Secretary of Labor, Complainant, v. Bianchi Trison Corporation, Respondent.	OSHRC Docket Nos. 01-1367 and 01-1368

Appearances:

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Office of the Solicitor, U. S. Department of Labor, Philadelphia, Pennsylvania
For Complainant

Robert G. Walsh, Esq., Law Offices of Robert G. Walsh, P.C., Blasdell, New York
For Respondent

Before: Administrative Law Judge Nancy J. Spies

DECISION AND ORDER

Bianchi Trison Corporation (BTC) is a Syracuse, New York, demolition contractor specializing in large commercial projects. From January through April 2001, BTC was the general contractor for demolition of Three Rivers Stadium in Pittsburgh, Pennsylvania. On January 2, 2001, BTC began pre-implosion demolition. The implosion of the stadium, which was originally scheduled for January 28, 2001, occurred on February 11, 2001. Post-implosion, the demolition involved removal of approximately 200,000 tons of primarily concrete debris and 11,000 tons of steel debris (Tr. 4452, 4453, 4735, 4773).

Based on a formal complaint regarding fall hazards, an inspection of the worksite was conducted from January 29 to 31, 2001, by Occupational Safety and Health Administration (OSHA) compliance officer Michael Laughlin. This first inspection is the so-called "safety" inspection, docketed as No. 01-1367. A second on-site inspection, based on a media referral, was conducted on February 15, 21, and 22, 2001, by OSHA industrial hygienists Maria Javorsky Healey and Jan Oleszewski. This second inspection is the so-called "health" inspection, docketed as No. 01-1368. As a result of these two inspections, on June 29, 2001, the Secretary issued to BTC willful and serious citations and proposed penalties totaling $ 454,550.00.

The hearing on these consolidated cases was held over 20 days from June 3 through June 21, 2002, and July 29 through August 2, 2002, in Pittsburgh, Pennsylvania. The Secretary contends that she established each of the alleged violations and that a substantial penalty is warranted. BTC asserts that the Secretary failed to prove any of the allegations. Both parties submitted post-hearing briefs, and the case is ready for decision.

For the reasons that follow, in **Docket No. 01-1367 (the Safety Case)**, the Secretary established many of the cited safety violations. Specifically in Citation No. 1, proven violations include electrical and steam hazards; lighting, scaffolding, and guardrail deficiencies; and fall hazards. BTC is correct that the Secretary failed to prove that a wire cable was utilized as a tie off line. In Citation No. 2, proven violations relate to the hazards associated with wall openings and floor holes, and with a lack of barricades or warning signs. Certain of those violations were willful. The Secretary failed to prove that employees were exposed to the hazards of falling debris from an unbarricaded escalator hole or of hanging debris in one of the elevator shafts.

In **Docket No. 01-1368 (the Health Case)**, the Secretary established many of the cited health violations, but those that were duplicative were vacated. In Citation No. 1, proven willful violations include failure to make an appropriate initial determination of lead exposure and to provide interim and other protections from excessive lead exposure.[1]

DOCKET NO. 01-1367 (Safety)

Docket No. 01-1367: Citation No. 1 alleges 11 serious violations and one reclassified other than serious violation. Item 1a alleges a violation of § 1926.416(a)(3) for failing to advise employees of the location of energized electrical power circuits, the hazards involved, and the protective measures to take. Item 1b alleges a violation of § 1926.850(c) for failing to shut off, cap, or control electric, water, and steam service lines. Item 2a alleges a violation of § 1926.451(b)(3) for failing to protect employees from interior falls from the scaffold platform. Item 2b alleges a violation of § 1926.451(g)(1)(vii) for failing to protect employees from exterior falls from the scaffold platform. Item 3a alleges a violation of § 1926.452(w)(1) for failing to ensure that a mobile scaffold rested on a suitable footing and stood plumb. Item 3b alleges an other than serious violation

[1] The "safety" case and the "health" case are discussed separately. For ease of discussion, the purported violations are not discussed in numerical order. They are discussed in a chronological order or (especially for the health case) as related by subject matter. At the end of the decision the safety and the health items are listed as they are numbered in the citations.

of § 1926.452(w)(2) for failing to lock the casters or wheels on the mobile scaffold. Item 3c was withdrawn and vacated at the hearing (Tr. 28). Item 4a alleges a violation of § 1926.501(b)(1) for failing to protect employees from falls from unprotected sides and edges. Item 4b alleges a violation of § 1926.502(b)(2)(i) for failing to install midrails on guardrail systems. Item 4c alleges a violation of § 1926.502(b)(3) for failing to install guardrails capable of withstanding a force of 200 pounds. Item 5 alleges a violation of § 1926.502(d)(16)(iii) for failing to properly rig personal fall arrest systems to prevent extended free falls. Item 6 alleges a violation of § 1926.851(c) for failing to properly illuminate stairwells. Item 7 was withdrawn and is vacated (Secretary's Brief p. 112).

Citation No. 2 alleges three willful violations. Item 1 alleges a violation of § 1926.850(g) for failing to protect employees from falling through wall openings (now alleged to be a serious violation) (Tr. 28). Item 2a alleges a violation of § 1926.850(h) for failing to use appropriate barricades to enclose and to place "warning" signs where heavy debris from escalators and elevators was dropped through floor holes; or in the alternative, alleges a § 5(a)(1) violation for failing to furnish a place of employment free from the hazards of being struck by falling escalator and elevator parts. Item 2b alleges a violation of § 1926.850(i) for failing to cover floor openings with a material sufficiently substantial to hold the weight of the loads.

BACKGROUND OF SAFETY CASE

BTC's president is William Bianchi. His brother, David Bianchi, is vice president. They have held these positions for the 22 years the company has been in the demolition business (Tr. 3055). At the time of the inspections BTC had approximately 211 employees and was involved in three projects, including the Three Rivers Stadium demolition project (Tr. 3055, 3203).

The City of Pittsburgh, through its Sports and Exhibition Authority (SEA), owned Three Rivers Stadium. In August 2000 SEA put out a bid to demolish it (Tr. 4711). BTC was the successful bidder, and in December 2000 it was awarded the demolition contract (Tr. 4729). SEA utilized AMEC Construction Management (AMEC) as project manager for the demolition and Makin Engineering to oversee contract compliance (Tr. 611, 661). AMEC hired Allegheny Asbestos Analysis d/b/a Global Environmental Management (AAA) to inspect the stadium for asbestos and hazardous materials, other than lead (Tr. 2556, 2596, 2637). BTC retained the responsibility for lead abatement.

Pre-implosion, the contract required BTC to prepare the stadium for the implosion and to remove environmental hazards. On the west side of the Three Rivers demolition project, the new Steelers NFL Stadium was under construction with a scheduled completion date of August 1, 2001 (Exh. C-4 at pp. 49-50). Because of their proximity, additional precautions were to be put in place to protect the new Steelers Stadium from the planned implosion of Three Rivers Stadium. Post-implosion, BTC was required to remove the debris and perform site clearing and restoration of the area (Exh. C-4, C-5, C-6). The safety case concerns only the pre-implosion phase.

The contract's project labor provisions required BTC to secure its laborers from Laborers Local Union No. 373 (Tr. 4272, 4750). Although the pre-implosion work schedule varied, the crews worked either a day shift or a night shift. Each shift was 10 hours long, Monday through Thursday. Some employees worked the weekend shift, which was also 10 hours, Friday through Sunday.

BTC hired various subcontractors, including Project Development Group Environmental (PDG) to perform asbestos abatement; O'Rourke, Inc., to act as the safety and health consultant; and Control Demolition, Inc. (CDI), to perform the actual implosion. At various times approximately 17 different on-site contractors were involved in the demolition (Exh. C-90; Tr. 3918).

The round, open-air stadium consisted of a basement (which housed offices and utility rooms), a ground level playing field, five concourse levels/floors, and the sixth seating level ("peanut heaven") above the fifth level. A partial roof extended over the sixth level. To the outside of and around the stadium four elevated entrance ramps (ramps A, B, C, and D) were used to reach the upper levels/floors (Exh. R-39).

Before full scale demolition began, asbestos from all of the enclosed areas (such as the restaurants, concessions, bathrooms, and locker rooms), all of the roof, and the elevator brakes had to be removed (Exh. C-88; Tr. 4255- 4258). Asbestos removal took about one month and was completed on January 19, 2001 (Tr. 2351).

On January 2, 2001, BTC began its pre-implosion demolition. Daniel Skinner, BTC's head project superintendent, characterized the project as "fast paced" making "it hard to keep up with everything" (Tr. 4546). According to Skinner, the demolition work proceeded generally from top to bottom (Tr. 4366). However, BTC employees (laborers David Roberts, Charles Wallace, Michael Brady, Michael Grondziowski) testified that the work was not concentrated on one floor at a time

but that employees worked on several floors simultaneously as the work took them randomly from floor to floor (Tr. 126, 148, 751, 794)

In order to keep the dust down during the day, the night shift performed the heavy equipment demolition, including knocking down walls, clearing space, and pushing debris into the infield or the outer ring (Tr. 4366, 4587). As BTC gutted a floor, the implosion contractor CDI came onto that floor to drill the holes in the columns which would later be packed with explosives. BTC followed CDI and wrapped the columns with fence wire and fabric (Tr. 4350). To prevent damage to the new stadium during implosion, BTC hung blast curtains and fencing where the old and new stadiums faced each other (Exh. ALJ-1, R-24 at February 3, 2001; Tr. 817). CDI performed a test blast on February 3, 2001, and loaded explosives on levels 4 and 5 on February 4, 2001; on levels 3, 4, and 5 on February 5, 2001; and on levels 1 through 5 on February 6, 2001 (Exh. R-24).

At the beginning of the demolition, SEA and AMEC planned a public auction of the stadium's seats, freezers, coolers, chairs, tables, and other stadium memorabilia (Tr. 614). The public was invited into the stadium to view these items. The presence of the public inside the stadium, along with the fact that stadium manager Jimmy Sacko and the Pittsburgh Pirates organization were still on site, meant that BTC could perform only "soft" demolition during the day shift for the first two weeks in January (Tr. 632, 4520). On January 15, 2001, the auctioneer FreeMarkets conducted the memorabilia sale. The sold items were to be picked up by January 19, 2001 (Tr. 4257). So many buyers participated that AMEC asked BTC to provide laborers to help secure and to load the memorabilia (especially the stadium seats) into the buyers' vehicles (Tr. 4519). Until all of the auctioned items were picked up, some elevators remained in use (Tr. 4256-4257).

O'Rourke, Inc., a small consulting firm, was hired as the full-time, on-site, health and safety contractor. Its employee, Matt Pickard, was the primary on-site health and safety officer; and he reported directly to BTC. Pickard had a previous working relationship with BTC through O'Rourke (Exh. C-19; Tr. 1691-1695). Pickard worked substantial portions of each day and night shift. O'Rourke's Terry Coleman was also on-site to fill in for Pickard for 5 or 6 nights while Pickard was ill, although Pickard continued to work the day shift during that time (Tr. 1730). Every morning at 7:00 a.m. at the beginning of the day shift, Pickard held an all-employee safety meeting outside the BTC trailer at the bottom end of "B" ramp (Exh. C-88; Tr. 40, 178, 4268, 4269). Night shift safety

meetings were at 6:00 p.m. (Tr. 4515). According to Skinner and laborer Charles Wallace, these meetings usually lasted about 5 to 10 minutes. Pickard stated that when he finished "the safety talk," he turned the meeting over to the foremen and supervisors who gave the employees their shift work assignments (Tr. 181, 2014, 4567).

Part of Skinner's duties involved meeting with Pickard every morning to address any of Pickard's safety concerns and then to notify the foremen (Tr. 4566, 4568-4569). If an employee had a safety concern, the procedure was for the employee to advise either a foreman, Matt Pickard, or the Local 373 local union steward for the day shift, Dean Sedlar (Tr. 441). If Sedlar had a safety issue, he first advised the foreman, and then Dan Skinner if necessary, and lastly Pickard (Tr. 459). Around January 23, 2001, after employee complaints and injuries, BTC chose a safety crew from among the workers (Tr. 468, 4518, 4571). The safety crew was to respond to employees' complaints to management about such things as fall hazards, the electricity being on during soft demolition, ice on the ramp, a lack of lighting, and floor holes.

Background for Wrapping Columns: As an important preparation for the implosion, BTC had to wrap the stadium's reinforced concrete columns to contain the debris. The columns measured 3-feet by 3-feet; and according to laborer Wallace, their height varied from where an employee could almost reach the top of the column up to about 15 feet (Tr. 150, 4300).

The columns were wrapped after CDI had drilled approximately five to six holes in each column and after the adjacent kneewalls were partially demolished or "opened up" on all four sides to permit wrapping. This process required that any walls or kneewalls adjacent to a column be removed at least a few feet (Tr. 4287-4288, 4312, 4319). Some of the columns on the first, third, and fourth levels had already been exposed. The "A" and "B" rows of columns, which supported the seating, had been removed mechanically (Tr. 4288, 4302). The "C" and "D" rows of columns had to be wrapped. These went around the perimeter of the stadium from the basement level to the fourth level and had 68 columns in each row (Tr. 4290, 4306). The "E" row columns, which partially encircled the stadium on the elevated ramps from the basement to part of the fifth level (Columns 5-14, 21-30, 39-48, 55-64), also had to be wrapped (Tr. 4290, 4299, 4303).

Each column had a number painted on it before it was wrapped and that number was painted on it again after wrapping (Tr. 4351). These numbers were used to orientate the workers (Tr. 4351). BTC employees wrapped the columns with chain link or wire cyclone fence, cut openings in the

wire over the explosive holes, covered the wire with black fabric, secured the fabric with wire, and then marked the fabric or cut it open over the explosive hole (Exh. C-3; Tr. 475, 753, 4367-4368). After all of the work on a floor was completed, CDI inserted the explosives (Tr. 4289).

OSHA's Safety Inspection

Robert Stanizzo, a representative for the Pittsburgh Building and Construction Trades Council (of which Local 373 is a member), received continuing complaints from the laborers about safety issues on the Three Rivers Stadium job. Stanizzo asked Robert McCall, Director of Safety for the Construction Industry Advancement Program of Western Pennsylvania Fund (CAP), to assess the situation (Tr. 231). McCall arrived on site on January 29, 2001, and met with two Local 373 representatives (Tr. 230, 231, 233). They examined the safety conditions on the job and considered them deficient (Tr. 361). Afterward, they spoke with BTC project manager Richard Stern about the situation (Tr. 251). Receiving what they considered an unsatisfactory response from BTC, McCall and the union representatives filed a formal complaint with OSHA's Pittsburgh, Pennsylvania, Area Director Robert Szymanski (Tr. 253).

In response to this formal complaint, which primarily concerned fall hazards, OSHA's Michael Laughlin was assigned to conduct the safety inspection. On that same day (January 29) at approximately 1:30 p.m., Laughlin held an opening conference with BTC project manager Richard Stern and owner William Bianchi (Tr. 3913, 3915). Laughlin learned that in addition to BTC, implosion contractor CDI, an electrical company, and O'Rourke were also on site (Tr. 4138, 4143).

Laughlin began the inspection at Gate B accompanied by BTC's head superintendent Don Schulick (Tr. 3930). As they proceeded up the ramp toward the concourse, they met union steward Sedlar. Laughlin then held an opening conference with Sedlar (Tr. 3920). At the concourse Thomas Jalowiec, another BTC project manager, and foreman Billy Palmer joined the walk-around (Tr. 3920). Approximately 50 feet from the gate, Laughlin received a telephone call from the union's Business Agent Bill Brooks, and he exited the stadium. Laughlin re-entered with Brooks, McCall, and Business Agent Richard Irlbacher (Tr. 4187, 4195-4196). O'Rourke's Coleman also joined the inspection group (Tr. 4196). Laughlin inspected the entire second level and proceeded through levels 3, 4, and the parts of the fifth level, which had not yet been demolished. On the third level, Laughlin encountered CDI's management and held an opening conference with them (Tr. 3910, 4144, 4205, 4222).

Pickard's Daily Safety Report of January 29, 2001, notes that 51 laborers, two operators, and seven supervisors and foremen were on site when OSHA inspected (Exh. C-29; Tr. 4365). Skinner recalled that four crews, each with three to four men, were wrapping "C" and "D" row columns on the first level, that employees at the basement level were clearing and wrapping columns, and that a safety crew was on the fourth level making repairs (Tr. 4582).

Laughlin videotaped as the inspection group proceeded through the stadium on January 29.[2] He concluded his on-site inspection and conducted interviews on January 30 (Exh. C-3; Tr. 261, 4044).

DISCUSSION OF SAFETY CASE

> The Secretary bears the burden of proving, by a preponderance of the evidence:
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> (a) the 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).

Indisputably, the cited Part 1926 construction standards apply to BTC's demolition work.

BTC's knowledge of the violative conditions is imputed to it through its supervisory employees. "Because corporate employers can only obtain knowledge through their agents, the actions and knowledge of supervisory personnel are generally imputed to their employers, and the Secretary can make a prima facie showing of knowledge by proving that a supervisory employee knew of or was responsible for the violation." *Todd Shipyards Corp.*, 11 BNA OSHC 2177, 2179 (No. 77-1598, 1984). "[W]hen a supervisory employee has actual or constructive knowledge of the violative conditions, that knowledge is imputed to the employer." *Dover Elevator Co.*, 16 BNA OSHC 1281, 1286 (No. 91-862, 1993).

Numerous supervisors and foremen were on site for BTC, including project managers Richard Stern and later Harry Greenwald, head superintendent Don Schulick, site superintendent Dan Skinner, site supervisor Marlon Ferrier, night site supervisor Eugene "Gene" Gilbert, and

[2] Laughlin's original inspection videotape was edited for trial (Exh. C-3; Tr. 3922-3923).

foremen Greg Smith, Billy Palmer, and Shawn Cramer. These supervisors and foremen directed the work of the following testifying employees:[3] David Roberts (directed by foremen Marlon and Eugene); Charles Wallace (foreman Palmer); Dean Sedlar (supervisor Skinner); Michael Brady (could not remember his foreman's name); Michael Grondziowski (foremen Marlon, Greg, and Drew); Richard Olbeter (foreman Marlon and occasionally Shawn); Robert Brown (foremen Greg and Shawn); Kevin Opfar (foreman Shawn); Kevin Rupp (foreman Shawn); James Zamaris (foreman Gene and another guy); John Zamaris (foreman Gene); Clayton Bertino (supervisor Skinner); Matthew Nagy (foreman Marlon); and Adrienne (Ace) Bertino (foreman Marlon) (Tr. 41, 149, 442, 752, 791, 815, 856, 972, 984, 1171, 1244, 1307, 1311, 1378, 1419, 1481, 1549, 2522).

Given the projected activities and the conditions on the jobsite, the omissions or violative conduct at issue were reasonably foreseeable and preventable. Even if actual knowledge was lacking in a particular instance, as discussed *infra*, the cited conditions were in plain view. With the exercise of reasonable diligence BTC would have known of their existence.

BTC primarily disputes whether the conditions violated the standards and whether employees were exposed to the conditions. If a violation is shown, a proper classification for the violation must be determined.

Citation No. 1, items 1a & 1b
Alleged Violations of §§ 1926.416(a)(3) and 1926.850(c):
Utilities (Electrical and Steam)

The Allegations

Items 1a and 1b address the need to disconnect utilities before beginning demolition work. Item 1a involves "demolishing the interior walls, ceilings, and appliances" in the luxury box areas on the third and fourth levels of the stadium on January 4, 2001, "where the 110 to 220 volt electrical cables and panels were still energized." Section 1926.416(a)(3) requires inquiry and notification and provides:

> (a) *Protection of employees* – (3) Before work is begun the employer shall ascertain by inquiry or direct observation, or by instruments, whether any part of an energized electric power circuit, exposed or concealed, is so located that the performance of the work may bring any person, tool, or machine into physical or electrical contact with the electric power circuit. The employer shall post and maintain proper warning

[3] The names of the supervisors in parenthesis are listed as they were identified by the employees.

signs where such a circuit exists. The employer shall advise employees of the location of such lines, the hazards involved, and the protective measures to be taken.

Also on January 4, 2001, the Secretary alleges that at item 1b (instance (a)) BTC did not deenergize the l15 to 220 volt electrical circuits before employees demolished those areas; and (instance (b)) BTC did not deenergize a steam line on the fourth level of the stadium which was ruptured. Section 1926.850(c) provides:

> (c) All electric, gas, water, steam, sewer, and other service lines shall be shut off, capped, or otherwise controlled, outside the building line before demolition work is started. In each case, any utility company which is involved shall be notified in advance.

Discussion

Items 1a and 1b - instance (a): Electrical Hazard. On the third level, 100 to 120 privately owned luxury (club) boxes were placed around the perimeter of the stadium (Exhs. C-88-89; Tr. 4275-4276, 4283). On the fourth level 25 to 30 large luxury boxes partially encircled the perimeter (Tr. 4283). The soft demolition of the boxes involved removal of cabinets, seating, carpet, lighting, ceilings, and sheetrock walls (Tr. 42, 4276). Initially, Skinner assigned 10 to 15 laborers to the soft demolition of the boxes on the third and fourth levels, but eventually the number of laborers grew (Tr. 4273). Skinner explained that usually three members of a six-man crew were assigned to demolish each box (Tr. 4281).

On January 3, 2001, his first day on the job, laborer David Roberts and his small crew were assigned to demolish luxury boxes (Tr. 38, 41). BTC provided his crew with a sledgehammer and 6-foot and 3-foot pry bars (Tr. 42). Roberts, who was an experienced laborer, stated that both of his foremen Marlon (Ferrier) and Eugene (Gilbert) stated that "[t]here may be some electric on. Be very careful" (Tr. 42, 99). As his fellow crewmember James Zamaris put a digging bar behind a cabinet and pulled it forward, Roberts saw sparks fly. Everyone stopped work. When they looked inside the cabinet, they found an outlet fixture (Tr. 47). Roberts watched crewmember John Zamaris (brother of James Zamaris) use his personal electricity tester to trace the energized circuit to an electric shut-off switch in a ceiling subpanel (Tr. 48, 100). Roberts and the other laborers advised union steward Sedlar, who also worked as a laborer, and gave him John Zamaris's tester (Tr. 49, 443). The crew continued their work in the boxes for several days (Tr. 52).

Laborer Robert Brown began work on January 3, 2001, and demolished luxury boxes his first week. Brown testified that he and a fellow laborer began removing all cabinets, wood, carpet, lighting, and ceilings in the luxury boxes (Tr. 1168-1170). Brown was told that the electricity was off (Tr. 1173). Brown came into contact with electricity on January 3, 2001, while standing on a ladder and using a metal bolt cutter to cut down fluorescent lights. Sparks flew and burned and notched the end of the bolt cutter. The men then advised union steward Sedlar and supervisor Greg Smith of the problem (Tr. 1172-1173). Smith responded that the lighting had to come down so "just be careful when we cut them that we didn't get electrocuted" (Tr. 1173). Brown continued to cut down lighting and to come into contact with energized electrical circuits (Tr. 1175, 1200).

BTC contends that Brown's testimony was not credible because he contradicted himself and admitted in cross-examination that his testimony could be misleading.[4] The undersigned assessed Brown as a consistent and credible witness. His demeanor was earnest and candid as he attempted to recall past events.

Laborer Michael Grondziowski and fellow crewmembers were assigned to demolish the luxury boxes on the day shift (Tr. 790, 793). He testified that his crew was told that the electricity was off (Tr. 791). On "something like" his second or third day, January 5 or 6, 2001, Grondziowski was about 5 feet from another crew member, Bill, who while standing on a ladder cut through an electrical conduit, causing sparks to fly (Tr. 790, 791, 792, 793). Grondziowski described how the sparks flew about 2½ feet, and he so advised his steward (Tr. 792, 857). Sedlar stated that he came to believe "[i]t was up to us to throw the breakers" (Tr. 445).

BTC contends that it was unaware of any electrical hazards because the circuit panels were concealed in the ceilings. The argument is not credible. It ignores the fact that the employer must identify all energized circuits "exposed or concealed." Skinner stated that each luxury box had its own breaker outside in the hallway with the number of the luxury box and the name of the owner on it (Tr. 4278, 4280). Skinner admitted that he knew the main power utilities were on during the

[4] BTC points out minor discrepancies in the testimony of Brown and other employee witnesses. The cross-examination of the employee witnesses was exceptionally vigorous. BTC was given leeway in its cross-examination because one of its defenses asserted impropriety and connivance of the employees. No evidence of the sort was presented and a good faith basis for the allegations is questionable. The allegations permitted insinuations and attempts at confusion to be inserted into the cross-examination. Tangential elements became a focus, and several employee witnesses became confused and flustered. The testimony of each witness is assessed as a whole and is relied upon to the extent warranted.

early days of the project (Tr. 4277, 4283). In his opinion, the foremen should have made sure that the circuit panels to the boxes were de-energized (Tr. 4282-4283).[5] Pickard was also aware that the existence of energized utilities raised safety issues. His January 4 and 5, 2001, daily safety reports state under "Safety Concerns:" "Power!!!! Building is still energized while soft demolition is occur[r]ing" (Exh. C-29, pp.1 and 2; Tr. 2065). Pickard's January 6, 2001, daily safety report reflects that he called David Bianchi to recommend the power be shut down in all work areas (Exh. C-29, p. 3). BTC's response is unknown. The only further reference to utilities in Pickard's notes is that on January 9, 2001, the gas was turned off.

Although contradictory, BTC also contends that utilities could not be shut off until January19, 2001.[6] Because some circuits in the luxury boxes were deenergized in the course of the demolition, it is concluded that the luxury boxes did not need to remain energized. In any event, to the extent that BTC may be asserting the defense of infeasibility of compliance, it has failed to establish any element of the defense.

Section 1926.416(a)(3) places responsibility on the employer to determine whether electrical power circuits are energized, to so inform its employees, and to explain to them how to protect themselves. Section 1926.850(c) requires the employer to actually shut off the electricity or other utilities before beginning demolition. BTC did not "ascertain," "post warning signs," "advise," or "deenergize" the electrical hazards in the luxury boxes. Vague warnings to "be careful" are not sufficient. The employees discovered the hazards for themselves when the electric lines and fixtures sparked. Employees eventually traced and disconnected the circuits, or they worked with energized circuits. BTC knew that the electricity remained on in many of the areas it chose to demolish.

Under § 17(k) of the Act a serious violation exists if there is a substantial probability that death or serious physical harm could result from the violative condition. Based on Laughlin's experience in his family's masonry and electrical business, his formal training, and his knowledge of the facts, Laughlin testified that the electrical circuits to the ceiling fans and appliances were

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[5] Skinner stated that each foreman had an electrical tester (Tr. 4283). Pickard's daily safety report dated January 11, 2001, indicates that not until that day were "Electrical testers purchased and distributed to foreman" (Tr. C-29, p. 8). This occurred more than a week after employees began demolishing the boxes.

[6] According to Skinner, utilities had to remain on until the asbestos abatement was completed, until the auction ended and all purchased items were picked up (about January 19, 2001), and until the Pirates organization moved out (Exh. 4253, 4255, 4257, 4259).

110 volts, and those for powering the air conditioners were 220 volts (Exh. C-3 at 18:07; Tr. 3905, 4067). This conclusion was not rebutted. An employee contacting 110 or 220 volts of electricity could be shocked, burned, or electrocuted (Tr. 4068). Employees worked with conductive digging bars and sledgehammers, which heightened the probability of a serious injury. Violations of §§ 1926.416(a)(3) and 1926.850(c) (instance (a)) are affirmed as serious.

Item 1b - instance (b): Steam. Pickard's January 4, 2001, daily safety report includes the notation that a bobcat operator hit and ruptured the functioning steam line on the fourth level (Exh. C-29, p. 1; Tr. 445, 447). BTC argues that the rupture was due to operator error.[7] BTC asserts that the employees were aware the steam lines were functional and that they knew the lines should not be hit. BTC's argument misses the point. Employees performed soft demolition on the fourth level. According to Sedlar, the bobcat operator was assigned to knock down block partitions on the fourth level (Tr. 447). Laughlin observed that steam lines ran throughout areas of the stadium, with some lines in the ceilings (Tr. 4073). Given the scope of the work, such accidents could be anticipated. If the steam lines remained charged for the convenience of others, BTC should have arranged its schedule or diverted work away from the hazard. The bobcat operator or workers passing by (or others who may encounter charged lines) could be seriously burned by the escaping steam or heated water (Tr. 4072).

Here, the steam created another safety concern. After Sedlar advised Skinner of the accident, he removed the laborers below the water leak because of the water-on-electrical hazard (Tr. 447). It took about one hour to shut off the water (Tr. 446, 448). As the water flowed down to the lower levels, it froze. For approximately one week, employees walked on ice while accessing their work areas (Tr. 448, 449-450). Instance (b) of § 1926.850(c) is affirmed as serious.

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[7] This argument is couched in terms of the employee misconduct defense. In order to establish the affirmative defense of employee misconduct, an employer must show:

> (1) that it has established work rules designed to prevent the violation; (2) that it adequately communicated the rules to its employees; (3) that it took steps to discover violations; and (4) that it has effectively enforced the rules when violations have been discovered. *Nooter Construction Co.*, 16 BNA OSHC 1572, 1578 (No. 91-0237, 1994). BTC offered no evidence that it had a work rule designed to shut off and control the electrical circuits or that the bobcat operator had responsibility to shut off or control the steam lines. If BTC asserts the defense here, it has failed to establish it.

Citation No 1, item 6, Alleged Violation of § 1926.851(c): Illumination

The Allegation

The Secretary alleges that BTC failed to provide illumination at the Gate B access ramp during the hours of darkness which prevented safe travel on the ramps and concourse levels in violation of §1926.851(c). The standard provides:

> (c) In a multistory building, when a stairwell is being used, it shall be properly illuminated by either natural or artificial means, and completely and substantially covered over at a point not less than two floors below the floor on which work is being performed, and access to the floor where the work is in progress shall be through a properly lighted, protected, and separate passageway.

Discussion

Charles Wallace, a laborer with 14 years experience, worked the day shift, Monday through Thursday (Tr. 181). He testified that he began work at 7:00 a.m. in January and that it was still dark outside at the time. He stated that he did not have enough illumination to see by. Wallace progressed up the ramp to his work area by sliding his feet so that he would not fall on debris or fall into holes in the stadium floor (Tr. 147, 156-158).[8] Wallace stated that while a part of the stadium was lighted with a generator, unless he worked on that side of the stadium, he had to wait for sufficient daylight to begin work. Employees were not provided with flashlights (Tr. 157, 158).

Laborer Michael Brady testified that it was dark in the morning and in the late afternoon (Tr. 748, 756). He stated that he had to hold on to the walls because he could not see where he was going when he left work around 5:30 p.m. (Tr. 757). Brady said that there was a ball of safety lighting lying on the floor but that it was never put up (Tr. 756). Brady testified that when he brought up his concern about needing lighting at the safety meeting, the foreman made fun of him for being afraid of the dark (Tr. 756).

Laborer Roberts testified that Pickard told them to be careful not to trip in the dark in the mornings (Tr. 132). Laborer Grondziowski said that the stadium was dark at around 7:00 a.m. and there was no lighting. He brought his own flashlight so that he could see (Tr. 803-804). Laborer and union steward Sedlar said that at the beginning of the shift there were no lights alongside the

[8] Wallace would not have been at his work station exactly at 7:00 a. m. He would have first attended the morning safety meeting which lasted 5 to 10 minutes. After he received his assignment, he would have attempted to walk to his work station.

ramps and on the levels. Sedlar stated that eventually BTC put up temporary lighting (Tr. 453-454).

William Kirby, general superintendent for AMEC (who is not an exposed employee) testified that in early January around 7:00 p.m., he injured himself on a metal dolly because of the darkness. When he stepped on the unseen dolly, it jackknifed and gashed his leg. After the injury, Kirby raised the lack of lighting with Richard Stern. He then unsuccessfully asked for temporary lighting "a half-dozen times" (Tr. 639-640).

BTC contends that there was adequate lighting. Skinner states that BTC had several diesel-powered light towers in place to illuminate the ramps and the infield, and that the towers were in place from the beginning to the end of the project (Tr. 4421-4423). String lights were run from those towers (Tr. 4422).

Pickard's January 12, 2001, daily report states that extra flashlights were purchased for the night crew (Tr. C-29, p. 10). Pickard admitted that he received complaints from the day shift employees that it was too dark to get to their work stations (Tr. 2057-2058). Although BTC may have had sufficient lighting for the night shift working in specific areas, the overwhelming testimony is credited that there was often insufficient lighting on the ramps at the beginning or end of the shifts. Employees' exposure to trip and fall hazards was heightened because of the ongoing demolition, such as uncovered 8-inch drain holes, open 4-inch wide expansion joints, concrete block, concrete debris, and scrap piping. In addition, the hazard was aggravated by the existence of an ice buildup. On January 8, 2001, employee Russell Long injured his knee when he slipped on ice (Exh. R-24). Sedlar stated that the ice was salted at the entrance to the stadium but nowhere else (Tr. 546). The possibility of tripping, falling, and slipping in the dark could result in serious cuts, sprains, and broken bones. The violation of § 1926.851(c) is affirmed as serious.

Citation No. 1, items 2a, 2b, 3a, & 3b
Alleged Violations of §§ 1926.451(b)(3), 1926.451(g)(1)(vii), 1926.452(w)(1), and 1926.452(w)(2): Scaffold

The Allegations

These four items involve the same tube and coupler mobile scaffold. At item 2a, the Secretary alleges that on level one BTC's tube and coupler mobile scaffold was positioned with the front edge of the work platform 3½ feet from the face of the work (the column). The scaffold did

not have guardrails on its inside face. Nor were the employees tied off to an appropriate anchor point. Section 1926.451(b)(3) provides:

> (b) *Scaffold platform construction.* (3) Except as provided in paragraphs (b)(3)(i) and (ii) of this section, the front edge of all platforms shall not be more than 14 inches (36 cm) from the face of the work, unless guardrail systems are erected along the front edge and/or personal fall arrest systems are used in accordance with paragraphs (g) of this section to protect employees from falling.

At item 2b, the Secretary alleges that the scaffold lacked midrails and toeboards at its exterior side. Section 1926.451(g)(1)(vii) provides in pertinent part:

> (g) *Fall protection.* (1) Each employee on a scaffold more than 10 feet (3.1 m) above a lower level shall be protected from falling to that lower level. (vii) For all scaffolds not otherwise specified in paragraphs (g)(1)(i) through (g)(1)(vi) of this section, each employee shall be protected by the use of personal fall arrest systems or guardrail systems meeting the requirements of paragraph (g)(4) of this section.

At item 3a the Secretary alleges that the scaffold was not plumb since one scaffold leg was resting in a 4-inch depression. Section 1926.452(w)(1) provides. in part:

> (w) *Mobile scaffolds.* (1) . . . Scaffolds shall be plumb, level, and squared.

At item 3b the Secretary alleges that one of the wheels on the scaffold leg was unlocked and could allow movement. Section 1926.452(w)(2) provides:

> (w) *Mobile scaffolds.* (2) Scaffold casters and wheels shall be locked with positive wheel and/or wheel and swivel locks, or equivalent means, to prevent movement of the scaffold while the scaffold is used in a stationary manner.

Discussion

In addition to standing on ladders or chairs to wrap the upper portion of certain of the larger columns, employees used a custom made tube and coupler scaffold. The scaffold was erected to be "U"-shaped to fit around the columns (Tr. 750, 751). The scaffold was two bucks high and rested on eight legs with 3-foot screw jacks (for raising or lowering the scaffold) and wheels. Laughlin measured each buck to be 5 foot, 5 inches high. He estimated that the caster legs were approximately 1 foot high, bringing the scaffold's total height to approximately 12 feet. The scaffold work platform consisted of two planks (Tr. 3959, 3961, 3966-3967, 4173, 4321-4322, 4377-4379).

Two BTC employees, Brady and Grondziowski, pushed the scaffold past the inspection group (Laughlin, BTC's management, and union representatives) and positioned it in plain view near a column on the concourse level (Exh. C-3 at 3:35; Tr. 3960-3965). The two employees climbed on the scaffold as their foreman watched from the ground (Tr. 772). Neither employee had been on a scaffold before, nor had they received scaffold training from BTC (Tr. 753, 794, 797).

Item 2a: Scaffold Front Edge. Laughlin stated he saw (and the videotape shows) that the scaffold's work platform was 2½ to 3 feet from the face of the column being wrapped (Exh. C-3 at 4:44; Tr. 3964). The employees worked at the edge of the platform because they had to walk the material around the column (Tr. 3966).

The standard permits the front edge of the scaffold to be more than 14 inches from the work face only if a guardrail system is erected along the front edge and/or a personal fall arrest system is used (§ 1926.451(b)(3)). No guardrail of any type was present at the interior of the scaffold. According to Brady, because OSHA was on site the foreman instructed them to tie off. Brady replied to his foreman that there was no place to tie to. The foreman then told them to tie off to the scaffold, so Brady tied to the toprail at the exterior side of the scaffold (Tr. 751-752). Grondziowski also tied off there, but stated it did not seem right to him (Tr. 797).

BTC does not argue that tying to the toprail of the mobile scaffold was permissible under § 1926.451(g)(3). BTC argues, however, that it was unaware that employees would place the scaffold more than 14 inches from the column. The argument is rejected. The scaffold was in plain view and was positioned, as designed, around the column. The foreman was standing on the floor next to the scaffold. The inspection group and the foreman could equally observe the space between the scaffold and the column. "Where a cited condition is 'readily apparent to anyone who looked,' employers have been found to have constructive knowledge." *A. L. Baumgartner Construction, Inc.*, 16 BNA OSHC 1995, 1998 (No. 92-1022, 1994), citing *Hamilton Fixture,* 16 BNA OSHC 1073, 1089 (No. 88-1720, 1993), *aff'd without published opinion,* 28 F.3d 1213 (6th Cir. 1994).

With 3 feet of space between the work platform and the column (especially on one side), the two employees worked towards the front of the "U" shaped scaffold to wrap the column. Laughlin's opinion is credited that if the scaffold was as close as 14 inches to the work surface (the distance allowed by the standard) the employees could still wrap the columns (Tr. 3966).

The employees could fall between the work platform and the face of the column (Tr. 3966). A 7 to 8-foot fall (*see* Item 2b *infra*) from the interior of the "U" to the concrete floor below could likely result in broken bones. A 27-foot fall into the gap at the top (outside ends) of the "U" would most likely result in death.[9] The violation of § 1926.451(b)(3) is affirmed as serious.

Item 2b: Scaffold Guardrail System. Laughlin stated he saw that the scaffold had no midrails or toeboards on the back side. Laughlin estimated that the toprail was 39 to 42 inches high. As the videotape shows, one of the employees bent down below the top rail to wrap the column (Exh. C-3 at 4:39; Tr. 3962).

Section 1926.450(b) defines a guardrail as "a vertical barrier, consisting of, but not limited to, toprails, midrails, and posts, erected to prevent employees from falling off a scaffold platform or walkway to lower levels." Here only a toprail was in place. BTC contends that the scaffold had midrails and toeboards, but the videotape shows otherwise. Based on Laughlin's measurement of the two bucks plus the caster legs, the Secretary asserts that the scaffold was 12 feet above the floor, implying the existence of a fall distance of more than 10 feet. The ceiling was 13 feet, 8 inches high (C-88; Tr. 4379). As BTC points out, the scaffold's work platform was only 7 to 8 feet high (5 feet high, plus approximately 2 to 3 feet for the jack screws and wheels). BTC's estimates are supported by Brady's testimony that the height of the work platform was 7 to 7½ feet high (Tr. 771). The videotape shows the employees climbing off the work platform and going down eight rungs of a scaffold ladder (Exh. C-3 at 4:17). Employees did not work 10 feet above the floor of the stadium's level one.

Nevertheless, the violation is affirmed because at the top of the "U" the scaffold was 2½ to 3 feet from a drop off the edge to the floor, 27 feet below (Exh. C-3 at 4:02; Tr. 3960, 3964). Employees reached over and around as they wrapped the column, placing themselves in the zone of danger of the fall hazard. BTC's foreman directed the employees to use the scaffold which was constructed without the required midrail and toeboard and told them to tie off to an insufficient anchor point. "The law is clear that when a scaffold or other piece of equipment does not comply with applicable health and safety regulations, the employer must affirmatively prevent employees

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[9] Although the mobile scaffold had a toprail around the back side and around the top of the "U" (*see* 2b *infra*) since the 2½ to 3 foot gap existed between the face of the column and the work platform, a gap of that dimension also existed at the top of the "U" off the edge of the floor. Employees worked right at that gap for short periods as they extended the wrap around the column.

from using the equipment until is it properly maintained." *Cleveland Construction, Inc. v. OSHRC*, 18 BNA OSHC 2028, 2033 (6th Cir. 1999). A fall of 27 feet through the opening between the top rail and the work platform would likely result in death (Tr. 3963). The violation of § 1926.451(g)(1)(vii) is affirmed as serious.

Item 3a: Out of Plumb. One of the eight legs of the scaffold sat in a 4-inch depression in the concrete, on top of debris (Exh. C-3 at 3:35; Tr. 3958). Brady testified that one of the wheels was caught in a break in the floor when they stopped moving the scaffold (Tr. 755). Grondziowski testified that one side of the scaffold was higher than the other and was not level (Tr. 795-796). Because one leg was in a depression, the scaffold leaned toward the infield (Exh. C-3 at 3:35; Tr. 3959, 3961). Brady and Grondziowski told Laughlin that they had not received any training from BTC on moving, altering, modifying, or setting up a scaffold (Tr. 753, 3968). They did not adjust the screw jack.

BTC asserts that it had no knowledge that the scaffold was in a depression. However, as stated, the foreman observed the men work. The fact that the scaffold leaned was in plain view. It was reasonably foreseeable that destroying walls around the columns could create floor depressions and leave debris. BTC had constructive knowledge of the violation. BTC also suggests that the "U"-shape configuration of the scaffold made it less prone to movement. Even if this is true when the scaffold was used as designed, the effect of having the scaffold out of plumb added to the instability of the mobile scaffold and its work platform. The scaffold was positioned at the edge of the floor. Working at the ends of the "U" on an unstable work platform could aggravate the possibility of an accident. A fall (even a fall of 27 feet to the infield) would result in serious injury or death. The violation of § 1926.452(w)(1) is affirmed as a lower gravity serious violation.

Item 3b: Scaffold Wheels Locked. Laughlin stated he saw (and the videotape shows) that the scaffold leg in the depression was not in the locked position, although the other seven legs were locked (Exh. C-3 at 4:55; Tr. 3967, 3968). BTC argues that it had no knowledge of the violation since the unlocked wheel was not visible from a distance. The foreman stood next to the scaffold as the inspection group approached. The scaffold leg was in plain view. This violation is classified as other than serious because it was substantially less likely that the scaffold would roll since seven of the eight legs were locked. Yet, the failure to lock all of the wheels of a mobile scaffold made

movement more possible. Employees could suffer bruises and contusions if the scaffold leg rolled or shifted. The violation of § 1926.452(w)(2) is affirmed as other than serious.

Citation No. 1, items 4a and 5 and Citation No. 2, items 1 and 2b Alleged Violations of §§ 1926.501(b)(1), 1926.502(d)(16)(iii), 1926.850(g), and 1926.850(i): Fall Hazards and Fall Protection

The Allegations

These four items involve a failure to provide protection from fall hazards (created by floor edges, wall openings, and floor holes). At Citation No. 1, item 4a, the Secretary alleges that on the second and third stadium levels BTC failed to guard floor openings. Exposed employees included those who wrapped columns, cleared debris, and operated bobcats and mules. Employees worked at the floor edges and were exposed to falls ranging from 15 to 40 feet above the ground level in violation of § 1926.501(b)(1), which provides:

> (b)(1) *Unprotected sides and edges.* Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of guardrails systems, safety net systems, or personal fall arrest systems.

At Citation No. 1, item 5, the Secretary alleges that on concourse levels 1 and 2 between Gates A and B employees improperly tied their lanyards to a slack ¼-inch horizontal cable which spanned 100 feet between columns. If an employee fell while tied to the cable, the employee would fall more than 6 feet in violation of § 1926.502(d)(16)(iii), which provides:

> (d) *Personal fall arrest systems.* (16) Personal fall arrest systems, when stopping a fall, shall: (iii) be rigged such that an employee can neither free fall more than 6 feet (1.8 m), nor contact any lower level.

At Citation No. 2, item 1 (now alleged as serious), the Secretary contends that: (instance (a)) employees wrapped columns on the fifth level of the stadium between Gates A and D, which had a portion of the wall removed for a width of approximately 2½ to 3 feet above a 60-foot drop; (instance (b)) on the fifth level of the stadium at Gate D ramp area, employees operated a "mule" near an approximate 6 foot wide wall openings, with a 60-foot drop; and (instance (c)) on level 2 at the Gate B concourse area, employees worked near 5-foot wide wall opening where the knee wall had been removed, exposing employees to a 20-foot fall, in violation of § 1926.850(g), which provides:

(g) Where a hazard exists to employees falling through wall openings, the opening shall be protected to a height of approximately 42 inches.

At Citation No. 2, item 2b, the Secretary alleges that: (instance (a)) on the ramps and concourse levels BTC willfully failed to cover expansion joint holes which were 4-inch wide by 31-feet long and to cover 8-inch diameter drain holes; (instance (b)) on the fourth level BTC willfully failed to cover a 2-foot by 3-foot floor opening which an employee stepped into; and (instance (c)) on the second level BTC willfully failed to cover a floor hole which was covered by debris, in violation of § 1926.850(i). The section provides:

(i) All floor openings, not used as material drops, shall be covered over with material substantial enough to support the weight of any load which may be imposed. Such material shall be properly secured to prevent its accidental movement.

Discussion

Citation No. 1, item 4a: Floor Edge. Laughlin stated that no type of fall protection existed around the edge of the stadium toward the infield. The videotape corroborates this (Exh. C-3 at 7:19; Tr. 3980). Debris had been piled towards the infield (Exh. C-3 at 7:11 and 7:32; Tr. 3977). Based on his interviews with employees, Laughlin concluded that during January employees wrapped columns at the edge of the infield without using any type of fall protection. Laughlin observed that on one side of the interior columns toward the infield most of the lower tier seating had been removed, with the exception of the highest two steps. According to Laughlin's interviews with employees, the seating was removed before employees began wrapping columns. Employees also told him that they wrapped columns by standing on one of the two remaining steps to the infield side of the column. They were exposed to a 30-foot drop to the infield created when most of the seats were removed (Exh. C-3 at 7:09; Tr. 3980-3982, 3985).

Charles Wallace testified that he worked for BTC beginning around the first part of January. During the four weeks he worked at the stadium, he wrapped columns. Wallace recalled wrapping five to six columns near the edge of the stadium on the second level (Tr. 148, 154). To wrap the columns, Wallace and his partner reached around the column, over the drop-off, to grab the materials (Tr. 152-153). He estimated that the edge dropped off approximately 25 feet or more. He was not tied off. Wallace stated that he wore a safety harness that was issued by BTC on his second week on the job but found nothing to tie it to (Exh. C-3 at 1:30; Tr. 151-153, 193, 218, 219).

Wallace asked his foreman Bill Palmer why he had to wear a safety harness since he could not tie off (Tr. 200).

Laborer Grondziowski testified that he wrapped columns at the edge of the floor toward the exterior of the stadium where the wall had been removed on the upper three levels (Tr. 799). Grondziowski recalled that the wall openings next to the columns measured 4 to 5 feet on all of the upper decks. With a wire he fed the fabric and fencing around the column to his counterpart on the other side of the column. Grondziowski was not tied off during this process (Tr. 799-801). He told his union steward Dean (Sedlar) about his concern regarding working at the edge (Tr. 803).

Richard Olbeter, a laborer for 11 to 12 years, worked the weekend shift (961, 962). Olbeter testified that the walls were knocked out at the exterior and interior sides of the stadium. Olbeter explained how bobcats equipped with jackhammer attachments knocked out the concrete walls next to the columns (Tr. 963-964). He and Ace Bertino then torch cut the remaining rebar near those columns on all of the levels. At the exterior columns he and Bertino torch cut 2 feet from the edge without using fall protection (Tr. 963-966, 1000). (Olbeter also used a JLG "cherry picker" to cut some of the rebar near the interior columns while the laborer tied off in the JLG.) However, his partner, who cut rebar from the floor was not tied off at the floor edge (Tr. 965). Olbeter's foreman, Marlon (Ferrier), told them to "be careful" when cutting rebar at the edge (Tr. 1005).

William Kirby, AMEC's general superintendent, testified that he threatened to shut down the job because of his safety concerns about loose debris overhead, edges that dropped 20 feet, and open drain holes (Exh. C-7; Tr. 632-633).

BTC contends that employees were not exposed to a fall hazard because on the second level the lower tier seating was in place at the time the columns were wrapped. BTC also suggests that it strung a cable with warning flags around the perimeter on the third level, eliminating the existence of any unprotected edge. Skinner claimed that after parts of the kneewall were removed to allow employees to wrap the "D" row columns, two-by-four barricades were installed to protect the area where the kneewall had been removed (Exh. R-40; Tr. 4336-4337).

Based on the record, it is concluded that the employees' statements to Laughlin made shortly after the event are more credible than Skinner's recollection that the seating was in place when these columns were wrapped. Further, the videotape shows a lack of any type of fall protection at the interior and exterior edges, except for a cable line on the first level. The cable in no way constituted

fall protection. (Exh. C-3 at 7:19 and 19:42) (*See* item 5, *infra*). Also, employees testified that they did not use any personal fall protection while working at the open edge of the stadium floors, either at the inside or outside edges (Tr. 150, 153, 799, 802, 963, 965). A fall of 25 to 30 feet from the second and third levels would most likely result in serious bodily injury or death. The violation of § 1926.501(b)(1) is affirmed as serious.

Citation No. 1, item 5: Cable. Laborer Wallace recalled that around the time when everyone was getting laid off, BTC had employees string a cable to the columns. He believed that employees were supposed to hook/tie to that (Tr. 155, 218). Wallace stated that before the "OSHA man" came, he never saw anyone tied off (Tr. 223). Laborer Olbeter testified that after OSHA came, a static line was put up to tie off to (Tr. 992, 994). Neither employee stated that he himself tied to the cable or saw anyone tied to it.

Laughlin stated he saw (and the videotape shows) that a waist-high, ¼-inch wire rope cable extended 100 feet between the columns on the first level of the stadium (Exh. C-3 at 0:11; Tr. 3931, 4164). The cable was in plain view. The wire was wrapped around a column and attached at 100-foot intervals with Crosby clamps (Tr. 3931). The wire was installed 3 feet from the edge of the concourse level, which dropped approximately 15 feet to the level below (Tr. 3934, 4585). As a test, with his hands Laughlin easily moved the wire down to his knees and pushed it to the ground by stepping on it. He concluded that the cable would not meet the lifeline requirement to be taut and to have a minimum breaking strength of 5000 pounds (§ 1926.502(d)(9)) (Tr. 3932).

The columns were wrapped with wire and fabric by the time the inspection began, but Laughlin considered that CDI employees, who were inspecting the columns and would be loading explosives, would still be exposed to falls when using the defective lifeline. Also on the concourse level, Laughlin saw an employee standing near the edge assisting someone in a JLG to drill a column, but that employee used no fall protection (Tr. 3937, 3939).

BTC's Skinner contends that the wire cable was a warning system "to prevent anybody from falling over the edge" and not a lifeline tie-off (Tr. 4355, 4356, 4585). Laughlin assumed that the cable was a tie-off line and part of a fall arrest system; he did not see any employee tied to the cable (Tr. 3933). Clearly, the "warning" cable was defective as a lifeline. The clamps were inadequate and the cable was improperly installed. The warning line would not provide any recognized type of fall protection, but the fall hazard from unguarded edges is cited elsewhere. Although illustrating

the danger of utilizing make-shift and unapproved fall "protection" (which employees could understandably mistake for real fall protection), the evidence is only speculative that the wire cable on level one was to be used as a tie-off line.[10] Since the evidence shows that the cable was intended as a warning line and was not used as a tie-off line, the violation of § 1926.502(d)(16)(iii) is vacated.

Citation No. 2, item 1 – instance (a): Wall Openings. Laughlin testified he saw (and the videotape shows) that next to a wrapped column on the fifth level, an exterior wall opening was "protected" only with caution tape strung across the front of the opening (Exh. C-3 at 19:41; Tr. 4220). BTC instructed the laborers to remove 2½ to 3 feet of the kneewall next to the columns so the columns could be wrapped. Laughlin estimated that the size of the opening was 2 to 2½ feet and that the potential fall from the opening was 60 feet. Laughlin interviewed the laborers who used a hoe ram to break the concrete and a torch to cut away the remaining rebar of the demolished kneewalls (Tr. 4019-4020, 4039-4040, 4042).

BTC asserts that no employees worked on the fifth level after January 26, 2001, and thus no employees were exposed to falling into wall openings created by removal of the kneewalls (Exh. R-24). "Exposure to a violative condition may be established either by showing actual exposure *or* that access to the hazard was reasonably predictable." *Phoenix Roofing, Inc.*, 17 BNA OSHC 1076, 1079 (No. 90-2148, 1995). Reasonable predictability is established by showing "that employees either while in the course of their assigned working duties, their personal comfort activities while on the job, or their normal means of ingress-egress to their assigned workplaces, will be, are, or have been in a zone of danger." *Giles & Cotting, Inc.*, 3 BNA OSHC 2002, 2003 (No. 504, 1976). "The zone of danger is determined by the hazard presented by the violative condition, and is normally that area surrounding the violative condition that presents the danger to employees which the standard is intended to prevent." *RGM Construction Co.*, 17 BNA OSHC 1229, 1234 (No. 91-2107, 1995).

Employees who wrapped the columns on the fifth level before January 26, 2001, were exposed to fall hazards of 60 feet when they wrapped the columns on that level. The videotape shows that all the exterior columns on level 5 were wrapped (Exh. C-3 at 17:30). As stated,

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[10] Union steward Sedlar testified that on January 25 or 26, 200l, he raised with Pickard the issue of a cable on the fourth floor (the Secretary cited a cable on the first floor) because "the guys were tying off to them because they were cables" (Tr. 584). When asked, Pickard told Sedlar that the cable was a warning not a tie off line (Tr. 584).

employee Wallace testified that he wrapped columns at the edge of the fifth floor without fall protection (Tr. 148, 152-153).

Also, on or around the day of the inspection CDI employees were exposed to the wall openings when they inspected the columns and later when they loaded explosives into the columns' drilled holes. Did BTC have responsibility to protect its subcontractors' employees from the hazards it created or controlled?

Multi-employer Worksite Doctrine

Since *Anning-Johnson Co.,* 4 BNA OSHC 1193 (No. 3694, 1976) and *Grossman Steel & Aluminum Corp.,* 4 BNA OSHC 1185 (No. 12775, 1976), it is well settled that an employer on a multi-employer worksite who creates or controls a hazard has a duty under the Act to protect its own employees and those of other employers. *See McDevitt Street Bovis, Inc.,* 19 BNA OSHC 1108, 1109 (No. 97-1918, 2000) ("Under Commission precedent, an employer who either creates or controls the cited hazard has a duty under § 5(a)(2) of the Act, 29 U. S. C. § 666(a)(2), to protect not only its own employees, but those of other employers 'engaged in the common undertaking.'"). *See also Flint Engineering & Construction Co.,* 15 BNA OSHC 2052, 2055 (No. 90-2873, 1992). The general contractor may be presumed "by virtue of its supervisory capacity over the entire worksite" to have sufficient control over its subcontractors. *Gil Haugan d/b/a/ Haugan Construction Company,* 7 BNA OSHC 2004, 2006 (Nos. 76-1512 and 76-1513, 1979).

BTC had overall responsibility for the demolition project. During OSHA's opening conference Stern admitted that BTC was the controlling contractor (Tr. 4143). BTC had the authority to ensure that some type of fall protection was available or installed at the wall openings in order to protect all employees on site. In addition, BTC had overall responsibility for safety at the site. BTC's safety officer Pickard walked the entire site daily (Tr. 1946). BTC formed a safety crew to address safety problems (although it used only caution tape at the wall openings and erected sub-standard guardrails around shafts). Finally, BTC created the wall openings.

BTC knew that the employees of other contractors performed work before and after its employees finished in an area. It contracted with some seventeen subcontractors and knew when and how each accomplished its work. CDI employees had access to the hazards as they walked or traveled to their work assignments, lunch breaks, personal comfort needs, or to get drinking water.

CDI's employees inspected and later packed the blast holes in the columns. They had access to the kneewall openings and floor holes and were exposed to fall hazards of 15 to 60 feet.

The standard requires wall openings be protected to a height of 42 inches. Caution tape strung in front of the wall opening is not fall protection. A 60-foot fall from the edge of the fifth level would result in serious injury or death. Item 1 of Citation No. 2, instance (a), is affirmed as a serious violation of § 1926.850(g).

Citation No. 2, item 1 – instance (b): Wall Opening. Laughlin observed an approximate 6-foot wide wall opening in front of a 60-foot drop from the ramp between Gates A and D. Caution tape was strung across the opening. Debris lay on the floor around the opening and hung from the top of the opening (Exh. C-3 at 28:14; Tr. 4044-46). Laughlin saw two CDI employees on a mule drive past while the inspection group stood near the wall opening (Tr. 4020). Also, Laughlin videotaped a laborer who worked with a sledgehammer hitting the orange seats in the upper tier seating (the sixth level). Laughlin identified the individual as a BTC employee because he wore a BTC red hard hat and was performing demolition work (Tr. 4044). Laughlin testified that the only way to access the level was to go up the ramp near the wall opening (Exh. C-3 at 22:12 and C-88; Tr. 4022, 4029).

BTC denies that its employee was on the sixth level and asserts that all of the work on the fifth level was finished on January 26, 2001. Further, since the employees on the mule were CDI, not BTC, employees, BTC contends that the Secretary failed to prove employee exposure to the violation. For the reasons offered by Laughlin, it is determined that the employee observed doing BTC's work on the sixth level was a BTC employee and that the employee would have access to the floor opening on the fifth level. Sedlar explained how all employees traveled in and out of the stadium to get to the port-a-potties, to go to lunch, or to get drinking water (Tr. 541). As discussed, BTC had responsibility to protect its employees while engaged in personal comfort activities and to protect its subcontractor's employees from the hazards it created or controlled. CDI was exposed to the wall opening as they worked near the column edges. Contrary to BTC's contention that no employees should be on the fifth floor, at least three employees (one BTC and two CDI employees) were shown to have access to the floor opening during the few hours OSHA was on site. The approximate 6-foot wide wall opening was not protected to a height of 42 inches. A 60-foot fall would likely result in death. Instance (b) of the violation of § 1926.850(g) is affirmed as serious.

Citation No. 2, item 1 – instance (c): Wall Openings. Laughlin stated he saw that on the concourse level at the exterior side of the stadium, 15-foot wide wall openings extended at many areas around the stadium where the galvanized railings had been removed to wrap the columns. Caution tape hung from column to column and on the ground between two columns (Exh. C-3 at 0:56, 1:08; Tr. 3940-3941, 3948). The fall distance from these openings was 20 feet (Tr. 3942).

As the videotape shows, at one 15-foot wide wall opening on level one, employees (Joseph Toboloski and Charles and Clifford Wallace) wrapped columns by reaching over the edge with fence and fabric (Exh. C-3 at 1:30; Tr. 3942, 3947). Charles Wallace was on a ladder that was 2½ to 3 feet from the edge of a 20 foot drop to the exterior (Tr. 3943-3944). Laughlin asked the employees about their lack of fall protection, and the employees responded that they were given safety harnesses but had nowhere to tie them (Tr. 3943). Charles Wallace testified that he wore his safety harness while he was on the ladder but was not tied off (Tr. 202). Project manager Jalowiec told Laughlin that he instructed employees to wrap their lanyards around the columns. When Laughlin asked how they were supposed to tie to the columns they wrapped, Jalowiec did not respond (Tr. 3944).

BTC asserts that there was no proof of this violation because the citation refers to level 2 and Laughlin testified about the first floor/concourse level. Federal Rule of Civil Procedure 15(b) allows amendment to the pleading to conform to the evidence and states in pertinent part:

> (b) Amendments to Conform to the Evidence. When issues not raised by the pleadings are tried by express or implied consent of the parties, they shall be treated in all respects as if they had been raised in the pleadings. Such amendment of the pleadings as may be necessary to cause them to conform to the evidence and to raise these issues may be made upon motion of any party at any time, even after judgment; but failure so to amend does not affect the result of the trial of these issues . . . .

Consent to try an unpleaded issue "can be found only when the parties knew, that is, 'squarely recognized,' that they were trying an unpleaded issue." *Armour Food Co.*, 14 BNA OSHC 1817, 1824 (No. 86-247, 1990); *see also Nordam Group*, 19 BNA OSHC 1413 (No. 99-0954, 2001) (motion to amend is granted since employer recognized and consented to trying unpleaded issue of whether it ensured employees used eye protection rather than actual issue that employer failed to

provide face shields or goggles). In this case BTC "squarely recognized" that it was trying the issue of fall protection at wall openings, whether it was on the first floor or the second floor.[11]

Even though the citation was not precise in this respect and the incident actually occurred on the first rather than the second floor, BTC does not suffer prejudice. "To determine whether a party has suffered prejudice, it is proper to look at whether the party had a fair opportunity to defend and whether it could have offered any additional evidence if the case were retried." *ConAgra Flour Milling Co.*, 15 BNA OSHC 1817, 1822 (No. 88-2572, 1992). BTC specifically cross-examined both Wallace and Laughlin about the ladder incident and available fall protection. BTC presented rebuttal evidence related to how the employees were supposed to tie off. Furthermore, BTC did not seek to bring additional evidence on the issue during the extended hearing. The citation is amended *sua sponte* to include reference to the stadium's first level.[12]

The 15-foot wide wall opening on level 1 was not protected to a height of 42 inches, and employees did not use personal fall protection. A 20-foot fall could result in serious injury or death. Instance (c) of the violation of § 1926.850(g) is affirmed as serious.

Citation No. 2, item 2b – instance (a): Floor Holes. Laughlin stated he saw (and the videotape shows) expansion joint openings in the floor on the third level (Exh. C-3 at 7:50; Tr. 3993). Laughlin measured the expansion joint openings to be 31 feet long and 4 inches wide, running the entire length of the joint (Tr. 3993). Expansion joints were placed approximately every 100 feet on every level and on the ramps. As part of the demolition process, the metal on which the rubber originally rested was removed from the joints, leaving the rubber without support. Laughlin saw that some of the rubber remained in the recessed expansion joint and some was removed. None of the expansion joints Laughlin saw during his inspection were appropriately covered (Exh. C-3 at 8:02; Tr. 3993-3995, 3999-4000). CAP's McCall testified that on January 29, 2001, on the second

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[11] Witnesses noted a common confusion about which number corresponded to which level/floor. A few considered the basement to be the first level. Throughout the testimony and during the inspection, it was not easily determined which number of the level/floor someone worked or walked on. For example, McCall of CAP referred to the stadium levels differently, calling Level 100 the second floor, Level 200 the third floor, etc. (Tr. 404).

[12] The Review Commission has affirmed *sua sponte* amendment to conform to the evidence. *See Morrison-Knudson Co./Yonkers Contracting Co.*, 16 BNA OSHC 1105, (No. 88-572, 1993) and *A. L. Baumgarter Construction, Inc.*, 16 BNA OSHC 1995, 1997 (No. 92-1022, 1994) (post-hearing *sua sponte* amendment by judge permitted).

and third levels, he also observed the open expansion joints running the entire width of the concourse. He saw that debris was in and around the openings (Tr. 249, 282).

The videotape shows that open drain holes also were present on the third level. Drain holes were placed throughout the stadium (Exh. C-3 at 7:45; Tr. 3987, 3990). Laughlin measured the drain holes to be 8 inches in diameter (Tr. 3987-3988). As with the expansion joints, the brass had been removed from the drain holes early in the project as part of the salvage process. None of the drain holes Laughlin saw were covered (Tr. 3990, 3992). As early as January 4, 2001, open drain holes were noted as a "trip hazard" on Pickard's daily safety report (Exh. C-29). AMEC's Kirby expressed to Stern and Pickard his concern about the safety hazard of having uncovered drain holes (Tr. 632-633). Laborer Roberts stated that "[w]e were all working around these small holes" on the second, third, and fourth levels (Tr. 128-129). Laborer Brown testified that throughout the stadium many uncovered floor holes existed which needed to be covered to prevent people from falling into them (Tr. 1188). Business Agent Irlbacher had noted that the uncovered, 8-inch drain holes were about 25 to 35 feet apart on every floor where the men traveled to get to work areas (Tr. 1097-1098).

BTC argues that it was impossible to cover the expansion joints and drain holes because bobcats would rip off the covers. According to Skinner, the expansion joints ran from the "D" row to the "C" row columns and were originally filled with flexible rubber. Skinner testified that he did not intend to remove the rubber from the expansion joints. When the bobcats ran over them, the rubber came out. When he tried to "Hilti" (a powder actuated nailgun fastener) wood over the joints, the bobcats tore up the wood (Tr. 4419-4420). As for the drain holes, Skinner said that they existed between "C" and "D" row columns on all levels (Tr. 4416). When the drain covers were removed, they left a 4-inch deep hole and an outlet for water. According to Skinner, when BTC tried to cover the holes with plywood, the bobcats "kept tearing [the plywood covers] up." BTC then decided that it would fill the drain holes with cinder block debris (Tr. 4416, 4417).

Infeasibility Defense

To establish this affirmative defense, an employer must prove that:

> (1) the means of compliance prescribed by the applicable standard would have been infeasible under the circumstances in that (a) its implementation would have been technologically or economically infeasible, or (b) necessary work operations would have been technologically or economically infeasible after its implementation, and (2) either (a) an alternative method of protection was used, or (b) there was no feasible alternative means of protection.

Armstrong Steel Erectors, Inc., 17 BNA OSHC 1385, 1387 (No. 92-262, 1995).

For the first element of the defense BTC must prove that properly covering the expansion joints and holes was technologically and economically infeasible. Employers are expected "to exercise some creativity in seeking to achieve compliance" with the standards. *Gregory & Cook, Inc.*, 17 BNA OSHC 1189, 1191 (No. 92-1891, 1995). BTC did not present any evidence that covering the joints or holes was infeasible, and it corrected this violation during the OSHA inspection. The second element of the defense is to show that no alternative means of protection was feasible. It is not enough to say that the bobcats dislodged wood placed on top of the holes. BTC sought no alternate means of covering the holes, such as recessing a plywood cover or designing protection for such a common, low-tech demolition problem. The employer "must show that it has explored all possible alternate forms of protection" to prove this element of infeasibility. *State Sheet Metal Co.*, 16 BNA OSHC 1155, 1160 (Nos. 90-1620 and 90-2894, 1993). BTC explored none. Its infeasibility defense fails.

BTC either left open the expansion joints and drain holes or filled them with debris. It did not properly secure and cover holes with a material substantial enough to support the anticipated load (a bobcat or an individual). An employee could trip and fall when stepping into the open expansion joints or drain holes. Broken bones could result. Also, if an employee kicked or pushed debris into the joint, the debris could fall onto employees working on the floor below (Exh. C-3 at 7:58; Tr. 3997). Instance (a) of the violation of § 1926.850(i) is affirmed as serious.

Citation No. 2, item 2b – instance (b) and instance (c): Floor Holes.

Instance (b): Charles Wallace testified that he, his brother Clifford, and Joe Japulski were wrapping columns on January 16, 2001, when he fell up to his crotch into a hole that was previously covered with a piece of tin (Exh. C-2; Tr. 158-159). Wallace had not noticed the tin cover as he performed his work. Japulski grabbed Wallace under the arm as he went into the hole. Japulski and his foreman Bill (Palmer) pulled him out of the hole. Although black and blue, Wallace was not seriously injured. Wallace stated that the hole was about 3 feet by 3 feet and was 15 to 20 feet above the floor below (Tr. 159-161). Wallace estimated that the hole he stepped into was about 1 to 2 feet from the column he wrapped (Tr. 220).

Instance (c): On January 17, 2001, David Roberts was wrapping columns on the second level with laborers Tony Camora and Keith Harley (Tr. 60). Camora was standing on a chair in

order to put the fabric at the top of the column (Tr. 135, 142). Roberts stated that as he came around the column to give the fabric to Camora, he stepped on a large pile of concrete blocks. As soon as he put his weight on it, the blocks fell through the floor (Tr. 61). Roberts stated that he caught himself on the edge and held onto the fabric while he hung in the air as the concrete block pounded the back of his leg (Tr. 61). Co-workers pulled Roberts out of the hole (Tr. 61). The hole was 30 to 40 feet above the floor below (Tr. 61). Roberts was seriously injured with torn tendons in his ankle, deep bruises, and a cracked tooth (Tr. 61). After surgery and eight months of physical therapy, he still used a cane (Tr. 67).

These incidents with Wallace and Roberts were not the only ones to highlight the extent of the problem before OSHA's inspection. Kenneth Harash, a laborer for 13 years, began work at the stadium for BTC. After a week he was reassigned to CDI (Tr. 1007-1008). Harash testified that about the third week of January, he saw a 2 foot by 2 foot hole covered by a Styrofoam cooler top with the word "hole" written on it. The Styrofoam was not secured over the hole (Tr. 1016, 1017). Harash recalled that this hole was "right up against the column" where they were drilling so "your feet would have been right on the edge" of the hole (Tr. 1016). Also, a week or so after his fall, Wallace came across a hole on the second level which was covered with an unsecured piece of ¼-inch thick plywood. Some debris was around the hole and cover (Tr. 162). Wallace told his boss that a ¼-inch piece of plywood was not going to stop somebody from falling through it (Tr. 163).

BTC contends that the holes into which Wallace and Roberts fell were not readily apparent. "The test for knowledge is whether an employer knew, or with the exercise of reasonable diligence could have known, of the violative condition." *Revoli Construction Co.*, 19 BNA OSHC 1682, 1684 (No. 00-0315, 2001). "Reasonable diligence includes 'the obligation to inspect the work area, to anticipate hazards to which employees may be exposed, and to take measures to prevent the occurrence.'" *Halmar Corp.* 18 BNA OSCH 1014, 1016 (No. 94-2043, 1997).

BTC created the floor holes around the columns when it had the ductwork removed. It later assigned work which required employees to walk around floor holes as they handled the fence wire and fabric. BTC did not inspect those areas for hazards. An employer "must make a reasonable effort to anticipate the particular hazards to which its employees may be exposed in the course of their scheduled work." *Automatic Sprinkler Corp. of American,* 8 BNA OSHC 1384, 1387 (No. 76-5089, 1980). BTC had no workrule designed to prevent falls into floor holes. Knowing of

the hazard and having the ability to abate it, BTC failed to take measures to avoid the foreseeable hazard. (*See Pennsylvania Power & Light Co.*, 737 F. 2d 353 (3rd Cir. 1984).) Its employees generally knew about open floor holes, and with reasonable diligence, BTC could have discovered their existence (and covered them). Instances (b) and (c) of item 2b (§ 1926.850(i)) are affirmed.

Willful Classification of §1926.850(i)

The Secretary recommended that Citation No. 2, item 2b (instances (a), (b), and (c)) be classified as willful. She contends that BTC had a heightened awareness that the floor holes constituted hazards and intentionally disregarded the requirement to cover them. At a minimum, she argues, BTC was indifferent to the safety of employees working near the hazard.

"It is well settled that a willful violation is one committed with intentional, knowing or voluntary disregard for the requirements of the Act, or with plain indifference to employee safety." *Continental Roof Systems, Inc.* 18 BNA OSHC 1070, 1071 (No. 95-1716, 1997). "A willful violation is differentiated by heightened awareness of the illegality of the conduct or conditions and by a state of conscious disregard or plain indifference when the employer committed the violation." *Hern Iron Works, Inc.*, 16 BNA OSHC 1206, 1214 (No. 89-433, 1993). "An employer who knows an employee is exposed to a hazard and fails to correct or eliminate the hazardous exposure commits a willful violation if the employer knows of the legal duty to act, for an employer's failure to act in the face of a known duty demonstrates the knowing disregard that characterizes willfulness." *Branham Sign Co.*, 18 BNA OSHC 2132, 2134 (No. 98-752, 2000). The Commission holds that a supervisor's willful actions may be imputed to an employer as would a supervisor's knowledge of the violative conditions. *Tampa Shipyards, Inc.*, 15 BNA OSHC 1533, 1541 (No. 86-360, 1992). "The key to whether a supervisor's actions are willful is the supervisor's *state of mind.*" *George Campbell Painting Corp.*, 18 BNA OSHC 1929, 1934 (No. 94-3121, 1999).

"A willful charge is not justified if an employer has made a good faith effort to comply with a standard or eliminate a hazard even though the employer's efforts are not entirely effective or complete." *Valdek Corp.*, 17 BNA OSHC 1135, 1136 (No. 93-0239, 1995), *aff'd* 73 F.3d 1466 (8th Cit. 1996). The test of good faith is an objective one, that is "whether the employer's belief concerning the factual matters in question was reasonable under all the circumstances." *Morrison-Knudson Co.*, 16 BNA OSHC at 1124. As discussed, BTC had specific knowledge that the floor holes presented hazards and that they were causing injuries. BTC knew that two of its employees

fell into floor holes, Wallace on January 16 and Roberts on January 17, 2001. BTC foreman Bill Palmer helped pull Wallace out of one hole. When Wallace complained to Pickard, Pickard advised that he was working to cover the holes (Tr. 184). Laborer Brady stated that employees brought up the fact at the safety meetings that some open floor holes were covered but others were not (Tr. 767-768). The floor holes were apparent and existed uncovered for most of the month of January. Even when BTC covered floor holes with Styrofoam, thin plywood, or tin, the materials were not sufficiently strong or properly secured.

AMEC's Kirby specifically pointed out the uncovered drain holes to Stern and Pickard around January 13, 14 or 15, 2001, and sent a letter to that effect on January 23, 2001 (Exh. C-7; Tr. 632-633). For more than 22 years BTC had been in the demolition business, and it had extensive experience with major demolition projects. It would know how the work was sequenced and which hazards were created thereby. BTC hired O'Rourke as its safety and health consultant to afford it one full-time safety officer, Pickard. Tim O'Rourke and Pickard agreed that when a job creates a safety hazard, the safety measure to correct the hazard "could be done consecutively or jointly" (Tr. 1752).

Pickard was aware of the hazards of the open floor holes, as noted in his daily safety report of January 4, 2001, which stated, "drainage holes within the deck need to be designated with cones or sealed up, trip hazard" (Exh. C-29; Tr. 1946, 2011). The employees' testimony demonstrates that this was not done. By January 29, 2001, the drain holes and expansion joints were still uncovered. Although Pickard and Skinner regularly met to review his safety concerns, Pickard's recognition of safety hazards did not lead to BTC's correction of the problem. BTC had a heightened awareness of the hazard but showed a complete lack of concern to correct it.

The Secretary established that BTC intentionally disregarded the requirement to adequately cover floor holes or was indifferent to the safety of employees exposed to that hazard. Item 2b (§ 1926.850(i)) is affirmed as willful.

Citation No. 1, items 4b and 4c
Alleged Violation of §§ 1926.502(b)(2)(i) and 1926.502(b)(3): Guardrails

The Allegations

These items are grouped because they relate to multiple deficient guardrails. At item 4b the Secretary alleges that: (instance (a)) on the concourse level of the stadium the guardrail lacked

midrails and toeboards;[13] and (instance (c)) on the third level at the interior area at Column 20 the guardrail lacked midrails and toeboards. Section 1926.502(b)(2)(i) provides:

> (b) *Guardrail systems.* (2) Midrails, screens, mesh, intermediate vertical members, or equivalent intermediate structural members shall be installed between the top edge of the guardrail system and the walking/working surface when there is no wall or parapet wall at least 21 inches (53 cm) high. (i) Midrails, when used, shall be installed at a height midway between the top edge of the guardrail system and the walking/working level.

At item 4c the Secretary alleges that four purported guardrail systems were deficient: (instance (a)) on the concourse level a two-by-four guardrail (without midrails or toeboards) was built with split and damaged wood, which would not withstand even moderate force without collapsing; (instance (b)) on the second level of the stadium at Column 4, a guardrail was constructed by using wooden sticks placed in plastic trash cans with caution tape wrapped around them; (instance (c)) on the third level at Column 20 a makeshift guardrail was constructed using scrap 8-inch concrete block with metal pipe placed in the block and a piece of caution tape wrapped around the pipe; and (instance (d)) on the fifth level at Columns 40 and 33, a two-by-four guardrail system was constructed of split and splintered wood, with unsecured uprights and protruding nails, which would not withstand force without collapsing. Section 1926.502(b)(3) provides:

> (b) *Guardrail systems.* (3) Guardrail systems shall be capable of withstanding, without failure, a force of at least 200 pounds (890 N) applied within 2 inches (5.1 cm) of the top edge, in any outward or downward direction, at any point along the top edge.

Discussion

Citation No. 1, item 4b – instance (a): Midrails and Toeboards. Laughlin stated he saw that at the exterior of the concourse level between Gates A and B, the "guardrail system" around an open elevator shaft had only caution tape where the midrail should have been installed. The videotape shows this and that no toeboard was in place (Exh. C-3 at 2:19; Tr. 3949, 3950). The elevator shaft was approximately 8 feet by 9 feet and was 15 feet deep (Tr. 3949, 3954). Laughlin measured the distance between the guardrail and the shaft opening and found it to be a little less than 3 feet all the way around (Exh. C-3 at 2:22; Tr. 3953). The upright of the guardrail was split, and Jalowiec told

[13] Instance (b) was withdrawn by the Secretary.

Laughlin that the guardrail had been struck the night before by an equipment operator and had not yet been repaired (Exh. C-3 at 2:26; Tr. 3951, 3954).

Laughlin observed employees Toboloski and the two Wallace brothers walking within 5 to 10 feet of this floor opening as they accessed their work area 50 feet away (Exh. C-3 at 2:31; Tr. 3950, 3951, 3954). Laughlin also saw a mule operator on his equipment traveling through the area of the floor opening (Tr. 3950).

Skinner testified that the safety crew was instructed to construct guardrails with a toprail at 42 inches, a midrail at 24 inches, and a toeboard (Tr. 4554). Skinner, who stated he made daily "tours" with Pickard to look at the work, testified that every guardrail system he saw had both midrails and toeboards (Tr. 4571-4572, 4574, 4576). BTC argues that the guardrail in question had been properly constructed. Since it had been damaged only the night before, according to BTC, using caution tape was an appropriate temporary remedy. BTC also contends that since its work was completed in that area, no employees would be exposed to the fall hazard from the shaft opening.

Laborer Brown testified that the safety crew used caution tape instead of midrails throughout the stadium (Tr. 1187). The videotape shows the purported guardrails, without midrails or toeboards, in plain view. Using caution tape to replace a midrail defeats the purpose of the requirement. Four employees were observed on the floor and were exposed to the hazard. An employee could fall underneath the top rail (which was held in place by a split upright) and into the elevator shaft. A fall of 15 feet could result in serious injuries and possibly death. Instance (a) of the violation of § 1926.502(b)(2)(i) is affirmed as serious.

Citation No. 1, item 4b – instance (c): Midrails and Toeboards. Laughlin stated he saw that on the third level on the interior side of the stadium, an orange painted two-by-four guardrail system was erected around an open elevator shaft. The videotape shows that BTC installed only a toprail, not midrails or toeboards, and had not attached one of the supports to the floor (Exh. C-3 at 14:30; Tr. 4006, 4008, 4009). Laughlin stated that he was able to lift the support 3 to 4 inches with ease (Tr. 4009). The open elevator shaft was 12 inches from the nearby column. The fall distance was approximately 30 to 45 feet (Tr. 4008, 4011). Laughlin asked Schulick why BTC would put up a "makeshift" guardrail. Schulick replied that Column 20 had to be rewrapped because an employee had set the wrapping fabric on fire (Exh. C-3 at 14:43; Tr. 4007-4008).

BTC asserts that Laughlin was on level 4, not level 3, and that since the work on level 4 was complete, no employee would be exposed to the hazard (Tr. 4007). Laughlin was clear that he was on the third level with Schulick and other members of BTC's management. Laughlin's testimony was credible and was not contradicted by other testimony. It was reasonably predictable that employees would have access to the improperly guarded fall hazard. BTC employees would rewrap the column, and CDI employees would inspect and load explosives into the column, which was 12 inches from the shaft opening. A fall of 30 to 45 feet would likely result in death. Instance (c) of the violation of § 1926.502(b)(2)(i) is affirmed as serious.

Citation No. 1, item 4c – instance (a): Force of 200 Pounds. As discussed under Citation 1, item 4b, instance (a) (*supra)*, this guardrail was without midrails or toeboards. According to Laughlin it was defective in other ways as well. Both the base lumber and the uprights were constructed of split wood with protruding nails. While the base was "hiltied" to the floor (fastened with a powder actuated Hilti gun), the fact that it was split away from the fastening anchor weakened the support (Tr. 3955, 3957). The entire structure was unsubstantial. Laughlin moved the toprails on both sides back and forth "with little or no pressure" (Tr. 3955, 3956). The poor construction of a guardrail on this floor had been noted earlier in the day. In response to employee complaints, McCall was sent to observe conditions at the stadium. McCall saw two-by-four lumber guardrails around floor openings on the concourse level. McCall moved the toprail as far as he could extend his arm, demonstrating that the toprail was not rigid (Tr. 244-245). He met with BTC's Stern shortly after he completed his review, but without effect (Tr. 251-252).

According to Skinner, damage to guardrails around the floor openings occurred on several occasions when they were hit by a bobcat or other equipment operator (Tr. 4572-4573). As discussed, the defects of this guardrail supposedly resulted when it was hit the night before (Tr. 3951, 3954). The obviously poor construction of the guardrail systems in the stadium and the fact that there was sufficient time for others to question the guardrail construction on that floor, makes BTC's explanation less than convincing. Even if true, it provides no excuse for noncompliance. If BTC knew the guardrail was damaged by the accident, it should have rebuilt it within the time afforded.

Guardrails must be able to withstand 200 pounds of force to prevent falls. This guardrail, which could withstand little or no pressure by hand, would not protect an employee who leaned or

fell into it. Four employees (Toboloski, the two Wallaces, and the mule operator) were exposed to 15 foot falls into the shaft. Item 4c, instance (a) (§ 1926.502(b)(3)) is affirmed as serious.

Citation No. 1, item 4c – instance (b): Force of 200 Pounds. Laughlin stated he saw (and the videotape shows) that on the second level of the stadium an open elevator shaft was surrounded by trash cans. Each held a stick, and yellow caution tape was strung between the sticks. Laughlin observed two employees on the floor as they came up the ramp and walked away from the inspection group (Exh. C-3 at 5:41; Tr. 3969-3971). Laughlin asked Schulick why the opening was not protected by a guardrail. Schulick replied that no one was to be back on that level again. BTC contends that no employees were exposed to the hazard. The Secretary argues that because two employees were walking on the second level and because a wrapped column was close to the opening, employees were exposed to a hazard.

Although it is obvious that sticks and caution tape cannot withstand 200 pounds of force, it is only speculative that employees would be exposed to the hazard. Laughlin admits that the two employees he saw on the second level were approximately 150 feet from the opening and were not within the zone of danger (Tr. 3970, 3972). It is unknown when the column was wrapped, who wrapped it, or whether the elevator shaft was opened at that time. Instance (b) of the violation of § 1926.502(b)(3) is vacated.

Citation No. 1, item 4c – instance (c): Force of 200 Pounds. Laughlin stated he saw (and the videotape shows) that on the third level at Column 20, a "guardrail" around an open elevator shaft consisted of caution tape wrapped around a piece of rebar sticking out from a kneewall. The caution tape extended to and was wrapped around a pipe inside a stack of concrete blocks. On the other side of the shaft, caution tape hung down to the floor. The shaft hole was within 10 feet of the ramp (Exh. C-3 at 15:16 and 15:29; Tr. 4013, 4017, 4030).

BTC alleges that since its work was completed on this level, no employees were exposed to the hazard. Laughlin testified that he observed two employees driving a mule on the ramp who stopped within 5 feet of the floor opening (Tr. 4015). When Schulick advised Laughlin that no one would work on the floor again, Laughlin pointed to the employees on the mule. These CDI employees were inspecting the columns. Laughlin also noted that CDI employees still had to load the explosives into the columns (Tr. 4015).

Caution tape is not a substitute for guardrails. The employees on a mule were within 5 feet of the opening and their duties would take them to the column. A fall into the open elevator shaft would most likely result in serious injury or death. Instance (c) of the violation of § 1926.502(b)(3) is affirmed as serious.

Citation No. 1, item 4c – instance (d): Force of 200 Pounds. Laughlin stated he saw that on the fifth level near Columns 33 and 40, an orange painted toprail and midrail were erected around a 60-foot elevator shaft. The videotape shows that the toprail was constructed with split wood and had nails protruding through the wood. Multiple uprights were not secured to the floor. Laughlin easily moved the guardrail with his hand about a foot back and forth. One of the toprails was lying on the floor (Exh. C-3 at 19:04; Tr. 4033-4034). Laughlin testified that part of the guardrail was 3 feet from the floor opening and part was right at the edge (Tr. 4034). The columns had already been wrapped (Tr. 4036). The two CDI employees Laughlin observed on a mule drove by the inspection group and parked next to the guardrail. They explained to Laughlin that they were inspecting the columns to give BTC a punch list. When completed, the punch list would advise BTC whether the columns needed to be wrapped, rewrapped, and/or drilled before explosives could be placed in the columns (Exh. C-3 at 19:11; Tr. 4034-4035, 4037). Explosives still needed to be placed into the drilled holes in the columns.

Two CDI employees were exposed to this hazard. Under the multi-employer worksite doctrine, as the controlling and creating contractor, BTC is charged with their exposure. The guardrail, which easily could be pushed back and forth by hand, could withstand little or none of the required 200 pounds of force. The consequences of falling 60 feet would likely be death. Instance (c) of the violation of § 1926.502(b)(3) is affirmed as serious.

Citation No. 2, item 2a
Alleged Violation of § 1926.850(h) (or in the alternative, § 5(a)(1)): Falling Debris

The Allegations

At Citation No. 2, item 2a, the Secretary alleges that: (instance (a)) BTC failed to barricade areas where an escalator and concrete block and debris was dropped from the fifth level onto the second level where employees were wrapping columns and traveling through the areas; (instance (b)) BTC failed to barricade an area where an escalator, concrete block and debris were dropped from two floors above employees who were wrapping columns; (instance (c)) BTC failed to

barricade an area where employees were wrapping columns on level 2 and where elevator doors and a steel I-beam attached to the wall by one bolt were hanging from level 4 directly above the employees; and (instance (d)) BTC failed to barricade an area where concrete block, two elevator doors, a steel I-beam, and electrical wiring and panels were hanging directly above an area where employees traveled to access their work stations. Section 1926.850(h) provides:

> (h) When debris is dropped through holes in the floor without the use of chutes, the area onto which the material is dropped shall be completely enclosed with barricades not less that 42 inches high and not less than 6 feet back from the projected edge of the opening above. Signs, warning of the hazard of falling materials, shall be posted at each level. Removal shall not be permitted in this lower area until debris handling ceases above.

Or in the alternative, § 5(a)(1) provides:

> (a) Each employer – (1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees.

Discussion

Application of the Standard. The Secretary alleges this item as a violation of § 1926.850(h), or in the alternative, as a violation of § 5(a)(1), the general duty clause. The general duty clause was enacted to cover hazards that are not addressed by a specific standard. If a specific standard applies to the conditions, it preempts § 5(a)(1). BTC argues that § 1926.850(h) does not apply to the escalator and elevator drops because these holes were not specifically created to facilitate debris removal. Contrary to the argument, in view of the fact that debris from the escalators and elevators was "dropped through holes in the floor," § 1926.850(h) applies to the conditions cited. As noted *infra*, the elevator shafts were particularly unsafe because their debris, such as doors and cables, was left dangling precariously inside the shafts. Whether or not BTC specifically created the escalator and elevator holes for removal of debris is irrelevant. BTC specifically *used* the holes for removal of the debris.

Citation No. 2, item 2a – instance (a): Barricade and Warning Signs for Escalator Drop. Based on Laughlin's investigation, he determined that an escalator had been dropped from level 5 onto level 4, and only caution tape had been used as a warning of the drop (Tr. 4052, 4054). BTC contends that there were no escalators on the fifth floor that could drop to the fourth floor. Skinner

stated that the escalators were on the first through the fourth floors, not on the fifth floor, a fact which Sedlar supported (Tr. 462, 4402, 4403, 4408). Laughlin appeared confused about the allegations of this escalator drop. The Secretary failed to fully articulate her proof. She presented insufficient evidence that employees were exposed to the hazard of falling debris from an escalator hole on the fifth level, which was unbarricaded below. Instance (a) of the violation of § 1926.850(h) is vacated.

Citation No. 2, item 2a – instance (b): Barricade and Warning Signs for Escalator Drop. Roberts stated that on January 17, 2001, he was wrapping columns on the second level when he saw two workers burning out an escalator. He asked them if they were going to barricade the escalator hole (Tr. 57). Roberts testified the men told him that they would barricade at the end of the day. When Roberts requested them to barricade the hole sooner than that, they returned in about 30 to 45 minutes to put caution tape around the shaft. Roberts stated that he was working within 8 feet of the approximate 15 by 6 foot opening, which had a drop of 30 to 40 feet from his floor (Tr. 58). At that morning's safety meeting, Roberts and the other employees were told to stay away from the escalators because they were going to be dropped that day (Tr. 59-60). Roberts never saw any barricades, other than caution tape, or any warning signs around the escalator holes (Tr. 58, 60).

Charles Wallace testified that around January 20, 2001, he, his brother, and Joe Japulski, were wrapping a column when they heard a big bang. Employees from an upper level had dropped an escalator onto their level about 20 to 25 feet away from where they were working (Tr. 167-168). Wallace stated that no one mentioned at that morning's safety meeting that an escalator would be dropped. Nor was he given more immediate notice. No warning sign, no caution tape, and no barricades had been placed around the escalator drop area (Tr. 168). After the escalator fell, Wallace described how "we ran over and w[ere] yelling at the guys afterwards. . . Hey, at least you could have warned us that something was coming down" (Tr. 168). Wallace testified that his foreman Bill Palmer simply said that the burners were unaware men were working below (Tr. 169).

Grondziowski stated that his third or fourth week on the job he was on the second level and walked by an escalator to retrieve a fuel can. He saw sparks from above, and then the escalator dropped about 15 feet from the level above. It left a pile of debris about 4 feet high (Tr. 814, 846, 863). No caution tape had been placed around the area and no safety monitor was at the escalator,

so he assumed that it was safe to walk by (Tr. 813, 815). Grondziowski told his steward and foreman about the incident (Tr. 815).

Olbeter testified that he and Ace Bertino were assigned to torch burn out the escalators. The first time they burned an escalator, it dropped and scared them. He did not know if anyone was working below them at that time (Tr. 968-969). After the first escalator dropped, he and Ace discussed this situation with their union steward Clayton Bertino (Ace's father). They decided that they would "barricade" the next escalator using caution tape. Olbeter stated that no one from BTC management was involved in this decision (Tr. 1002). Based on this and other information, Laughlin concluded that debris from the escalators was dropped to areas below which were not barricaded and that no warning signs were posted when escalator holes were being used as material drops (Tr. 4050, 4052). Although caution tape was ubiquitous at the site, it constituted neither a barricade nor an appropriate warning sign.

BTC's Skinner contended that the escalators were alternating, which meant that an escalator could only drop one floor down (Exh. R-42; Tr. 4410). According to Skinner, once the escalator was cut, it would drop one floor below, or if it did not drop, it would be pulled down from the floor below (Tr. 4404-4405). He testified that spotters with radios were stationed on the floor from which the escalator was cut and on the floor to which the escalator would be dropped (Tr. 4406, 4578). Skinner believed that employees were warned in the morning meeting whenever an impending escalator drop was planned and that the area was flagged 8 to 12 feet back from the hole (Tr. 4406).

Contradicting Skinner's testimony that spotters were used, experienced laborer Matthew Nagy stated that while he burned the escalators, "[w]e weren't allotted the manpower to man somebody to patrol that area while we dropped that escalator" (Tr. 1548, 1557). Nagy used caution tape around the escalator (Tr. 1557). The credible testimony is conclusive that escalators were dropped to areas where BTC had not erected barricades. If spotters were used, they were not a common occurrence. In any event, having an employee watch and warn that escalators are falling fails to comply with the standard. It puts the monitor into the dangerous situation of watching in close proximity while heavy debris falls into a shaft, creating the possibility of being hit by ricocheting debris (Tr. 4054).

Caution tape put up by employees on their own initiative is far from affording a 42-inch high barricade, constructed 6 feet back from the edge of the opening, which the standard requires.

Barricades protect employees from being hit by falling or ricocheting debris. Additionally, it is undisputed that no warning signs were posted to warn that debris might soon be falling. At least five employees were exposed to the falling debris from the escalator openings. Instance (b) of the violation of § 1926.850(h) is affirmed.

Citation No. 2, item 2a – instance (c): Barricade and Warning Signs for Elevator Shaft. Harash testified that on January 27, 2001, about 7:30 a.m., he was on the first level near Gate "D" warming up his drill compressor and a JLG lift when "I head some loud noises where the elevator shaft was and I s[aw] a door go by and then a bunch of cable c[a]me down" (Tr. 1013). The door and cable fell to the basement (Tr. 1013). Harash was 30 yards from the shaft (Tr. 1013). He stated that the elevator shaft had no barricade, no warning signs, and no spotters (Tr. 1015, 1025).

Laughlin stated he saw (and the videotape shows) that on the fourth level looking in an elevator shaft up to the fifth level, two I-beams had pulled away from the wall and were hanging by one bolt each. Wires and cables also hung in the shaft (Exh. C-3 at 16:07 and 16:47; Tr. 4018). Laughlin saw that there were no warning signs or barricades around the elevator shaft holes (Tr. 4003).

The stadium contained 18 elevators. Skinner testified that the elevator cars were taken to the basement first and then the rest of the elevator was demolished (Tr. 4401, 4402). BTC's assertion that it used caution tape around the shaft and placed a spotter on each floor when the elevator rails, the doors, and the frames were dropped down is not credited. At least one employee saw debris fall and observed no spotters, barricades, or warning signs around the cited elevator shaft. Even if BTC's assertion were correct, its purported action in no way complies with the requirements of the standard. Nevertheless, the item is vacated. The Secretary failed to show that employees, including those wrapping columns on the second level, were exposed to the hazard of hanging debris from the elevator shaft. Instance (c) of the violation of § 1926.850(h) is vacated.

Citation No. 2, item 2a – instance (d): Barricade and Warning Signs for Elevator Shaft. The union's Irlbacher testified that around January 16, 2001, as he looked up from the third level, he saw an elevator door on the fourth level hung from a ½ to ¾-inch cable (Tr. 1099-1101). He saw no barriers or warning signs around the area below it. He observed workers in the area traveling from one point to another (Tr. 1102). Laughlin stated he saw (and the videotape shows) that an open elevator shaft on the fourth level had an elevator door, concrete, wires, and pipes hanging inside the

shaft (Exh. C-3 at 13:27; Tr. 4000-4001). The videotape shows that an I-beam hung in the elevator shaft. The I-beam was attached to the wall by only one bolt (Exh. C-3 at 13:45; Tr. 4005). When he looked down, Laughlin saw employees on the level below near the elevator shaft hole (Tr. 4005).

BTC's contention that it used spotters at the escalator and elevator drops cannot be credited; even if it could, that measure fails to comply with the standard and creates additional dangers. BTC also argues that the elevator holes in the videotape are surrounded by some type of guardrail. A guardrail system (especially if defective) is not a barricade or a barrier appropriate to a drop area (Tr. 4051). Instance (d) of the violation of § 1926.850(h) is affirmed.

Willful Classification of §1926.850(h)

Citation No. 2, item 2a, is classified as willful. The heavy debris hanging in the elevator shafts was plainly visible and plainly dangerous. BTC previously received complaints concerning the hazards of dropping the escalator and elevators and their debris without taking proper safety precautions. Around January 13, 14 or 15, 2001, AMEC's Kirby pointed out to Stern and Pickard the hazards of loose debris overhead. His letter on January 23, 2001, noted the continuing problem with overhead debris (Exh. C-7; Tr. 632-633). Pickard's daily safety reports dated January 17, 19-24, and 26, 2001, state under "Safety Concerns," "When cutting escalators make sure to implement a way of letting all those in the area know, put watch on all levels" (Exh. C-20 and C-29). The problem had not been corrected by the time of the OSHA inspection.

As stated, BTC had extensive experience with major demolition projects. BTC's management was aware how it dropped the escalators, elevators, and their debris. Its attitude was reflected in Pickard's January 27, 2001, daily safety report. Under "Safety Concerns" Pickard wrote: "Noted hanging cables and door in elevato[r] shaft, brought to the attention of BTC foreman Gregg Smith and Supervisor Jamie Gance their response was to not worry about it, it's all coming down soon" (Exh. C-29). This refrain was repeated throughout the case. BTC apparently considered that the safety requirements for demolition projects differed from those which might be appropriate for other types of construction. The "it's all coming down anyway" attitude negates the existence of OSHA's demolition standards, which were specifically adopted for industry.

The demolition contract required compliance with the OSHA standards (Exhs. C-17 at pp. 2-6, 2-160, and C-5). BTC's health and safety manual restates the standards throughout, including the one for use of barricades when dropping debris. The Secretary is correct that BTC had

a heightened awareness of the hazards of dropping escalators, elevators, and their resultant debris and was plainly indifferent to the safety of the employees exposed to the hazards. The instances of the violation of § 1926.850(h) are affirmed as willful.

Penalty Assessment for Safety Case

The Commission is the final arbiter of penalties in all contested cases. Section 17(j) of the Act requires that when assessing penalties, the Commission must give "due consideration" to four criteria: (1) the size of the employer's business, (2) the gravity of the violation, (3) the good faith of the employer, and (4) the prior history of violations. 29 U.S.C. § 666(j). The Commission has wide discretion in penalty assessment. *Kohler Co.*, 16 BNA OSHC 1769, 1776 (No. 88-237, 1994).

BTC is a medium-to-large company with approximately 211 employees. It is afforded some credit for its size. Within the prior three years, BTC had not been found in serious violation of the OSHA standards. Credit is afforded for its past history. BTC argues that it is entitled to a reduction in the penalties because of its good injury record. According to David Bianchi, BTC beat OSHA's incident (accident) rate for the last 7 to 8 years, and its worker's compensation experience modification rating beat the averages for the demolition industry (Tr. 4704-4708). Yet, the obviousness of the safety hazards and the flagrant method by which many were purportedly addressed does not permit allowance of additional credit for good faith.

The gravity of the violation is the primary consideration. *Trinity Industries, Inc.*, 15 BNA OSHC 1481, 1483 (No. 88-2691, 1992). The gravity of a particular violation "depends upon such matters as the number of employees exposed, the duration of the exposure, the precautions taken against injury, and the likelihood that any injury would result." *J. A. Jones Construction Co.*, 15 BNA OSHC 2201, 2214 (No. 87-2059, 1993). OSHA's assessment of the gravity of the violations is not necessarily this judge's.

OSHA "grouped" many of the violations for penalty purposes. Thus because the violations were related, OSHA recommended only <u>one</u> penalty for the grouped items. OSHA contends that any one of the items supports the recommended grouped penalty but that their combined existence aggravates the danger. This judge agrees that each subitem is not mathematically of equal value but affords some reduction in penalty where a grouped item or instance(s) of an item are vacated. The Act provides that a penalty for a serious violation shall be assessed at up to $7,000 and a willful violation at no less than $5,000 or more than $70,000 (29 U.S.C. § 666).

Penalties for Serious Citation No. 1: The gravity of item 1a and two instances of item 1b is high. Without being notified of the hazard, teams of at least ten to fifteen employees worked for extended periods on or near energized electrical power circuits and charged steamlines. For weeks teams of employees were subjected electric shock, burns, or electrocution. A grouped penalty of $2,250 is assessed. The gravity of items 2a and 2b is relatively high because two employees worked from a less than fully stable mobile scaffold positioned at a column at the edge of the floor where a fall of 27 feet was possible. The more likely fall was 8 feet. Employees reached over and around the column aggravating the gravity of the violation, but the duration was short. A grouped penalty of $2,500 is assessed. The gravity of item 3a, which exposed the same two employees to the same fall hazards, was moderate because the duration of exposure was short and the movement of the scaffold was less likely to result in a fall than would a lack of fall protection. A penalty of $525 is assessed. The gravity of item 3b is low. No penalty is assessed for the failure to lock one scaffold wheel since the other seven wheels were locked. The gravity of item 4a, of two instances of item 4b, and of three instances of item 4c is high. While reaching up and around to wrap columns various employees were subjected to fall hazards of from 15 to 60 feet. The fact that some of the fall hazards only appeared to be guarded and/or had unsubstantial or partial railings aggravated the gravity of the violation because a defective guardrail fosters a false reliance. A grouped penalty of $3,000 is assessed. The gravity of item 6, which involves employees traveling to work stations in the dark, is moderate due to the possibility of employees tripping or falling and sustaining bruises, cuts, and broken bones. Numerous employees were exposed to the hazards for a prolonged duration. A penalty of $2,000 is assessed.

Penalties for Willful Citation No. 2: The gravity of three instances of item 1 (affirmed as serious, not willful) is high. Employees were exposed to fall hazards at wall openings with the possibility of falling from 20 to 60 feet. A penalty of $2,750.00 is assessed. The gravity of two instances of item 2a and of three instances of item 2b is high. Employees were exposed to being hit by dropping machinery and heavy and precariously hanging debris through the escalator and elevator holes. Of equally high gravity because of the pervasive nature of the hazard, employees were exposed to falls (and they did fall) into uncovered or partially covered floor holes, or to having concrete debris fall on them from the floor openings above. Some of the holes were sufficiently large that employees could fall through them 40 feet to the lower level. Numerous employees were

exposed to the hazards for an extended period. Both items are willful. A grouped penalty of $39,000 is assessed.

DOCKET NO. 01-1368 (Health)

Docket No. 01-1368: Citation No. 1 alleges 29 willful violations as follows: Item 1a alleges a violation of § 1926.62(c)(1) for exposing employees to lead at concentrations greater than the "permissible exposure limit" (PEL)of 50 micrograms per cubic meter (50 $\mu g/m^3$)of air averaged over an 8-hour period. Item 1b alleges a violation of § 1926.62(e)(1) for failing to implement engineering and work practice controls to reduce and maintain employee lead exposure below the PEL (permissible exposure limit). Item 1c alleges a violation of § 1926.62(e)(2)(i) for failing to establish and implement a written lead compliance program prior to commencement of cutting and burning operations on lead painted steel. Item 1d alleges a violation of § 1926.62(e)(2)(ii) for its deficient lead compliance plan. Item 2a alleges a violation of § 1926.62(d)(1)(i) for failing to determine if any employee may be exposed to lead at or above the "action level"(AL) of 30 $\mu g/m^3$ of air calculated as an 8-hour time weighted average. Item 2b alleges a violation of § 1926.62(d)(3)(i)(C) for failing to consider employee complaints of symptoms attributable to lead exposure. Item 2c alleges a violation of § 1926.62(d)(3)(iii) for using its National Starch Plant study as "historical data" when that study did not "closely resemble" the conditions of the current project. Item 2d (§ 1926.62(d)(3)(iv)(B)) is withdrawn by the Secretary and is vacated (Tr. 28). Item 2e alleges a violation of § 1926.62(d)(4)(i) for failing to conduct monitoring which was representative of the lead exposure of each employee in the workplace. Item 2f alleges a violation of § 1926.62(d)(8)(i) for failing to notify each employee in writing within 5 working days of the results of an exposure assessment. Item 3a alleges a violation of § 1926.62(d)(2)(v)(A) for failing to provide employees, who were exposed to lead, appropriate respiratory protection as an interim protection. Item 3b alleges a violation of § 1926.62(f)(1)(i) for failing to ensure that employees used respirators whenever their exposure to lead exceeded the PEL. Item 3c alleges a violation of § 1926.62(f)(1)(iii) for failing to provide respirators to employees who requested them. Item 3d alleges a violation of § 1926.62(f)(2)(i) for failing to implement a respiratory protection program. Item 3e alleges a violation of § 1910.134(f)(2) for failing to fit test employees for tight-fitting facepiece respirators. Item 3f alleges a violation of § 1910.134(k)(3) for failing to provide respirator training prior to requiring employees to use a respirator. Item 3g alleges a violation of

§ 1926.62(f)(3)(i) for failing to select the appropriate respirator or combination of respirators corresponding to the degree of lead exposure. Item 4a alleges a violation of § 1926.62(d)(2)(v)(B) for failing to provide appropriate personal protective clothing to employees exposed to lead as an interim protection. Item 4b alleges a violation of § 1926.62(g)(1)(i) for failing to provide appropriate protective work clothing, such as coveralls, for employees exposed to lead above the PEL. Item 4c alleges a violation of § 1926.62(d)(2)(v)(C) for failing to provide change areas for employees exposed to lead as an interim protection. Item 4d alleges a violation of § 1926.62(i)(2)(i) for failing to provide clean change areas for employees whose airborne exposure to lead exceeded the PEL. Item 4e alleges a violation of § 1926.62(d)(2)(v)(D) for failing to provide hand washing facilities to employees exposed to lead as an interim protection. Item 4f alleges a violation of § 1926.62(i)(5)(i) for failing to provide adequate hand washing facilities for employees exposed to lead above the PEL. Item 4g alleges a violation of § 1926.62(i)(3)(i) for failing to provide shower facilities for employees whose airborne exposure to lead exceeded the PEL. Item 5a alleges a violation of § 1926.62(d)(2)(v)(E) for failing to provide biological monitoring for employees until after an employee exposure assessment was performed. Item 5b alleges a violation of § 1926.62(j)(2)(iv)(A) for failing to notify each employee in writing of his or her blood lead level within five working days after the receipt of biological monitoring results. Item 6a alleges a violation of § 1926.62(d)(2)(v)(F) for failing to provide lead training as an interim protection. Item 6b alleges a violation of § 1926.62(l)(1)(ii) for failing to provide a training program for employees who were exposed to lead at or above the AL (action level). Item 6c alleges a violation of § 1926.62(m)(2) for failing to post warning signs when employee exposure to lead exceeded the PEL.

BACKGROUND OF HEALTH CASE

Construction on Three Rivers Stadium began in 1968 and was completed in 1970. It opened on July 16, 1970. The stadium was painted with lead based paint.

Pre-Implosion Burning: As stated, BTC mobilized and began demolition on the site on January 2, 2001. SEA, the Pittsburgh Pirates, and the City of Pittsburgh continued to use offices and facilities. Demolition project manager AMEC planned an auction of stadium seats and other items to the general public (Tr. 661, 663, 709). FreeMarkets auction company conducted the auction on January 15, 2001. The demand for stadium seats was greater than anticipated. In order to make more seats available more quickly, BTC directed laborers to torch burn off the seats (Tr. 1391,

1421). The seats had been painted to correspond to the color-coded levels of the stadium. On the top level of orange seats, for example, four painted bolts held each seat to the floor. All lower rows of seats were fastened to the painted surfaces at the back. The seats and bolts were coated with lead based paint (Exh. C-43; C-46 at BT 83).

The process of burning the seats involved torch cutting off the bolts and screws that held the seats to the floor and to each other. David Roberts, who burned seats for about three days, was "asked to go down and start burning bolts off the bottom of the seats so we could lower the seats down to the stadium" (Tr. 53). Although most of their work was with the box beams, Kevin Rupp was fire watch, while David Pixley burned the bolts and screws that held the seats together (Tr. 1314, 1315, 1356). James Zamaris burned seats for about 8 to10 hours a day for a couple of days (Tr. 1379, 1391). John Zamaris, who burned seats for 8 hours a day for about 4 days, stated that he burned the bolts connected to the cast iron legs on the base of the seats (Tr. 1421, 1425, 1443). After several days of burning seats, the burners were stopped because of a labor dispute with the carpenters, who claimed removing the seats was their work (Tr. 1421).

CDI, the explosives subcontractor, advised BTC that it would have to make slices in the structural steel to facilitate a complete cave-in at the time of the implosion (Tr. 4782, 4784). To perform this work, teams of two laborers were formed: a burner, who utilized a 3-foot oxygen/propane torch, and his fire watch (who occasionally burned to relieve the burner) (Tr. 1308, 1360). One of Richard Olbeter's first assignments was to burn the painted structural beams on the stadium roof. The employees burned "set cuts" (an angled cut) along the expansion joints for the beams.

Beginning on January 10, the burners and their watchers spent 10 hours burning per shift (Tr. 972, 973). For example, Olbeter burned during the weekend shift (Friday, Saturday, and Sunday), 10 hours each day for two weekends. Rupp, who was fire watch for Pixley, did some burning himself when Pixley took a break. Rupp worked with Pixley on the weekend shift for 10 hours each day, for 2 weekends in January (Tr. 1308, 1311, 1361). Rupp stated, "We were putting slices in the main structural beams" on the fifth level to make it easier for the clean-up (Tr. 1309). Rupp described the box beams as "big, huge," at times the steel was "6 inches thick," and was covered with a reddish paint (Tr. 1310). Some of the steel beams were inside the walls behind concession stands or other rooms (Tr. 1372). Rupp testified, "I had to bang a hole through

the wall with a sledgehammer to get to the steel beams, and I would climb in the hole with [the burner]" (Tr. 1368). The area they worked in was about 5 feet by 5 feet (Tr. 1372). Of the 64 beams they burned, they had to climb behind walls 50 to 75 percent of the time (Tr. 1368, 1374).

Monday through Thursday, Matthew Nagy burned the main structural box beams on the roof, which were about 5 feet high and 2 to 3 feet wide. He burned 10 hours a day for 2 to 2½ weeks (Tr. 1551). Nagy testified how, "I would climb inside of them" to burn on the inside of the box beams (Exh. ALJ 1-A; Tr. 1552).

Adrienne (Ace) Bertino burned steel beams on the roof for three weekends, 10 hours a day (Tr. 2523). He climbed out on the beams and cut the expansion joints on the beams, so that they would fall in when imploded (Tr. 2522, 2535).

Post-Implosion Burning: After the implosion on February 11, the structural steel laid in a massive twisted pile on the ground. Teams of employees were assigned to torch cut the steel into smaller sizes in order to load them onto the trucks to be hauled away (Tr. 1524). According to Clayton Bertino, the structural steel on the ground was difficult to burn because the beams were long and had to be reached from a distance, and all four cuts had to be matched. The process took over an hour (Tr. 1523-1524). "Sometimes you would be standing on top [of the steel], and sometimes you would be inside, crawling inside to burn because it was easier" (Tr. 1524). Clayton Bertino, who burned structural steel on February 13 and 14, 2001, stated that his actual burning time was less than the full shift because it took him some time to set up, tear down, and eat lunch (Tr. 1487).

Kevin Opfar testified that he burned structural steel for 10 hours on February 13, 2001 (Tr. 1277). James Zamaris stated that he burned the steel for 10 hours each night on February 13 and 14, 2001. John Zamaris testified that he burned the upper structural steel coated with lead based paint for 10 hours on February 13, 2001 (Tr. 1419-1430). He cut the steel into 10-foot long by 3-foot wide sections because "the machinery [shredders] couldn't chop" it (Tr. 1431).

OSHA's Health Inspection

Pittsburgh avidly followed the progress of the demolition of the Three Rivers Stadium, and local television reports prominently featured the implosion and cleanup. As a part of the contemporaneous coverage, on February 13, 2001, a Pittsburgh evening news program aired footage of a worker torch cutting on a painted steel beam. Smoke fumes were visible. The worker wore no

respirator. Several Pittsburgh OSHA employees and the Area Director viewed the program. The next morning they expressed their concerns about the worker's potential for lead exposure.

On February 14, 2001, Assistant Area Director Edward Selker assigned industrial hygienists (IH) Maria Javorsky Healey and Jan Oleszewski to inspect the demolition project for health hazards (Tr. 3119-2122). On February 15 the two hygienists went to the stadium to begin the inspection, but BTC denied them entry (Tr. 3123). Healey notified Selker of the denial of entry, and Selker attempted to secure permission to inspect the site from owner SEA. When SEA granted permission to inspect, BTC informed the hygienists that it had suspended all burning work for that day. BTC advised OSHA that they could interview the union steward, but none of the other employees. Those interviews indicated that employees had performed pre-implosion torch burning and cutting. OSHA served an administrative subpoena to secure records related to the pre-implosion activities (Tr. 3127).

On February 16, 2001, OSHA obtained an inspection warrant to conduct a full inspection, and the two hygienists returned to the site (Tr. 3126). It was raining, and BTC's new safety consultant advised OSHA that BTC had shut down the burning work until further notice. He agreed that BTC would notify OSHA when burning resumed (Tr. 2693). On February 21 Harry Greenwald (BTC's new project manager who replaced Richard Stern on February 11) notified OSHA that it was ready to return to torch burning operations (Tr. 2699). OSHA arrived at the site to continue its inspection, taking bulk samples, conducting air monitoring, and conducting interviews.

On February 15 and then on February 21, 2001, OSHA and BTC took concurrent bulk paint samples at various locations from the stadium's transition roof to its pedestrian walkway. They tried to sample close to areas where they observed visible burn cuts in the painted steel (Tr. 2677). In addition, on April 18, 2001, Oleszewski took bulk samples from the stadium seats which were stored off site (Tr. 2135).

OSHA and BTC analyzed their bulk samples at different accredited laboratories. The results follow (Exh. C-26, C-46, C-60):

Date	Area Sampled	OSHA Samples - % Lead	BTC Samples - % Lead
2/15/01	Leg column 58	31.2261%	26.8%
2/15/01	North end of column, transition roof to leg	19.1300%	19.5%
2/15/01	Bent between Columns 48 & 49	31.5278%	30.1%
2/15/01	Yellow pedestrian walkway	0.0196%*	0.0238%*
2/21/01	Bulk samples taken from areas where 3 employees air monitored	5.4374%	43.0%**
2/21/01	(Above)	4.0714%	
2/21/01	(Above)	2.2094%	
4/18/01	Near the burned areas of the stadium seats	3%; 8%	

***** According to Healey, the yellow pedestrian walkway was a new addition to the stadium (Tr. 2682).

****** The Secretary's expert witness John Cignatta, is a licensed professional engineer specializing in environmental engineering, who for the past 25 years worked with lead hazards at construction sites. Cignatta testified that there are a variety of factors which explain variations in the percentages of lead in bulk samples, even when they are taken from areas in proximity. One possible factor is that the bulk sample contained a thick layer of primer (which can contain as much as 50 percent lead) and a thin layer of top coat paint (Tr. 3629).

Between February 15 (when BTC denied OSHA entry) and February 21 when OSHA resumed the inspection, BTC implemented a lead protection program at Three Rivers Stadium. On February 21 and 22, OSHA conducted air monitoring for lead, and BTC concurrently monitored (Tr. 2700). Employees wore supplied-air respirators with face shields for the first time while they burned on the painted steel at Three Rivers Stadium. The same three employees were monitored for each of the two days. For a variety of reasons, the time sampled was short of 8 hours. OSHA's Healey assumed no exposure to lead for the unsampled period, regardless of whether the individuals might ordinarily have continued to burn steel. The amount of time each employee was monitored and his calculated 8-hour time-weighted average follow (Exh. C-36):

Date	Employee	OSHA TWA* (Time Sampled)	BTC TWA (Time Sampled)
2/21/01	Shawn Cramer**	36 µg/m³ (321 min.)	36 µg/m³ (234 min.)
2/21/01	Kevin Opfar	259 µg/m³ (323 min.)	209 µg/m³ (230 min.)
2/21/01	Eric Yockey	318.6 µg/m³ (317 min.)	975 µg/m³
2/22/01	Shawn Cramer**	37 µg/m³ (458 min.)	40 µg/m³
2/22/01	Kevin Opfar	954.4 µg/m³ (318 min.)	2158 µg/m³
2/22/01	Eric Yockey	615.1 µg/m³ (464 min.)	1453 µg/m³

* Time weighted average

****** Shawn Cramer, who was not overexposed on either day, was a working foreman who served as fire watch for the burning employees. Although he did no burning work, his sampling results showed him to be exposed at more than the action level and half of the PEL (Tr. 2740-2741, 2745).

DISCUSSION OF THE HEALTH CASE

For purposes of the lead exposure discussion, the demolition of the stadium took place in three phases: pre-implosion torch cutting and burning, the implosion, and the post-implosion clean-up. The pre-implosion phase began around January 2, 2001, and ran until the extended implosion date of February 11, 2001. The jobsite was inactive on February 12. The clean-up phase began on February 13, 2001. The Secretary's lead exposure allegations relate to both the pre-implosion work in January 2001 and the post-implosion clean-up in February 2001.

Pre-implosion, the asserted violations are items 2a, 2b, 2c, 3a, 4a, 4c, 4e, 5a, and 6a. These items relate to that part of the lead standard which requires an employer to provide interim protection and other safeguards for employees presumed to be exposed to excessive levels of lead, until the employer makes its determination of actual exposure. The post-implosion allegations are set out in items 1a, 1b, 2e, 2f, 3b, 3c, 3e, 4b, 4d, 4f, 4g, 6b, and 6c. These relate to the steps required to protect employees from lead exposure in excess of the PEL. The remaining items, 1c, 1d, 3d, 3f, and 5b, involve programmatic requirements.

BTC contends that it relied on an exception in the standard which obviated the need for it to perform any of OSHA's cited omissions. It denies that violations occurred.

Applicability of Lead in Construction Standards (Pre- and Post-Implosion)

BTC's demolition contract covers lead and lead abatement (Tr. 2559, 3380). The first subparagraph of that contract specifies (Exh. C-6, Vol. 3, p.28, § 3.4): "The painted materials in the building contain, or should be assumed to contain lead." The OSHA "lead in construction" standards (§ 1926.62) apply "to all construction work where an employee may be occupationally exposed to lead *** and includes [d]emolition or salvage of structures where lead or materials containing lead are present (§ 1926.62(a), (a)(1))." Burning and torch cutting on steel coated with lead paint are commonly known to produce exposure to airborne lead (*See* §1926.62(d)(2)(iv)). Employees burned and torch cut on lead coated steel, some for 10 hours a day. Section 1926.62 applies to BTC's demolition activities, both pre- and post-implosion.

Employee Status of the Laborers

Exposure to airborne lead resulted from two job tasks: a) torch burning painted stadium seats and b) torch burning painted steel beams. BTC argues generally that some of the workers performing these tasks were not its employees. Since the auction of stadium seats was unexpectedly popular, AMEC (on behalf of stadium owner Pittsburgh's SEA) and BTC entered into a change order to the original contract. BTC was to remove 1400 seats and was paid an additional $65,000 to do so (Tr. 688). BTC contends that these workers were hired as an accommodation for AMEC, "exclusively" for AMEC's benefit, not to facilitate demolition of the Stadium, and were "directed and controlled by construction manager AMEC or FreeMarkets" (Resp. brief, p. 11). The record does not support these contentions.

The relevant factors for determining employer/employee status under the applicable "economic realities test" are: (1) Whom the workers consider to be their employer; (2) Who pays the workers' wages; (3) Who is responsible for controlling the workers' activities; (4) Who has the power (as opposed to the responsibility) to control the employee; and (5) Who has the power to fire, hire, or modify the employment condition. *MLB Industries, Inc.*, 12 BNA OSHC 1525, 1526-27 (No. 83-231, 1985); and *C. Abbonizio Contractors, Inc.*, 16 BNA OSHC 2125 (No. 91-2929, 1994). The answer to each of the posed questions is: BTC (Tr. 961-962, 972-973, 1306-1307, 1309-1311, 1377-1379, 1419-1420, 1421-1422, 1504-1505, 1551-1552, 2521-2523, 2530, 2534-2535, 2539-2542, 2549-2550). The laborers were hired by BTC, paid through its payroll, worked with its equipment, and were under the control of its supervisors Shawn Cramer, Marlon Ferrier, Eugene

Gilbert, and Greg Smith, who oversaw the laborers who burned the bolts from the seats (Tr. 490, 972, 1245, 1264-65, 1309-1310, 1312, 1378, 1383, 1419, 1431, 1549, 1552, 2521, 2524). According to AMEC's Kirby, once the change order was signed, BTC's project manager Stern made the decision to use laborers with torches to remove the seats (rather than carpenters who would use pneumatic tools) (Tr. 685-686). Even its vice-president David Bianchi considered BTC to be the employer of the laborers who removed the stadium seats (Tr. 685, 3457). Also, to the extent that BTC argues it, and based on the same analysis, the individuals burning and torch cutting to weaken the steel beams were BTC employees.

Historical Data and the National Starch Demolition Project

In §§ 1926.62(b) and (c) the lead standard defines the "action level" as exposure at 30 $\mu g/m^3$ (calculated as an 8-hour time-weighted average) and the "permissible exposure limit" as 50 $\mu g/m^3$ (averaged over an 8-hour period). While an employer must ordinarily monitor employees to determine whether they may be exposed to lead at or above the AL or PEL, employee monitoring is not the exclusive basis for making the determination. An employer may rely on exceptions for "objective data" (which BTC concedes it did not have) or on "historical data" (which BTC argues that it had from its earlier National Starch demolition project). BTC strongly asserts that it properly relied upon the "historical data" exception. BTC's National Starch data showed exposures to lead at less than the action level. Thus, BTC contends that it was not required to perform the initial monitoring (or to take interim steps in lieu of monitoring) which the Secretary cited as pre-implosion violations at Three Rivers Stadium.

The Historical Data Exception

BTC claims the exception and bears the burden of proof on the issue. *Kaspar Wire Works, Inc.*, 18 BNA OSHC 2178, 2194 (No. 90-2775, 2000), *aff'd* 268 F.3d 1123 (D. C. Cir. 2001); *ConAgra Flour Milling*, 15 BNA OSHC 1817, 1823 (No. 88-2572, 1992). In general, exceptions in remedial legislation, such as the OSH Act, must be narrowly construed.

The exception at § 1926.62(d)(3)(iii) allows an employer to rely on data obtained under workplace conditions "closely resembling" the current operation. The standard provides:

> (3) *Basis of initial determination.* (iii) Where the employer has previously monitored for lead exposures, and the data were obtained within the past 12 months during work operations conducted under workplace conditions closely resembling the processes, type of material, control methods, work practices, and environmental

> conditions used and prevailing in the employer's current operations, the employer may rely on such earlier monitoring results to satisfy the requirements of paragraphs (d)(3)(i) and (d)(6) of this section if the sampling and analytical methods meet the accuracy and confidence levels of paragraph (d)(10)(*sic*)[14] of this section.

Of the criteria listed above, the parties agree only that BTC previously monitored for lead exposure at National Starch while using acceptable sampling and analytical methods and that the data were obtained within the past 12 months. They fundamentally disagree on how the facts fit each of the other criteria of the exception, *i.e.*, work operations conducted under workplace conditions "closely resembling" the:

> a) processes, b) type of material, c) control methods, d) work practices, and e) environmental conditions prevailing.

Could BTC utilize a lead assessment from its National Starch demolition project (the ACT report) as "historical data" for the Three Rivers Project (Exh. C-22)?

The National Starch Project. BTC's National Starch project was the demolition of an old power house and drying facility inside a corn starch factory complex in Indianapolis, Indiana (Tr. 4436, 4538). The project started in September 2000 and was finished for the most part by January 2001 (Tr. 4438). Harry Greenwald was the project manager and Dan Skinner was the project superintendent at National Starch (Tr. 4506). Skinner was solely responsible for job safety (Tr. 4506). The demolition was primarily mechanical. Cranes lowered sections of the structure to the ground where the sections were cut up by mechanical shears (Tr. 4437). Unlike the Three Rivers project, no implosion was involved.

The boilers in the furnace house were between 50 to 100 years old according to BTC's Greenwald and Skinner (Tr. 4437, 4538-4539). The boilers were suspended from the top of a structural assembly that was approximately 120 feet high (Tr. 4505). Structural members faced the outside and inside, and a sheet metal skin enclosed the structure (Tr. 4506). The work on the boiler/furnace house involved torch cutting of lead-painted boilers and structural steel to pre-weaken the steel for the mechanical shears. Employees David Pixley and Hayward Tarver worked from

[14] As the parties point out, paragraph (d) does not contain a subparagraph (10). The intended reference is to subparagraph (d)(9).

man-baskets and catwalks using 3-foot Harris torches to cut the boilers (Tr. 4437). The work was both indoors and outdoors (Tr. 4539). The cutting work on the boilers and boiler house occurred in November and December 2000 (Tr. 4438).

For the National Starch project, BTC hired ACT Environmental Services, Inc. (ACT) of Indianapolis to do an exposure assessment (Tr. 4541). According to Greenwald, bulk samples were taken from the structural support assembly, not from the boilers (Tr. 4505, 4506). However, the ACT report verifies that bulk samples were primarily from the boilers (Exh. C-22 at BT 125). Two bulk samples were taken from the structural assembly: Sample No. 15P from a column coating contained 0.484% lead and Sample No. 17P also from a column contained 0.095% lead (Exh. C-22 at BT 125; Tr. 1827). Having belatedly taken the bulk paint samples at Three Rivers Stadium, the results showed that the two National Starch columns contained markedly less lead than anything sampled at Three Rivers Stadium, expect for the new pedestrian walkway.

BTC's decision to rely on the exception. BTC's Skinner testified that at some point Tim O'Rourke received a copy of the National Starch report to for his review (Tr. 4542). It is unclear who from BTC suggested use of the National Starch report as historical data for Three Rivers Stadium. O'Rourke was not involved in any aspect of the National Starch demolition project (Tr. 1824). At the time that O'Rourke agreed that BTC could use the National Starch data, he actually knew little about how the two jobs compared. He knew nothing about the type of paint, or even the lead content of the paint at Three Rivers Stadium (Tr. 1647). He did not know what control methods, if any, were in place at National Starch, or what work practices were used, since that information was not in the ACT report (C-22; Tr. 1825-1826). He knew nothing about the environmental conditions at National Starch (Tr. 1826). O'Rourke concluded that "I don't have a good answer" for his failure to take bulk samples at the beginning of the job (Tr. 1903).

"Closely Resembling." The term "closely resembling," as applied to the five criteria of the exception, is not defined in the standard. Contending that the operations and conditions at National Starch closely resembled those of Three Rivers Stadium, BTC offers a broad interpretation. In its analysis, "the processes" compared because both jobs required burning on structural steel in the open air. The "type of material" cut or burned in both projects compared because they were lead painted structural steel. BTC considers that the "control methods" were the same because no controls were needed, other than "normal PPE [personal protective equipment], including 3 foot

Torch" (Resp. brief, p. 69). BTC suggests that the "work practices" were closely resembling because both jobs required notch cuts to be made on the steel during 10-hour shifts. BTC argues that the "environmental conditions" were closely resembling since the work was performed in the open air during cold weather. BTC dismisses the Secretary's argument that a comparison of materials required it to take bulk paint samples. It states that regardless of whether taking bulk samples might be a good idea, the Secretary failed to include the requirement in the exception.[15]

The Secretary disputes BTC's analysis. She considers the similarities suggested by BTC to be too superficial to meet an exception to a standard intended to protect employees generating airborne lead. She argues that BTC did not have enough information to compare the two projects. She particularly objects to the fact that BTC took no bulk samples of the paint or made other attempts to secure data for comparisons.

The Secretary's expert witness John Cignatta testified that "[t]o use data regarding any sort of extrapolation you have to have what's referred to as a representative sampling, or as AIHA[16] specifies, a similar exposure group has to be established" (Tr. 3602). He did not consider the painted structures at the National Starch Plant to be in the same exposure group as the massive steel beams and plate or box girder assemblies of the Three Rivers Stadium (Tr. 3604).

It is concluded that the term "closely resembling" in the "historical data" exception is ambiguous. Where a standard is susceptible of different interpretations, the best and most authoritative statement of the Secretary's intent is the preamble. *Beta Construction Co.*, 16 BNA OSHC 1435, 1443 (No. 91-102, 1993) citing *American Sterilizer Co.*, 15 BNA OSHC 1476, 1478 (No. 86-1179, 1992) (where a standard is susceptible of different interpretations, the preamble may be considered).

The Preamble to the lead standard details why OSHA included a "historical data" exception. It explains that if an employer on a construction site conducted exposure monitoring for previous job(s) *and* the current job was "*substantially similar*" to the old one(s), the previous "historical data" could substitute for new monitoring. So that the old data could be "reasonably assumed" to be

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[15] BTC suggests that had the Secretary intended to include a requirement for bulk sampling, it could have been placed in the much-discussed, though non-existent, subparagraph .62(d)(10).

[16] The American Industrial Hygiene Association (AIHA) accredits laboratories and is a widely recognized association of practioners in the industrial hygiene field (Tr. 1807, 3553-3554).

representative for lead exposures on the new site, the historical measurements had to be obtained "under conditions which in all relevant and significant respects are *essentially the same as the current project*" (emphasis added) (Lead Exposure in Construction, 58 Fed. Reg. 26599 (1993)). In discussing the term "closely resembling" the Preamble repeats the "essentially the same" language to describe how the prevailing environmental conditions, the processes, and the work practices must compare, including that the "characteristics of the lead containing material" must be "essentially the same" (*Id.* at 26599).

The exception does not require an absolute identity between the old and new projects. Whether the criteria listed in the exception are met requires a case-by-case factual analysis. The number of previous studies relied upon, and the similarity of the construction means and methods all bear on the reasonableness of the comparisons. For example, an employer might rely on the standard's exception after various studies showed comparable results, or an employer might rely on a single study if the jobs duplicated each other. Informed by the synonyms for "closely resembling" in the preamble and the stated purpose of the exception, it is determined that BTC's reliance on the historical data exception was incorrect.

Since BTC did not attempt to determine the lead content for one component of a two-part comparison, BTC could not know whether the lead-containing material at the two projects was "substantially similar" or "essentially the same." Even if taking bulk samples was not necessary for comparisons in all projects, it was necessary here. The "characteristics" of all lead paint could not reasonably be assumed to be the same, regardless of the lead content, the age of the paint, or the layers of the paint. The bulk samples established a wide inconsistency between BTC's predicted results and the actual lead content of the paint.[17] BTC did not make other pertinent comparisons. For example, it did not consider how the thickness of the lead paint or the thickness of the underlying steel might affect the exposures (Tr. 3605, 3616).

Also, the methods, work practices, and environmental factors differed to varying degrees. Pickard described the burning work at the stadium as occurring in the open air during the winter months (Tr. 2039). Although Greenwald testified that the workers at National Starch burned in a

[17] As noted, at National Starch the only two bulk samples from the painted steel beams were 0.095 and 0.484 percent lead (Exh. C-22). At Three Rivers Stadium the bulk samples of the seats ranged from 3.0 to 8.0 percent lead, and the steel beams ranged from 2.2 to 43 percent lead (other than for the new walkway) (Exh. C-26, C-32, C-46).

roofed structure but "most of the work was outside," other working conditions varied significantly (Tr. 4438, 4505-4506). While employees at National Starch worked from manbaskets, stadium employee Nagy described burning large box beams in January in close quarters, sometimes having to crawl to the inside of the box beams (Tr. 1552, 1590). Employee Rupp and his partner Pixley were "in a closed area where a lot of the beams had to be cut" (Tr. 1368). Nor did BTC attempt to correlate how notch cutting at National Starch compared with burning off the stadium seats. *See Lunda Construction Co.*, 20 BNA OSHC 1134 (No. 02-0010, 2003) (ALJ). Burning the seats was not an incidental task; some employees burned seats for their entire 10-hour shift. Post-implosion, BTC continued to rely on the National Starch data although employees then burned and cut through the structural steel as it laid in and around the huge debris pile.

After BTC finally obtained its first bulk sample results on February 15, 2001, O'Rourke appeared almost incredulous that he relied on the National Starch study. He understood, "that the higher the lead content in the paint, the more potential there is for a higher airborne concentration" (Tr. 1830). "I immediately understood that the initial assessment I made using National Starch was inappropriate" (Tr. 1838). He then advised David Bianchi that he would revise the plan. O'Rourke initially thought National Starch could be used for Three Rivers since "it was torch cutting of painted steel . . . In hindsight, they were lousy reasons . . . " (Tr. 1902).

BTC had a strong incentive to substitute "historical data" which came in below the action level for the anticipated high exposure tasks its employees would perform at Three Rivers Stadium. If BTC could rely on the National Starch data, it had no obligation to comply with most of the requirements of the lead standard. For the reasons stated, BTC's reliance on the historical data exception was not reasonable, and its argument to the contrary is rejected.

Pre-Implosion
Citation No. 1, Items 2a, 2b, 2c, 3a, 4a, 4c, 4e, 5a, and 6a:
Alleged Willful Violations of §§ 1926.62(d)(1)(i), .62(d)(3)(i)(C), .62(d)(3)(iii), .62(d)(2)(v)(A), .62(d)(2)(v)(B), .62(d)(2)(v)(C), .62(d)(2)(v)(D), .62(d)(2)(v)(E), .62(d)(2)(v)(F)

Pre-implosion, the Secretary asserts that BTC failed to make an initial determination of lead exposure for employees burning and torch cutting painted steel in January 2001 (items 2a, 2b, and 2c). She also asserts that BTC failed to provide employees with the required interim protections of

a respirator (item 3a), personal protective clothing (item 4a), a change area (item 4c), hand washing facilities (item 4e), biological monitoring (item 5a), and lead hazard training (item 6a).

No "Initial Determination" of Lead: items 2a, 2b, and 2c

Item 2a: Alleged Willful Violation of § 1926.62(d)(1)(i). At item 2a, the Secretary alleges that for two separate time periods BTC should have, but did not, make an initial determination of whether employees were exposed to lead at or above the action level of 30 µg/m3. Section 1926.62(d)(1)(i) provides:

> (d) *Exposure assessment* – (1) *General*. (i) Each employer who has a workplace or operation covered by this standard shall initially determine if any employee may be exposed to lead at or above the action level.

The first alleged instance (instance a) is based on the pre-implosion burning work. During the entire pre-implosion burning phase from January 4 through February 10, 2001, employees were torch cutting and burning metal seats or structural steel coated with lead based paint. As noted previously, testifying employees Roberts, Rupp, Pixley, and James and John Zamaris burned seats (Tr. 53, 1314, 1315, 1379, 1391, 1421, 1425, 1443). Olberter, Rupp, Nagy, and Ace Bertino burned structural steel (Tr. 961-962, 1308, 1309, 1551, 1552, 2522, 2534).[18]

The second instance (instance b) occurred post-implosion on February 13 and 14. The stadium was now an enormous pile of concrete and twisted steel. Excavators with hoe rams were breaking up the concrete, excavators with shear attachments were cutting the steel, high lift machinery was loading trucks at the rate of 45 trucks per half hour, employees were torch cutting and burning the structural steel, and employees were torch cutting and burning rebar embedded in the concrete (Tr. 1254-1255, 1403). Contrary to BTC's contention that no burning took place on February 13 and 14, the overwhelming credible testimony was that BTC continued to torch burn structural steel on both of those days.

Post-implosion employees Opfar, James and John Zamaris, and Clayton Bertino continued to torch cut and burn the lead coated structural steel, but the location and types of cuts changed. The Secretary asserts that on February 13 and 14, 2001, the work activities had sufficiently changed so that even if BTC could have relied on the National Starch pre-implosion, it should have made a new

[18] Although other employees also performed the burning and cutting work on painted steel (both pre- and post-implosion) the number of those employees is unknown.

"initial determination" post-implosion. The work was even less arguably comparable to that of National Starch (Tr. 1277, 1384-1385, 1430, 1487, 1523-1524). The changed circumstances did not prompt BTC to monitor for lead exposure, and it continued to rely on the National Starch data. BTC's reliance on the historical data exception does not constitute a defensible basis for failing to "initially determine" whether employees were exposed to lead at or above AL of 30 $\mu g/m^3$. BTC did not conduct initial air monitoring (and took no bulk paint samples) before it assigned employees to torch cut painted seats and steel pre- or post-implosion (Tr. 1646-1647, 1823).

While maintaining that the National Starch data constituted its initial exposure assessment, in the alternative, BTC argues that it reasonably and in good faith relied on the expertise of O'Rourke, a certified industrial hygienist (CIH), and Pickard, an IH. Since neither O'Rourke nor Pickard raised questions regarding potential lead exposure or problems with relying on National Starch, it had no reason to know that anything was amiss. BTC makes this same argument for pre-implosion items 2a, 2b, 2c, 3a, 4a, 4c, 4e, 5a, and 6a, for post-implosion items1b, 1c, 1d, 2e, 3b, 3c, 3d, 3e, 3f, 3g, 4b, 4d, 4g, and 6b, but it will be addressed only here.

As discussed in more detail *infra*, BTC was the general contractor for the project and is not entitled to claim that it was unaware of lead exposure. *See Paul Betty d/b/a Betty Brothers,* 9 BNA OSHC 1379, 1383 (No. 76-4271, 1981) (an employer cannot hide behind its lack of knowledge concerning dangerous working conditions). Before the project began, BTC was aware of the presence of lead on site. The demolition contract required compliance with the OSHA lead standards (Exh. C-6 at p. 28). BTC directed its employees to torch cut and burn the coated steel and provided the equipment for them to do it.

BTC was specifically aware of the requirement to make an initial lead assessment since that provision was included in its health and safety manual, which states (Exh. C-17 at pp. 2-141 through 2-147): "Each operation or task involving lead will be assessed to determine whether employees may be exposed at or above the action level" (Exh. C-18 at p. 2-146). BTC cannot abrogate its safety and health responsibilities by shifting them onto its safety consultant. *See Pride Oil Well Service,* 15 BNA OSHC 1809, 1815 (No. 87-692, 1992). This would be especially true where having one individual oversee all safety and health concerns on the huge, 24 hour per day, 7 day per week jobsite presented grueling obstacles to an effective program (Tr. 1902-1903). "[T]he Act places ultimate responsibility for compliance with its requirements on the employer, who cannot

contract away those duties to another party." *Well Solutions, Inc.*, 17 BNA OSHC 1211, 1214 (No. 91-340, 1995). BTC had specific expertise in lead abatement (Exh. C-50). The two instances of the violation of § 1926.62(d)(1)(i) are affirmed.

Item 2b: Alleged Willful Violation of § 1926.62(d)(3)(i)(C). At item 2b, the Secretary asserts that employee complaints of symptoms attributable to lead should have caused BTC to re-evaluate its reliance on National Starch's negative exposure data. BTC wrongly relied on the exemption and, thus, failed to consider employee complaints of symptoms in arriving at a valid "initial determination"of lead exposure. Section 1926.62(d)(3)(i)(C) requires that an initial determination be based on monitoring (unless the historical data or objective data exceptions apply) and, specifically, on such factors as employee complaints. Section 1926.62(d)(3)(i)(C) provides (emphasis added):

> (3) *Basis of initial determination*. (1) Except as provided under paragraphs (d)(3)(iii) and (d)(3)(iv) of this section the employer shall monitor employee exposures and shall base initial determinations on the employee exposure monitoring results *and any of the following, relevant considerations*: . . . (C) Any employee *complaints of symptoms* which may be attributable to exposure to lead.

Employees reported symptoms attributable to lead exposure.

Sweet taste: Employees torch cutting and burning painted steel complained about having a "bad," "funny," or "sweet," taste in their mouths both pre- and post-implosion (Tr. 2524 (Ace Bertino - "bad taste"), 973 (Olbeter - "funny taste), 1247 (Opfar - tastes "kind of sweet "), 1312 (Rupp - "tasting something funny"), 1388 (James Zamaris - "smelled sweet"), 1431 (John Zamaris - "tastes like--it's real sweet"). John Zamaris and his co-worker Billy Kantrimaitis noticed a "sweet" taste that they associated with lead. The first day after the implosion that they burned the structural steel on the ground, they raised the question about the lead content of the paint with Pickard (Tr. 1430-1431). Pickard responded that he did not know the lead level of the paint but that he would get back to them. He never got back to them (Tr. 1431-1432, 1435).

Fumes: Employees also complained about the fumes from cutting the painted steel, or they requested respirators. Pre-implosion, Nagy, who was burning the high structural steel, asked foreman Marlon Ferrier for a respirator because of his concern about lead exposure (Tr. 1555-1556). Ferrier told Nagy to "[s]tay downwind and you'll be all right" (Tr. 1556). Before he started burning the high structural steel, Ace Bertino also asked Ferrier for a respirator (Tr. 2524). Ferrier told him

that it was not necessary to use one because the paint had been tested, and it was negative for any lead (Tr. 2524). John Zamaris (who burned seats around the third week of January for about a week) noticed that there was a bit of smoke when he burned the bolts off the seats, and he asked Pickard about the lead paint on the seats (Tr. 1421, 1425). Pickard told him that he did not have the test results on the seats (Tr. 1425). Olbeter, who was burning the high steel structure, stated that the paint smoked and had "a light, powdery residue after you ran a torch across it" (Tr. 1004).

BTC contends that on February 14, 2001, upon learning about employee concerns raised to Pickard, it decided to reevaluate the negative exposure assessment. However, many of the employee complaints occurred pre-implosion and were directed to BTC foreman Ferrier as well as to Pickard. Employees continued to burn on February 14. BTC knew, as its health and safety manual explains (Exh. C-17 at p. 2-145): "Exposure to lead is usually in the form of dust and fumes."

The standard requires that employees' symptoms be a part of the input of an initial determination of lead exposure. At the time the employees brought up their symptoms, BTC had not yet made a valid initial determination. The employees' report of symptoms failed to prompt one. BTC's decision to ignore, rather than consider, the employees' complaints attributable to lead violated the standard. The violation of § 1926.62(d)(3)(i)(C) is affirmed.

Item 2c: Alleged Willful Violation of § 1926.62(d)(3)(iii). At item 2c, the Secretary alleges that when BTC unreasonably purported to rely on the historical data exception, it violated § 1926.62(d)(3)(iii). The standard is quoted *supra* and provides that under specific circumstances an employer may rely on evaluations of lead exposure made from earlier work which closely resembles the processes, type of material, control methods, work practices, and environmental conditions of a current project. As discussed, the National Starch project did not closely resemble the Three Rivers Stadium demolition for purposes of the "historical data" exception.

Nevertheless, the language of § 1926.62(d)(3)(iii) is not written as a section that can be violated by an affirmative act or omission. The language sets out an exception which, if proven, provides an alternative means for assessing lead exposure. Because BTC failed to prove that the exemption of § 1926.62(d)(3)(iii) applied, it violated the standards that required an alternative assessment and interim protections. The section itself does not constitute a separate requirement which could be violated. BTC has not violated the exception simply because it failed to show that it applied. The violation of § 1926.62(d)(3)(iii) is vacated.

No Interim Protections for Task Related Trigger: Items 3a, 4a, 4c, 4e, 5a, 5b,[19] and 6a:

Task Related Triggers: Section 1926.62(d)(2)(iv) of the lead standard gives special attention to abrasive blasting, welding, *cutting, and torch burning*, if lead based paints are present on the structures. These "task-related triggers" presume an exposure *until* the employer actually monitors (unless an exception applies). OSHA explains its rationale (58 Fed. Reg. at 26594-26595):

> The air lead levels that trigger the standard are determined by an employee exposure assessment, most often containing air sampling. However, there is often a time lapse between taking the sample and receiving the results. Certain construction tasks are known to commonly produce exposures above the PEL – sometimes many orders of magnitude above the PEL. In such tasks, workers could be exposed to high concentrations of lead in air during the period between sampling and receipt of the results without sufficient protection. In addition, because many construction jobs are of short duration, workers could complete one job before monitoring results are in and go on to another, again in a high exposure situation, still without adequate protection in the absence of monitoring results.

Burning and torch cutting on steel trigger the highest level of interim protection with a presumption of exposure greater than 2,500 $\mu g/m^3$ (50 times the PEL) because (*Id*. at 26595-26596):

> Data obtained by OSHA's contractor regarding welding, cutting and burning show control exposure levels to be from about 970 to about 1560 $\mu g/m^3$ depending on the specific operation involved. Such levels would not seem to qualify these tasks for the over-2500 $\mu g/m^3$ exposure category. The numbers, however, represent estimates from a very wide spread of data points, thus providing a high degree of uncertainty. The data show that actual exposure can reach 28,000 $\mu g/m^3$.

Thus, until BTC made a valid exposure assessment, § 1926.62(d)(2)(v)(A) – (F) required a series of "interim protections" whenever BTC's employees torch cut and burned seats and structural steel painted with lead based paint. The standard provides in pertinent part:

> (d) *Exposure assessment* – (2) *Protection of employees during assessment of exposure*. (v) Until the employer performs an employee exposure assessment . . . and determines actual employee exposure, the employer shall provide to employees performing [the specific tasks] with interim protection as follows: [respirators, clothing, change areas, training, etc.].

[19] Although item 5b (§ 1926.62(j)(2)(iv)(A)) is not an interim protection, it is included here for ease of discussion.

The Secretary's medical expert on the health effects of lead, Dr. John Cortinovis, explained that lead enters the body through skin absorption, ingestion, or inhalation. He considered that (Tr. 911):

> Inhalation exposure to lead is by far the most hazardous because a huge or a very large amount of lead can be taken up through the lungs. The lungs are very efficient in absorbing the lead because of the very small nature of the particles that are inhaled.
>
> Oral ingestion can deposit lead into the gut leading into the blood stream and other tissues.

Lead can be deposited into the bones if the amount excreted by the kidneys is insufficient to eliminate it (Tr. 912, 935). Cortinovis described how workers who wear lead contaminated clothing home, disseminate it to the family, and "young children are very susceptible to small amounts of lead in terms of having adverse effects" and "a fetus is very susceptible to lead during development" (Tr. 922, 956). According to Cortinovis, lead can damage the neurological system, causing problems with memory, thinking, alertness, personality changes, and motor weakness such as foot or wrist drop. It can also cause sensory impairments, elevated blood pressure, kidneys damage with resulting anemia, damage to the reproductive and gastrointestinal systems with resulting abdominal pain and diarrhea (Tr. 913-914). A failure to provide any of the interim protections would present the likelihood of serious physical harm to exposed employees (and their families).

The Secretary asserts separate violations for BTC's failure to provide each of the six types of interim protection, and each is discussed separately below. The Secretary conceives of these violations as having occurred only *pre-implosion*. She asserts that different, but related, violations occurred during the post-implosion period. Although this decision discusses the time periods as originally alleged, it is the valid initial exposure assessment, not the implosion, which delineates applicability of the particular standard.

Item 3a: Alleged Willful Violation of § 1926.62(d)(2)(v)(A). The first interim protection for employees who torch burn and cut is "[a]ppropriate respiratory protection in accordance with Table 1 from paragraph (f) of this section" (§1926.62(d)(2)(v)(A)). Table I follows:

TABLE 1.—RESPIRATORY PROTECTION FOR LEAD AEROSOLS

Airborne concentration of lead or condition of use	Required respirator [1]
Not in excess of 500 ug/m³	½ mask air purifying respirator with high efficiency filters.[2,3]
	½ mask supplied air respirator operated in demand (negative pressure) mode.
Not in excess of 1,250 ug/m³	Loose fitting hood or helmet powered air purifying respirator with high efficiency filters.[3]
	Hood or helmet supplied air respirator operated in a continuous-flow mode—e.g., type CE abrasive blasting respirators operated in a continuous-flow mode.
Not in excess of 2,500 ug/m³	Full facepiece air purifying respirator with high efficiency filters.[3]
	Tight fitting powered air purifying respirator with high efficiency filters.[3]
	Full facepiece supplied air respirator operated in demand mode.
	½ mask or full facepiece supplied air respirator operated in a continuous-flow mode.
	Full facepiece self-contained breathing apparatus (SCBA) operated in demand mode.
Not in excess of 50,000 ug/m³	½ mask supplied air respirator operated in pressure demand or other positive-pressure mode.
Not in excess of 100,000 ug/m³	Full facepiece supplied air respirator operated in pressure demand or other positive-pressure mode—e.g., type CE abrasive blasting respirators operated in a positive-pressure mode.
Greater than 100,000 ug/m³ unknown concentration, or fire fighting.	Full facepiece SCBA operated in pressure demand or other positive-pressure mode.

[1] Respirators specified for higher concentrations can be used at lower concentrations of lead.
[2] Full facepiece is required if the lead aerosols cause eye or skin irritation at the use concentrations.
[3] A high efficiency particulate filter (HEPA) means a filter that is a 99.97 percent efficient against particles of 0.3 micron size or larger.

Since the presumed lead exposure exceeded 2,500 $\mu g/m^3$, the standard offered BTC a variety of supplied-air respirators from which to choose. Employees Olbeter, Rupp, James Zamaris, John Zamaris, Nagy, and Ace Bertino testified that during the pre-implosion burning they used no respiratory protection at all (Tr. 974, 1311-1312, 1345, 1381, 1422, 1554, 2523). James Zamaris testified that pre-implosion he used "those thin dust masks you can buy [at] a hardware store" (Tr. 1381). The first time BTC issued respirators was post-implosion and those respirators were the half-mask type, not air supplied as required by the standard (Exh. C-30).

BTC contends that *if* it had monitored for lead exposure and *if* the results were the same as on February 21 and 22, employees need not have worn the supplied-air respirators. Thus, it argues, it should not be found to have violated the standard which required the interim protection of a supplied-air respirator. The argument is rejected. First, no employee wore a respirator which corresponded to the exposure levels found on February 22 before that date. Second, a justification from hindsight impermissibly challenges the wisdom of the standard. BTC's violation is not

mitigated by the fact that some lesser protection might have sufficed had it monitored for lead as the standard required.

The demolition contract specifically required BTC to comply with the OSHA regulations "including respiratory protection" (Exh. C-6 at p. 28). BTC's health and safety manual requires respiratory protection in its "Lead Exposure" chapter and has an entire section devoted to "Respiratory Protection" (Exh. C-17 at pp. 2-142, 2-143, 2-201). BTC's failure to provide supplied air respirators as an interim protection violated the standard. The violation of § 1926.62(d)(2)(v)(A) is affirmed.

Item 4a: Alleged Willful Violation of § 1926.62(d)(2)(v)(B). The second interim protection is "[a]ppropriate personal protective clothing and equipment in accordance with paragraph (g) of this section" (§1926.62(d)(2)(v)(B)). Specifically, the Secretary asserts that BTC should have provided and paid to clean the appropriate protective clothing and equipment (including flame retardant coveralls, coats, gloves, hats, shoes or disposable shoe covers, goggles, and face shields) for employees burning or cutting lead coated steel.

Pre-implosion, the employees verified that BTC provided none of the appropriate personal protective clothing or equipment required for the burning operations (Tr. 996, 1316, 1381, 1423, 1485, 1554, 2523). Employees Olbeter, John Zamaris, Clayton Bertino, Nagy, and Ace Bertino testified that they used their own burning jackets, coveralls, and gloves (Tr. 974, 1423, 1489, 1554, 2523). Rupp and James Zamaris wore their everyday street clothes while burning (Tr. 1316, 1381). When James Zamaris, who wore his street clothes while burning, asked for protective clothing, "Gene and the safety guy" told him that "they didn't have [protective clothing] at the time we were burning . . . Because we asked for them (Tr. 1381). Olbeter also wore his own goggles (Tr. 974).

The demolition contract required BTC to comply with OSHA's lead standard (Exh C-6 at p. 28). BTC's health and safety manual states that it will provide protective work clothing and will provide cleaning and replacement of protective clothing for employees exposed to lead (Exh. C-17 at p. 2-143). BTC's failure to provide protective clothing as an interim protection violated the standard. The violation of § 1926.62(d)(2)(v)(B) is affirmed.

Item 4c: Alleged Willful Violation of § 1926.62(d)(2)(v)(C). The third interim protection requires "[c]hange areas in accordance with paragraph (i)(2) of this section" (§ 1926.62(d)(2)(v)(C)) for employees who burn and torch cut on lead coated steel. Change areas provide employees with

a place to remove and store their lead contaminated clothing. The standard's prohibition against wearing work clothes home, was intended to (58 Fed. Reg. at 26602, 26603):

> minimize employees exposure after the work shift ends because it limits the period in which work clothes contaminated with lead dust may be worn. *** Wearing contaminated clothing outside the work place will lengthen the duration of the employee's exposure through both inhalation and ingestion routes and potentially expose others in the family.

According to Olbeter, Rupp, and John Zamaris whether BTC's employees burned or not, they all used the employee trailer to change clothes, hang clothes, and eat lunch (Tr. 975, 1369, 1423-1424). Employees' testimony established that change areas were not available and that the employees wore lead contaminated work clothes home (975, 1247, 1316-1317, 1382, 1423, 1485, 1555, 2524).

The demolition contract required compliance with OSHA's lead standard (Exh. C-6 at p. 28). BTC's own health and safety manual requires a clean change area. BTC's manual states (Exh. C-17 at p. 2-142):

> B. Clean change areas will be provided for employees whose airborne exposure to lead is above the action level and as interim protection for employees whose exposures are being evaluated.
>
> C. The change areas will be equipped with separate storage facilities for protective work clothing and equipment and for street clothes.

Until BTC made a valid exposure assessment for the "triggered" activity, it was required to have a change area as an interim protection. The violation of § 1926.62(d)(2)(v)(C) is affirmed.

Item 4e: Alleged Willful Violation of § 1926.62(d)(2)(v)(D). The fourth interim protection required BTC to provide "[h]and washing facilities in accordance with paragraph (i)(5) of this section" (§1926.62(d)(2)(v)(D)). Employee testimony established that no hand washing facilities were made available for the employees who were torch cutting and burning the lead coated seats and structural steel (Tr. 975, 1247, 1317, 1382, 1423, 1486, 1555, 2524). Rupp testified that the trailer did not have any wash sinks, and employees were not allowed into the locker rooms in the stadium (Tr. 1318). John Zamaris stated that before he ate, "I got washed up in a water jug" that was outside the employee trailer (Tr. 1424). During her inspection, on February 14 through 16, 2001, Healy

looked for hand washing facilities and found none (Tr. 2725). A water jug does not equate to hand washing facilities.

As noted previously, before the project began BTC was aware that it was to comply with OSHA's lead standard (Exh. C-6 at p. 28). BTC's health and safety manual required employees who were exposed to lead to "wash their hands and face prior to eating, drinking, smoking, applying cosmetics, or leaving the site" (Exh. C-17 at p. 2-142). At least until the exposure assessment was completed, BTC was required to provide hand washing facilities as an interim protection. The violation of § 1926.62(d)(2)(v)(D) is affirmed.

Item 5a: Alleged Willful Violation of § 1926.62(d)(2)(v)(E). The fifth interim protection required "[b]iological monitoring in accordance with paragraph (j)(1)(i) of this section, to consist of blood sampling and analysis for lead and zinc protoporphyrin levels [ZPP] (§ 1926.62(d)(2)(v)(E)). Section 1926.62(j)(1)(i) requires that initial medical surveillance be made available to the exposed employees on days the lead exposure exceeds the AL and specifies that initial medical surveillance "consists of biological monitoring in the form of blood sampling and analysis for lead and [ZPP] levels." The Preamble explains that medical surveillance will "supplement the standard's primary mechanisms of disease prevention, the elimination or reduction of airborne concentrations of lead and sources of ingestion, by facilitating the early detection of medical effects associated with exposure to lead" (58 Fed. Reg. at 26603).

Until it monitored, BTC had to assume a lead exposure of over 2,500 $\mu g/m^3$ and to provide blood sampling information to employees performing the burning and torch cutting work. None of the employees were offered blood lead tests until February 15, 2001 (the day OSHA was refused entry) (Exh. C-11). BTC took blood lead tests on February 15, 2001, for 15 employees and on March 13 for 15 employees. The results of these tests are reflected in the medical records introduced into evidence as Exhibits C-10 and C-11.[20] Prior to February 15 BTC offered no blood

[20] At the request of the parties, a Protective Order was issued on July 1, 2001, to protect the personal identifying information contained in the medical records which are exhibits in this case (Exh. C-10, C-11). As introduced, however, the names and identifying information in the medical records were blanked out. The protective order was left in place because at that time BTC was unsure whether it wished to relate specific medical tests to the particular individuals tested. BTC has not made that argument. As the exhibits of the medical records stand, there remains no need for the Protective Order; and it is hereby lifted for Exhibits C-10 and C-11. However, the Protective Order previously entered at J-45 is hereby imposed to protect from disclosure the personal identifying information in the one remaining unredacted medical record at Exhibit R-20.

(continued...)

lead tests or other biological monitoring, a fact Pickard confirmed (Tr. 996, 1246, 1317, 1380-81, 1422, 1485, 1553-54, 1950, 2525).

Before the project began, BTC knew that the blood tests were required. The demolition contract specified the need for worker medical surveillance including "lead-in-blood" tests (Exh. C-6 at p. 28). Also, BTC's health and safety manual required blood tests to check for lead and ZPP levels, and states (Exh. C-17 at p. 2-145):

> In addition to the requirements found in *Medical Surveillance* of this manual, the following requirements apply to lead projects: A. Initial medical surveillance for lead will be performed during the New Hire Physical. Initial medical surveillance consists of blood sampling and analysis for lead and Zinc Protoporphyrin (ZPP) levels.

BTC's failure to conduct biological monitoring violated the standard. The violation of § 1926.62(d)(2)(v)(E) is affirmed.

Item 5b: Alleged Willful Violation of § 1926.62(j)(2)(iv)(A). At item 5b, the Secretary alleges that BTC failed to notify each employee in writing within 5 days of his blood lead level. Section 1926.62(j)(2)(iv)(A) provides:

> (j) *Medical surveillance* – (2) *Biological monitoring* – (iv) *Employee notification.* (A) Within five working days after the receipt of biological monitoring results, the employer shall notify each employee in writing of his or her blood lead level[.]

February 15, 2001, was the first date that BTC offered blood lead tests to employees (Exh. C-11). John Zamaris testified that he did not receive any results from his blood lead test (Tr. 1435). James Zamaris and Clayton Bertino received the results of their blood lead tests. Zamaris did not remember when he received them, and Bertino believed that he received his results within a week to 10 days after the test (Tr. 1387, 1491). Clayton Bertino testified that he received his results directly from BTC, not the hospital (Tr. 1491). Nothing was provided by BTC in response to OSHA's subpoena for information about its blood lead level testing (Tr. 2876).

BTC contends that employees were given their blood level results within five days and that the results were mailed to employees directly from the hospital for confidentiality reasons. There is some indication in Exhibit C-10 that the results of the March tests may have been mailed to the

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(...continued)

individuals who were tested. This is not the case for the February tests. The existence of R-20, a February medical record presented by BTC and in its possession, tends to support that the company received the February test results directly. BTC's health and safety manual states: "Within five (5) working days after the receipt of biological monitoring results, each employee will be notified in writing of his or her blood lead levels and any temporary requirements that may apply" (Exh. C-17 at p. 2-145). Based on employee testimony and the records, the Secretary established the violation of § 1926.62(j)(2)(iv)(A) for the February tests by a preponderance of the evidence. Item 5b is affirmed.

Item 6a: Alleged Willful Violation of § 1926.62(d)(2)(v)(F). The sixth interim protection requires that employees be trained on lead hazards; on use of respirators; and on how to recognize, avoid, and prevent related unsafe conditions. Section 1926.62(d)(2)(v)(F) provides:

> (d) *Exposure assessment* – (2) *Protection of employees during assessment of exposure.* (F) Training as required under paragraph (l)(1)(i) of this section regarding 29 CFR 1926.59, Hazard Communication; training as required under paragraph (l)(2)(ii)(C) of this section, regarding use of respirators; and training in accordance with 29 CFR 1926.21, Safety training and education.

The Secretary contends that before the implosion employees did not receive any of the required training on lead hazards. She subpoenaed training records, but BTC provided nothing in response. As Pickard and the employees verified, employees had no lead related training pre-implosion and none post-implosion until February 20, 2001 (Exh. C-33 (sign-in sheet); Tr. 974, 1247, 317, 1382, 1424, 1484, 1555, 1950, 1998-2000, 2525).

The demolition contract required BTC to hire union employees. BTC claims that it assumed that the union trained its members and that the training included a discussion of lead. Citing *E. Smalis Painting Co., Inc.*, 1995-1997 CCH OSHD ¶31,113 (No. 94-1979, 1996) (ALJ)), the Secretary counters that even where employees may have received training from their union or a former employer, BTC was obligated to assure itself that employees were properly trained. Also, BTC did not provide training in lead hazards at Three Rivers Stadium to its own full-time employees Pixley and Tarver. BTC brought these two men to the stadium specifically to burn lead painted steel (Tr. 1310, 1504, 4628). Rupp, who was fire watch for Pixley, stated that when he worked with Pixley, Pixley never wore a respirator (Tr. 1345). According to Rupp, Pixley "worked every single day, seven days a week" and "he was extremely tired" and "wanted to go home" (Tr. 1344-1345).

Pixley left when BTC stopped him from burning while it sought to comply with the requirements of the lead standard (Tr. 1505).

Before the project began, BTC knew that its contract included the requirement to train employees on lead hazards and specified (Exh. C-6 at p. 28):

> Should manual methods of demolition be employed, contractor shall provide documentation as required by OSHA and may include the following: * * * c. Proof of worker training information, including at least one person trained as a lead abatement supervisor.

Also, BTC's health and safety manual required training on lead hazards prior to a job assignment (Exh. C-17 at pp. 2-143 and 2-144). BTC's failure to provide lead training violated the standard. The violation of § 1926.62(d)(2)(v)(F) is affirmed.

Post-Implosion
Alleged Willful Items 1a, 1b, 1c, 1d, 2e, 2f, 3b, 3c, 3d, 3e, 3f, 3g, 4b, 4d, 4f, 4g, 6b, and 6c
§§ 1926.62(c)(1), .62(e)(1), .62(e)(2)(i), .62(e)(2)(ii), .62(d)(4)(i), .62(d)(8)(i), .62(f)(1)(i), .62(f)(1)(iii), .62(f)(2)(i), 1910.134(f)(2), 1910.134(k)(3), 1926.62(f)(3(i), .62(g)(1)(i), .62(i)(2)(i), .62(i)(5)(i), .62(i)(3)(i), .62(l)(1)(ii), and .62(m)(2):

Background for the post-implosion allegations. Post-implosion, the Secretary cited violations of the standards which come into play when employees are exposed to lead above the PEL of 50 $\mu g/m^3$. The Secretary asserts violations for the excessive exposure levels she found on February 21 and 22 (items 1a, 1b, 2e). She also contends that the burning and cutting work which occurred on February 13 and 14, 2001, exposed employees to lead levels above the PEL. She asserts the violation for this time period because on February 21 and 22, 2001 (when she actually monitored employees for airborne lead exposure) the levels exceeded the PEL. Given the general identity of the work between the earlier and later dates, she infers that the lead levels on February 13 and 14 would have been at least as high as they were during the abbreviated monitoring on February 21 and 22.

Further, based in part on the February 21 and 22 monitoring results, the Secretary asserts that BTC failed to provide employees with: appropriate respirators and respirator program (item 3b, 3c, 3d, and 3g), fit testing for the respirators (item 3e), personal protective clothing (item 4b), a change area (item 4d), hand washing facilities (item 4f), showers (item 4g), results of blood lead tests (item 5b), lead hazard training (item 6b), and warning signs (item 6c). In addition, the following

items allege that pre- or post-implosion, BTC's written lead compliance plan was deficient (items 1c and 1d), that BTC failed to provide employees with monitoring results (item 2f), and that it failed to provide them with respiratory training (item 3f).

Item 1a: Alleged Willful Violation of § 1926.62(c)(1). For item 1a, the Secretary asserts that on both February 21 and 22, 2001, BTC exposed two employees to levels of airborne lead above the PEL in violation of 1926.62(c)(1). The standard provides:

> (c) *Permissible exposure limit.* (1) The employer shall assure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air (50 μg/m³) averaged over an 8-hour period.

The Secretary monitored the same three employees on February 21 and 22. The samples were sent to the Salt Lake City Technical Center, which sent the raw data back to OSHA's Healey, who then calculated the 8-hour time-weighted average (Tr. 2735-2736). The fact that employees may have regularly worked 10 hour shifts is not recognized by the calculation.

On February 21: Sampling was shortened on February 21 because the employees' respirator airlines froze during lunch, and the burning work was discontinued. As previously set out, Eric Yockey's time-weighted average exposure was 318.6 μg/m³ (6.37 times the PEL of 50 μg/m³ as a time-weighted average concentration) (Exh. C-36, C-80). Yockey was sampled for 317 minutes, and Healey assumed zero exposure for the unsampled portion of an 8-hour (480 minute) shift (Tr. 2742-2743). Opfar was exposed to lead at a time-weighted average of 258.5 μg/m³ (5.17 times the PEL as a time-weighted average concentration) (Exh. C-36, C-80). Opfar was sampled for 323 minutes and zero exposure was assumed for the unsampled portion of an 8-hour shift.

On February 22: Yockey was exposed to lead at a time-weighted average of 615.1 μg/m³ (12.3 times the PEL as a time-weighted average concentration) (Exh. C-36, C-80). Yockey was sampled for 464 minutes and zero exposure was assumed for the unsampled portion of an 8-hour shift. OSHA's sampling pump for Opfar stopped functioning early in the afternoon. Although his sampling time was shortened, the results still exceeded the PEL. Opfar was exposed to lead at a time-weighted average of 954.4 μg/m³ (19.1 times the PEL as a time-weighted average concentration) (Exh. C-36, C-80). Opfar was sampled for 318 minutes and zero exposure was assumed for the unsampled portion of an 8-hour shift.

On cross-examination BTC extensively questioned the reliability of the sampling data. The Secretary established that she followed appropriate protocol and that the sampling data was reliable.[21] BTC's sampling results, which were higher than OSHA's, corroborates OSHA's results. As previously noted, even before any demolition took place, BTC knew that lead was present in the coated steel. Two of the three sampled employees were exposed to airborne lead far above the PEL. Exposure above the PEL can result in serious health problems. The violation of § 1926.62(c)(1) is affirmed.

Item 1b: Alleged Willful Violation of § 1926.62(e)(1). At item 1b, the Secretary asserts that BTC did not implement engineering and work practice controls on February 13, 14, 21, and 22, 2001, to reduce employee exposure to lead to or below the PEL. BTC was required to provide engineering or work practice controls since the exposures exceeded the PEL at least on February 21 and 22. Section 1926.62(e)(1) requires:

> (e) *Methods of compliance.* (1) *Engineering and work practice controls.* The employer shall implement engineering and work practice controls, including administrative controls, to reduce and maintain employee exposure to lead to or below the permissible exposure limit to the extent that such controls are feasible. Wherever all feasible engineering and work practices controls that can be instituted are not sufficient to reduce employee exposure to or below the permissible exposure limit prescribed in paragraph (c) of this section, the employer shall nonetheless use them to reduce employee exposure to the lowest feasible level and shall supplement them by the use of respiratory protection that complies with the requirements of paragraph (f) of this section.

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[21] BTC raised questions at the hearing about the Secretary's sampling process. However, it failed to raise the issue in its brief; and the argument is deemed abandoned. In any event, the Secretary established that the sampling procedures were, in fact, reliable. Specifically, OSHA properly calibrated its pumps, used approved sampling equipment and methodology, calculated the sampling results, and documented the foregoing. After the inspection, Oleszewski evaluated the Gilian Gilibrator which was used to calibrate the sampling pumps. Although the Gilibrator's calibration sticker had expired, the Secretary established that the equipment was functioning properly (Exh. C-44; Tr. 2172). As to an allegation of tampering, all evidence was to the contrary (Tr. 2120, 2123, 2124, 2701, 2714). Tim O'Rourke, who monitored concurrently for BTC, saw no evidence of tampering (Tr. 1848-1849). Steve Edwards, lead chemist and team leader of the spectroscopy team which analyzes metal samples for OSHA's Salt Lake City Technical Center found no signs of tampering (Exh. C-47; Tr. 2481-2483). Opfar, one of the burners who was monitored, stated that he did not touch the monitoring equipment after it was placed on him (Tr. 1250). Finally, even if air temperatures in the 20° (F) range speculatively could affect the flow rate of the sampling pumps, Ray Feldman, an electrical engineer at OSHA Cincinnati Technical Center for testing, persuasively testified that a correction factor which slightly reduced the time-weighted averages could not affect the existence of over-exposures above the PEL (Exh. C-45, C-48; Tr. 2324-2325, 2329).

BTC argues that it utilized engineering controls to reduce employee lead exposure when it provided 3-foot (instead of 18-inch) torches and when its mechanical shears cut up the largest percentage of the steel. BTC presented the expert testimony of John P. Coniglio. Coniglio, owner of Occupational Safety and Environmental Association, has a master's degree in environmental engineering and is a certified safety professional (Tr. 4815-4818). Coniglio testified that use of a 3-foot torch "in my mind was [an] adequate" engineering control for the project, since it kept the worker away from the burn and back from the immediate burning point (Tr. 4969, 4972). BTC also claims that since employees were operating in an open-air environment, they were provided with natural ventilation. On the two monitored days, employees wore respirators.

BTC fundamentally misunderstands the meaning of "engineering controls" and "feasibility." "The test of whether administrative and/or engineering controls are technologically feasible is whether the controls are 'achievable' and capable of producing a significant reduction in exposure to air contaminants." *G & C Foundry Co.,* 17 BNA OSHC 2137, 2140 (No. 95-0869, 1997), citing *Harmony Blue Granite Co.,* 11 BNA OSHC 1277, 1278 (No. 14189, 1983). A control can be feasible even if it does not achieve full compliance. *Id.*

The Secretary's Recommended Engineering and Administrative Controls

The burden is on the Secretary to prove feasibility of engineering controls. *See E. Smalis Painting Co., Inc.,* 1995-96 CCH OSHD ¶ 31,113 (No. 94-1979, 1996) (ALJ). The Secretary proposed that feasible (and practical) controls would include the use of paint strippers to remove the lead paint before torch cutting, the use of air movers and blowers in areas where torch cutting was performed, the implementation of employee rotation, and/or reduction of the length of the employee's work shift. BTC utlizied none of the proposed controls (Tr. 2777).

The Secretary recommended that the lead based paint could have been removed or "stripped back" from the steel. The Secretary's expert witness John Cignatta testified that the two most common tools used to strip back lead based paint before cutting on the specific area are the rotopening hammer and the needle gun (Tr. 3668). Cignatta, who routinely used both of these methods on demolition projects for more than a decade, testified that these methods practically could

have been used at Three Rivers Stadium on February 21 and 22, 2001 (Tr. 3668).[22] Addressing BTC's assertion that the wind constituted a control, Cignatta noted that while a strong blowing wind might reduce an employee's overall lead exposure, a study confirms that employees who torch burn may still have a substantial over-exposure to lead (Tr. 3670-3671). The wind would be less of a factor for employees burning behind walls or inside the beams.

BTC claims that on February 21 and 22 it could not chemically or mechanically strip or vacuum blast because it would create a more hazardous environment for employees due to the instability of the debris pile and the jagged metal sections protruding from the pile (Tr. 4499). Since employees had to be within three feet of the steel in order to torch cut it, it is unclear how first chemically stripping or vacuum blasting an area of painted steel would have been more hazardous. The mere fact that employees needed to take additional time to perform the procedure does not establish infeasibility. The Secretary's proposed controls were hardly exotic, and they had been successfully used for lead control with other demolition projects over an extended period of time (Tr. 3667-3669). Implementation of the controls would undoubtedly require additional employee work hours, but BTC did not assert that use of the proposed controls presented an economic hardship. It is determined that on February 21 and 22, 2001, BTC could have utilized engineering controls to strip back and significantly reduce employee exposure to airborne lead.[23]

As far as administrative controls, the Secretary recommended employee rotation or shorter work shifts in order to reduce employee exposure to lead (Tr. 2777, 2779). Post-implosion, Opfar and James Zamaris stated that they burned their entire 10- hour shift and John Zamaris and Clayton Bertino stated that they burned their entire 8-hour shift (Tr. 1245, 1385, 1430, 1487). Rupp described how BTC employee Pixley, who was brought from another BTC job, burned "every

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[22] In addition to the Secretary's other proposed controls, Cignatta suggested that BTC could use mechanical shears to cut all of the coated steel, instead of having employees torch cut these largest pieces (Tr. 3667). Insufficient information was provided as to the existence of the larger sheers. John Zamaris testified that on February 13 and 14 the upper structural steel he torch cut into smaller sections could not have been chopped up by BTC's shears (Tr. 1430). Since torch cutting steel had to be performed, this control was not a viable option.

[23] In fact, pre-implosion, the Secretary also established that it was feasible to reduce lead exposure by use of the same strip back method before employees cut the high steel. For the seats Cignatta recommended that the vacuum shrouded air-powered chisels or vacuum shrouded cutting wheels readily could have been used to capture airborne lead (Tr. 3672).

single day, seven days a week" (Tr. 1344). Healey observed that on February 21 and 22 none of the burners or firewatchers were rotated (Tr. 2777).

Before the project began, BTC was aware of a need to use engineering and administrative controls in such circumstances. Even if BTC did not formally recognize that the exposures were above the PEL, as discussed, it had reason to suspect that they were. Its failure to monitor does not defeat a showing of knowledge. BTC's health and safety manual states: "The OSHA standards require that engineering and work practice controls be implemented to the extent feasible to reduce exposures at or below the PEL" (Exh. C-17 at p. 2-147). The manual mentions ventilation controls, high efficiency vacuums, and wetting agents as appropriate engineering controls, and worker rotation as a work practice control (Exh. C-17 at p. 2-147).

Feasible engineering and administrative controls existed, but were not implemented, for torch burning and cutting work on the lead coated steel. The violation of § 1926.62(e)(1) is affirmed.

Item 1c: Alleged Violation of § 1926.62(e)(2)(i). At item 1c, the Secretary alleges that from January 4 through February 14, 2001, BTC had not established or implemented a written compliance program. The standard requires that the program be in place before employees torch cut and burned the lead coated seats and structural steel. Section 1926.62(e)(2)(i) provides:

> (e) *Methods of compliance.* (2) *Compliance program.* (i) Prior to commencement of the job each employer shall establish and implement a written compliance program to achieve compliance with paragraph (c) of this section.

Employees torch cut and burned seats and steel, pre-implosion (Roberts, Olbeter, Rupp, Pixley, Nagy, James and John Zamaris, and Ace Bertino), and post-implosion (Opfar, James and John Zamaris, and Clayton Bertino) from January 4 through February 14, 2001. O'Rourke admitted that BTC did not have a written lead compliance plan before February 16, 2001 (Tr. 1649). The final revised compliance plan is dated February 26, 2001 (Exh. C-25). As noted, BTC was always aware of the presence of lead on site and of the requirement to comply with the OSHA lead standards. The violation of § 1926.62(e)(2)(i) is affirmed.

Item 1d: Alleged Willful Violation of § 1926.62(e)(2)(ii). Related to item 1c, which asserts that BTC had no plan during the approximate 1½ months employees torch burned on coated steel,

is item 1d. Item 1d alleges that when BTC finally devised a lead compliance plan on February 16, 2001, and even when it revised its plan on February 26, 2001, the plans were deficient.

Section 1926.62(e)(2)(ii) provides:

> *Methods of compliance.* (2) *Compliance program.* (ii) Written plans for these compliance programs shall include at least the following:
> (A) A description of each activity in which lead is emitted; e.g. equipment used, material involved, controls in place, crew size, employee job responsibilities, operating procedures and maintenance practices;
> (B) A description of the specific means that will be employed to achieve compliance and, where engineering controls are required engineering plans and studies used to determine methods selected for controlling exposure to lead;
> (C) A report of the technology considered in meeting the PEL;
> (D) Air monitoring data which documents the source of lead emissions;
> (E) A detailed schedule for implementation of the program, including documentation such as copies of purchase orders for equipment, construction contracts, etc.;
> (F) A work practice program which includes items required under paragraphs (g), (h) and (i) of this section and incorporates other relevant work practices such as those specified in paragraph (e)(5) of this section;
> (G) An administrative control schedule required by paragraph (e)(4) of this section, if applicable;
> (H) A description of arrangements made among contractors on multi-contractor sites with respect to informing affected employees of potential exposure to lead and with respect to responsibility for compliance with this section as set-forth in 1926.16.
> (I) Other relevant information.

BTC's initial February 16 lead compliance plan did not contain all required information. Specifically, it lacked: 1) a description of each activity in which lead was emitted; 2) a specific means to achieve compliance; 3) a report of the technology considered in meeting the PEL; 4) air monitoring data; 5) a detailed schedule for implementation of the program; 6) an administrative control schedule; and 7) a description of arrangements made among contractors to inform affected employees of potential exposure to lead (Exh. C-23). The February 16 plan simply concluded that based on the National Starch data no exposure above the AL or PEL would occur. That conclusion was followed by what appeared to be little more than generic information on lead safeguards which could have applied if exposure exceeded the AL or PEL. Even the final revised plan did not provide sufficient detail concerning the engineering controls to be used, technology to be used, air monitoring, or a schedule for compliance (Exh. C-25). The violation of § 1926.62(e)(2)(ii) is affirmed.

Item 2e: Alleged Willful Violation of § 1926.62(d)(4)(i). At item 2e, the Secretary alleges that on or about February 13 and 14, 2001, BTC failed to conduct monitoring which was representative of the exposure for the employees who were exposed to lead. Section 1926.62(d)(4)(i) provides:

> *Exposure assessment* – (4) *Positive initial determination and initial monitoring.* (i) Where a determination conducted under paragraphs (d)(1), (2) and (3) of this section shows the possibility of any employee exposure at or above the action level the employer shall conduct monitoring which is representative of the exposure for each employee in the workplace who is exposed to lead.

The standard assumes that BTC would have made a valid initial determination by this point. The circumstances fully demonstrate that *if* BTC had conducted a valid initial determination (as opposed to reliance on the National Starch data) it would have learned that employees were exposed to lead, at the least, above the action level.[24] Pickard's February 13 daily safety report states: "Voiced my concern of lead-base paint and burning procedures to Don Schulick" (Exh. C-30). Pickard allegedly raised this issue with Schulick because an employee told him that he was getting a sweet taste when he burned (Tr. 1956). According to Pickard, after informing Schulick, he ordered personal air sampling pumps and cassettes and contacted Tri-State Mobile X-Ray regarding pulmonary function and blood tests (Tr. 1957). Yet, employees had been burning on lead coated steel for over a month when Pickard describes raising the issue with Schulick. Employees previously questioned their lead exposure. Also, employees continued to burn the next day shift (February 14) without a change in procedures (Tr. 1957, 1959). BTC was aware of concerns about lead exposure and knew from the demolition contract that lead was present on site. It was aware "of the possibility of any employee exposure at or above the action level" and was required to monitor testifying employees Opfar, James and John Zamaris, and Clayton Bertino on February 13 and 14, 2001. BTC did not conduct air monitoring until February 21, when it monitored concurrently with OSHA. The violation of § 1926.62(d)(4)(i) is affirmed.

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[24] As discussed in more detail *infra*, because BTC was cited for failure to comply with the "interim protections" under.62(d)(2)(iv), the Secretary could not also cite BTC for failing to provide the same protection for a time period still within the purview of the interim protections. Unlike the items which are found to duplicate those protections, the abatement for item 2e is not duplicated by an interim protection.

Item 2f: Alleged Willful Violation of § 1926.62(d)(8)(i). At item 2f, the Secretary alleges that BTC failed to provide employees with a written exposure assessment. Section 1926.62(d)(8)(i) provides:

> (d) *Exposure assessment* – (8) *Employee notification.* (i) Within 5 working days after completion of the exposure assessment the employer shall notify each employee in writing of the results which represent that employee's exposure.

Since BTC purported to rely on the National Starch assessment, beginning on January 4, 2001, BTC should have given all burners and fire watchers the sample results from the National Starch report. It provided no documentation to the employees. Employees might have been alerted to the fact a negative assessment for lead was based solely on BTC's other project. After the implosion, employees were air monitored on February 21 and 22. BTC should have, but did not, provide employees with the monitoring results. The notification requirement is included in its safety and health manual, which states (Exh. C-17 at p. 2-144): "Employees will be notified in writing within five (5) days after the completion of the exposure assessment of the results that represent that employee's exposure." BTC's lead plan also required employee notification (Exh. C-23 at p. 6; C-25 at p. 6). The standard contemplates that if employees know the extent of their lead exposure, they can better protect themselves and their families. The violation of § 1926.62(d)(8)(i) is affirmed.

Item 3b: Alleged Willful Violation of § 1926.62(f)(1)(i). At item 3b, the Secretary alleges that on or about February 13 and 14, 2001, BTC failed to require use of respirators although the employee's lead exposure exceeded the PEL. Section 1926.62(f)(1)(i) provides:

> (f) *Respiratory protection.* (1) *General.* For employees who use respirators required by this section, the employer must provide respirators that comply with the requirements of this paragraph. Respirators must be used during:
> (i) Periods when an employee's exposure to lead exceeds the PEL.

Pickard's daily safety report notes that he "issued 4 half-mask respirators [with] piggy back filters for lead-base paint concerns on 2/13/01 night shift" (Exh. C-30; Tr. 1959, 1961). Opfar, who burned February 13 and 14, stated that he did not receive a respirator from BTC but used his own half-mask respirator (Tr. 1245). James Zamaris stated that when he burned the first night, post-implosion (February 13), he did not have a respirator. The second night Gene Gilbert gave him a

half-mask respirator (Tr. 1386-1387). For February 13 and 14, John Zamaris and Clayton Bertino wore their own half-mask respirators (Tr. 1432, 1488).

Half-mask respirators with filters provide protection only up to 10 times the PEL (500 $\mu g/m^3$) (Tr. 2820, 2827). Monitoring on February 22 for burners Opfar and Yockey showed exposure greater than 10 times the PEL (12.3 and 19.1 times the PEL) (Exh. C-36). Pickard admitted that the half-mask respirators used on February 13 and 14 would not have provided adequate protection based on the exposure levels of February 22 (Tr. 2055).

Representative Monitoring

Nevertheless, the question remains whether the Secretary can use the data collected on February 21 and 22 to establish exposure above the PEL for February 13 and 14, 2001. According to the Secretary, since OSHA's lead standard permits an employer to use "representative monitoring" under specific circumstances, the standard must contemplate that the Secretary can apply the same concept – if she also meets the specific circumstances. She seeks to establish that activities which are "essentially the same" as those on the monitoring date would yield the same or similar air monitoring results. Opfar stated that the torch cutting work he did on February 21 and 22, while he was being monitored, was the same work he did on February 13 and 14 except "we wore a bunch of protective gear" on February 21 and 22 (Tr. 1248, 1277). Cignatta opined that the monitoring on February 21 and 22 was representative of February 13 and 14 because of the "closely resembling" factors (Tr. 3663, 3665). He submitted his statistical analysis to support the validity of applying the concept of representative monitoring. As discussed below, because it is concluded that this item is duplicative of item 3a, it is unnecessary to reach the Secretary's issue of representative monitoring.

Duplicative Allegations

BTC violated the standards which required it to provide "interim protections" for employees torch burning and cutting on lead coated steel. The interim protections require: respirators which protect for an exposure of over 2,500 $\mu g/m^3$, personal protective clothing and equipment, change areas, hand washing facilities, biological monitoring, and training (§ .62(d)(2)(v)(A) - (F)). The standard mandates that each protection remains in place until after the initial employee exposure assessment disclosed the extent of the lead exposure. BTC did not monitor for an employee exposure assessment until February 21, 2001.

The lead standard contains provisions for the same types of lead protection when an employee's lead exposure exceeds the PEL. The Secretary cited both the interim protection and its paired requirement because she apparently concluded that the interim protections were no longer in effect after the implosion. The implosion presents an artificial date. Interim protections must be implemented "*until* the employer performs an employee exposure assessment" (emphasis added, § 1926.62(d)(2)(v)). Prior to February 21, the first interim protection (item 3a) would have required BTC to maintain a higher level of respiratory protection than was alleged in instant item 3b.

Commission precedent supports the principle that violations are duplicative where they are directed at fundamentally the same conduct and require the same abatement. *J. A. Jones Construction Co.*, 15 BNA OSHC 2201, 2207 (Docket No. 872059, 1993). The conditions giving rise to items 3a and 3b (and other "paired" violations) and their proposed abatements are the same. While certain violations may be duplicative, BTC's failure to provide the required lead protection during February 13 and 14 must still be considered. Prolonging the period during which employees were exposed to lead without use of respirators enhances the gravity of the violation for item 3a. It is thus properly consider in the penalty assessment for that item. The alleged respirator violation of § 1926.62(f)(1)(i) is duplicative of item 3a and is vacated.

Item 3c: Alleged Willful Violation of § 1926.62(f)(1)(iii). At item 3c, the Secretary alleges that on February 13 BTC failed to provide respirators whenever one was requested by an employee. Section 1926.62(f)(1)(iii) provides:

> (f) *Respiratory protection.* (1) *General.* For employees who use respirators required by this section, the employer must provide respirators that comply with the requirements of this paragraph. Respirators must be used during: . . .
> (iii) Periods when an employee requests a respirator.

According to James Zamaris, he and the other burners asked Pickard about lead on the job because the paint smelled sweet when they burned. Pickard told them something which Zamaris interpreted as "the results were that we were fine to burn" (Tr. 1388). Separately, on February 13, 2001, John Zamaris and his partner Kantrimaitis asked Pickard if there was lead paint on the structural steel. Pickard told them they did not have the results on the lead paint (Tr. 1431, 1432). John Zamaris stated that "I told [Pickard] that since I always carried a respirator with me, I was going to wear [it]" (Tr. 1432). Pickard did not ask him questions about the respirator.

The employees' inquiries about the lead, coupled with notification of the intended use of a personal respirator, was the equivalent of a request for a respirator. Also, the interim protection standard "required" that respirators be used "in accordance with paragraph (f) of this section." (§ 1926.62(d)(2)(v)(A)). BTC violated the elements of the standard.[25] Before demolition began, BTC's contract and its safety and health manual required it to provide respiratory protection in accordance with the OSHA standards (Exh. C-6 at p. 28; C-17 at pp. 2-143, 2-201). The violation of § 1926.62(f)(1)(iii) is affirmed.

Item 3d: Alleged Willful Violation of § 1926.62(f)(2)(i). At item 3d, the Secretary alleges that BTC failed to implement a complete respiratory protection program in accordance with 1910.134(b) through (d) and (f) through (m). Section 1926.62(f)(2)(i) provides:

> (f) *Respiratory protection.* (2) *Respirator program.* (i) The employer must implement a respiratory protection program in accordance with 29 CFR 1910.134 (b) through (d) (except (d)(1)(iii)), and (f) through (m).

Section 1910.134 requires employers to have and to implement a written respirator program which includes procedures for selecting respirators, fit testing, proper respirator use, respirator cleaning and maintenance, insuring adequate air flow, and training of employees in respirator hazards and use of respirators. BTC did not implement a respiratory protection program until OSHA arrived on site (Exh. C-17 at pp. 2-201 through 2-207). Even that belated program lacked information on fit testing, proper respirator use, and how to ensure adequate air flow (*see* Pickard's notes at Exh. C-33). BTC's contract and its safety and health manual required it to provide respiratory protection in accordance with the OSHA standards (Exh. C-6 at p. 28; C-17 at pp. 2-143, 2-201). A respirator program is a part of the respiratory protection program required for employees exposed to lead. The violation of § 1926.62(f)(2)(i) is affirmed.

[25] It is noted that the interim protection which required use of respirators and the instant standard are not duplicative. Item 3c has a different precipitate than item 3a, *i.e.*, a request for a respirator.

Item 3e: Alleged Willful Violation of § 1910.134(f)(2). At item 3e, the Secretary alleges that BTC did not provide fit testing for employees who utilized tight-fitting respirators.[26] Section 1910.134(f)(2) provides:

> (f) *Fit testing.* (2) The employer shall ensure that an employee using a tight-fitting facepiece respirator is fit tested prior to initial use of the respirator, whenever a different respirator facepiece (size, style, model or make) is used, and at least annually thereafter.

Before the implosion some employees chose to wear their own half-mask, tight fitting respirators. Post-implosion, on February 13 and 14, testifying employees Opfar, John Zamaris and Clayton Bertino wore the respirators. Pickard's daily report notes that six employees were fit tested on the February 13 night shift, including Clayton Bertino (Exh. C-30). BTC fit tested Opfar with his own half-mask respirator on February 16. Zamaris was not fit tested (Tr. 1246, 1432, 1489). BTC's health and safety manual contains a section on "Fit-Testing" (Exh. C-17 at p. 2-203). BTC was aware before demolition began that respirators had to be fit tested. The interim protection standard "required" use of respirators. BTC's failure to fit test all the employees who used their own respirators both pre- and post-implosion violated the standard. Without a proper fit, unfiltered air enters the facepiece and aggravates lead exposure, causing long-term health effects. The violation of § 1910.134(f)(2) is affirmed.

Item 3f: Alleged Willful Violation of § 1910.134(k)(3). At item 3f, the Secretary alleges that BTC failed to afford employees any of the respirator training specified by § 1910.134(k)(3), which provides:

> (k) *Training and information.* This paragraph requires the employer to provide effective training to employees who are required to use respirators. The training must be comprehensive, understandable, and recur annually, and more often if necessary. This paragraph also requires the employer to provide the basic information on respirators in Appendix D of this section to employees who wear respirators when not required by this section or by the employer to do so.
> (3) The employer shall provide the training prior to requiring the employee to use a respirator in the workplace.

[26] Pursuant to § 1926.62(f)(2) the respirator requirements of § 1910.134(k) are made applicable to construction jobs involving lead.

As discussed, during the pre-implosion period and during post-implosion on February 13 and 14, some employees wore respirators, even when BTC did not "require" them to do so. BTC did not provide the information in Appendix D to those employees who wore respirators on their own. Since early January 2001 the lead standard did "require" use of respirators as part of the interim protections.

By the evening shift of February 13 when Pickard issued four half mask respirators to the employees, BTC unquestionably "required" employees to wear respirators. Yet, BTC did not attempt to provide the specific training set out at § 1910.134(k) until February 20, 2001 (Exh. C-30). Before demolition began, BTC would have known that its contract and its safety and health manual required it to provide respiratory protection (Exh. C-6 at p. 28; C-17 at pp. 2-143, 2-201). The violation of § 1910.134(k)(3) is affirmed.

Item 3g: Alleged Willful Violation of § 1926.62(f)(3)(i). At item 3g, the Secretary alleges that on February 13 and 14, 2001, BTC failed to select respirators which were appropriate to the degree of its employees' lead exposure.[27] Section 1926.62(f)(3)(i) requires "[a]ppropriate respirator or combination of respirators from Table I of this section." BTC had a variety of respirators from which to choose.

As discussed at item 3b, the half-mask respirators distributed by BTC to its employees on the night shift of February 13 provided protection of up to 10 times the PEL (500 $\mu g/m^3$). If the monitoring on February 22 (which showed levels at 12.3 and 19.1 times the PEL) was representative of exposure on February 13 and 14, the half-mask respirators were insufficient to comply with the above. However, it is unnecessary to reach the issue of representative monitoring. The interim protection cited at item 3a was still in effect. It required BTC to provide a supplied air respirator. The supplied air respirator would have protected employees from lead in excess of the amount found on February 21 and 22. As stated, BTC's continuing failure through February 13 and 14 to provide an appropriate respirator for lead-exposed employees enhances the gravity of item 3a but does not

[27] The original Citation No. 1, item 3g, alleged that the violation occurred on February 14 and 15, 2001, rather than the Secretary's intended dates of February 13 and 14, 2001. The dates were corrected by amendment at the hearing (Tr. 3104).

constitute a separate violation of item 3g.[28] The violation of § 1926.62(f)(3)(i) is vacated as duplicative.

Item 4b: Alleged Willful Violation of § 1926.62(g)(1)(i). At item 4b, the Secretary alleges that BTC failed to provide appropriate personal protective clothing to employees who were torch cutting and burning structural steel painted with lead based paint on February 13 and 14, 2001. Section 1926.62(g)(1)(i) provides:

> (g) *Protective work clothing and equipment* - (1) *Provision and use*. Where an employee is exposed to lead above the PEL without regard to the use of respirators, where employees are exposed to lead compounds which may cause skin or eye irritation (e.g. lead arsenate, lead azide), and as interim protection for employees performing tasks as specified in paragraph (d)(2) of this section, the employer shall provide at no cost to the employee and assure that the employee uses appropriate protective work clothing and equipment that prevents contamination of the employee and the employee's garments such as, but not limited to:
> (i) Coveralls or similar full-body work clothing;

According to Healey's interviews and employee testimony, BTC provided no protective clothing to its exposed employees, such as burning jackets or gloves, until after February 15 when OSHA came onsite (Exh. C-69; Tr. 2849). Opfar, John Zamaris, and Clayton Bertino wore their own burning jackets on February 13 and 14. James Zamaris wore his street clothes. Special protective clothing and equipment shield employees from lead dust and ensure that the clothing will not be worn home to lengthen the employee's exposure or to expose the employee's family.

However, as discussed, BTC was already required to provide protective clothing and equipment as part of the interim protection until after it made an initial assessment of lead exposure. To cite the instant violation to cover a period before February 22, when BTC belatedly made its initial determination, is duplicative. The separate time period alleged in this item will be considered as an enhancement of the gravity for item 4a. The alleged violation of § 1926.62(g)(l)(i) is duplicative and is vacated.

Item 4d: Alleged Willful Violation of § 1926.62(i)(2)(i). At item 4d, the Secretary alleges that BTC failed to provide change areas for employees who were torch cutting and burning

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[28] Item 3b (.62(f)(1)(i)) cites BTC's failure to provide any respirator for most employees on February 13 and 14. Item 3g (.62(f)(3)(i)) cites BTC's failure to provide a sufficiently protective type of respirator to some night shift employees on February 13, 2001. While the two items are not duplicative of each other, they are both duplicative of the requirement for respirator protection in the interim protection, cited at item 3a.

structural steel painted with lead based paint on February 13 and 14, 2001. Section 1926.62(i)(2)(i) provides:

> (i) *Hygiene facilities and practices.* (2) *Change areas.* (i) The employer shall provide clean change areas for employees whose airborne exposure to lead is above the PEL, and as interim protection for employees performing tasks as specified in paragraph (d)(2) of this section, without regard to the use of respirators.

James and John Zamaris testified that the burners were not provided with a change area on February 13 and 14. They changed clothes in the employee trailer as usual (Tr. 1388, 1423). After OSHA arrived, BTC directed laborers to build a containment area and BTC brought in the clean up area (Tr. 500). When Healey returned to perform air monitoring on February 21, she observed the new change area (Exh. C-77, C-78, C-79 (February 21 photographs); Tr. 2858). A change area is necessary to minimize an employee's exposure to lead dust. Changing contaminated clothing and hanging burning coats in the trailer where all employees ate meals and took breaks increased their exposure to lead through inhalation and ingestion. However, since the change area was required to be provided as part of the interim protections, this item is duplicative of item 4c. The fact that the violation continued through February 13 and 14 will enhance the gravity of the violation at item 4c for penalty purposes. The violation of § 1926.62(i)(2)(i) is duplicative and is vacated.

Item 4f: Alleged Willful Violation of § 1926.62(i)(5)(i). At item 4f, the Secretary alleges that BTC failed to provide hand washing facilities for employees who were torch cutting and burning structural steel painted with lead based paint on February 13 and 14, 200l. Section 1926.62(i)(5)(i) provides:

> (i) *Hygiene facilities and practices.* (5) *Hand washing facilities.* (i) The employer shall provide adequate hand washing facilities for use by employees exposed to lead in accordance with §1926.51(f).

On February 13 and 14 Opfar, James Zamaris, and Clayton Bertino stated that they had no place to wash their hands (Tr. 1247, 1388, 1423, 1486). Healey did not see any hand washing facilities when she was on site during February 14 through 16 (Tr. 2725). After that time, BTC installed hand washing facilities (Exh. C-75, C-76 (February 21 photographs); Tr. 2864).

BTC contends that by February 13 and 14 there were no functioning utilities on site, but employees were provided with a wash station outside the trailer fitted with water and buckets for hand washing. John Zamaris stated that the only place to wash was a water jug outside the trailer

(Tr. 1424). A water jug is not an adequate hand washing facility. "OSHA expects that strict compliance with these [hygiene facilities] will control several sources of lead exposure which substantially contribute to increased lead absorption" (58 Fed. Reg. At 26603). Hand washing facilities are necessary to reduce an employee's lead absorption due to ingestion or inhalation. The Secretary asserts that this section applies to any employee exposed to lead at any level. It is unnecessary to decide this issue. The asserted violation is duplicative of the same requirement in the interim protection standard, which the Secretary cited at item 4e. The time period asserted here will be considered under the gravity of item 4e. The violation of § 1926.62(i)(5)(i) is duplicative and is vacated.

Item 4g: Alleged Willful Violation of § 1926.62(i)(3)(i). At item 4g, the Secretary alleges that BTC failed to provide shower facilities for employees who were torch cutting and burning structural steel painted with lead based paint. Section 1926.62(i)(3)(i) provides:

> (i) *Hygiene facilities and practices.* (3) *Showers.* (i) The employer shall provide shower facilities, where feasible, for use by employees whose airborne exposure to lead is above the PEL.

Air monitoring established that employees were exposed to lead above the PEL on February 21 and 22, 2001. Healey observed that BTC had not provided showers on the jobsite by those dates (Tr. 2869). John Zamaris and Clayton Bertino stated that there was no place to take a shower (Tr. 1423, 1491). No interim protection requires shower facilities, and the instant item is not duplicative. Environmental Safety Corporation (with ownership and a facility in common with BTC) owned five portable showers (Exh. C-50). BTC provided shower facilities during the inspection, and it has not asserted that it was infeasible to do so earlier. BTC's health and safety manual states that showers would be provided for employees with exposures above the AL: "Shower facilities will be provided, where feasible, for use by employees whose airborne exposure to lead is above the action level" (Exh. C-17 at p. 2-142). Using shower facilities reduces an employee's period of lead exposure and allows for the removal of lead particles that accumulate on the skin and hair. The violation of § 1926.62(i)(3)(i) is affirmed.

Item 6b: Alleged Willful Violation of § 1926.62(l)(1)(ii). At item 6b, the Secretary alleges that BTC failed to provide any lead training for employees who were torch cutting and burning

structural steel painted with lead based paint on February 13 and 14, 2001. Section 1926.62(l)(1)(ii) provides:

> (l) *Employee information and training* – (1) *General.* (ii) For all employees who are subject to exposure to lead at or above the action level on any day or who are subject to exposure to lead compounds which may cause skin or eye irritation (e.g. lead arsenate, lead azide), the employer shall provide a training program in accordance with paragraph (l)(2) of this section and assure employee participation.

The Secretary established that on February 13 and 14, 2001, employees were exposed to lead at or above the AL of 30 $\mu g/m^3$. Subsequent air monitoring by OSHA and BTC (where even the firewatch exceeded the AL) and the type of work being conducted during the burners' 10 hour shifts leaves little doubt that exposure exceeded the AL on both of those days. The standard required training on "any day" employee exposure exceeded the AL, *i.e.* on February 13 and 14. Opfar, James and John Zamaris, and Clayton Bertino testified that BTC had not trained them on lead hazards before they began torch burning on those dates (Tr. 1247,1382, 1424, 1488). Pickard admitted that he first attempted to conduct the training on February 20 (Tr. 1998-2000). This item is not duplicative as it requires periodic training which differs from that mandated by the interim protection. BTC's health and safety manual also requires the training and states (Exh. C-17 at p. 2-143):

> In addition to the training requirements outlined in *Training* of this manual, the following requirements apply: A. All employees who are subject to exposure to lead at or above the action level on any day … additional training will be provided. B. Training on lead will be provided prior to the time of job assignment.

BTC's lead plan required training on the hazards of lead (C-23 at p. 6; C-25 at p. 5). The violation of § 1926.62(l)(1)(ii) is affirmed.

Item 6c: Alleged Willful Violation of § 1926.62(m)(2). At item 6c, the Secretary alleges that BTC failed to post warning signs in the work area where employee exposures to lead were above the PEL. Section 1926.62(m)(2) provides:

> (m) *Signs* – (2) *Signs.* (i) The employer shall post the following warning signs in each work area where an employee exposure to lead is above the PEL.
>
> WARNING
> LEAD WORK AREA
> POISON
> NO SMOKING OR EATING

> (ii) The employer shall assure that signs required by this paragraph are illuminated and cleaned as necessary so that the legend is readily visible.

When Healey was on site on February 15, 21, and 22, 2001, she observed that no warning signs had been placed in the lead exposure areas (Tr. 2885). The Secretary's and BTC's monitoring results on February 21 and 22 establish that on those two days employees were exposed to lead above the PEL. BTC was aware that warning signs were required before the demolition began because that requirement was included in the contract (Exh. C-6 at p. 34 or BT-670). BTC's health and safety manual also requires the signs and states (Exh. C-17 at 2.144):

> The following warning sign will be placed and will be legible at each work area in which employee exposures to lead are above the PEL: 1. WARNING; 2. LEAD WORK AREA; 3. POISON; and 4. NO SMOKING OR EATING.

The preamble to the lead standard explains (58 Fed. Reg. At 26607):

> In light of the serious nature of the hazard of exposure to lead, OSHA believed that sign posting is needed, as well as periodic training, to adequately inform employees of the presence of high levels of lead and the possible need to utilize respirators and other protective equipment when entering the area.

BTC's failure to post the warning signs violated § 1926.62(m)(2), and the item is affirmed.

Willful Classification of Health Citation

The record establishes that BTC had a heightened awareness of the cited requirements of the lead standard, yet disregarded them. *See J.A.M. Builders, Inc. v. Herman,* 233 F.3d 1350, 1355 (11th Cir. 2000) quoting *Williams Enterprises, Inc.*, 13 BNA OSHC 1249, 1257 (No. 85-355, 1987) and *Fiore Construction Co., Inc.*, 19 BNA OSHC 1408 (No. 99-1217, 2001). *See also, Interstate Lead Co.*, 15 BNA OSHC 1989 (Nos. 89-2088P and 89-3296, 1992) (multiple violations of the lead standard were willful because the employer manifested both intentional disregard for the standard and plain indifference to employee safety).

David Bianchi, who was closely involved in the project from the preparation of the bid to its completion, admitted that he was always aware of the presence of lead at Three Rivers Stadium (Tr. 3073, 3074, 3380). The demolition contract required compliance with the OSHA standards generally and with lead standards specifically. It devoted an entire section to lead and lead based

paint (Exh. C-6 at p. 28 § 3.4 "Lead"; p. 34, § 3.5, J. "Lead-based Paint") and notified that (Exh. C-6 at p. 28):

> 1. The painted materials in the building contain, or should be assumed to contain lead. The OSHA Interim Final Lead in Construction Standard (1926.62) applies to all workers doing construction/demolition/abatement work who may be exposed to lead on the job.

BTC had a heightened awareness of OSHA's lead standards. BTC's Corporate Health and Safety Manual, last revised by O'Rourke in August 1999, treats lead related issues with specificity. The language mirrors the OSHA standards (Exh. C-17; Tr. 1606).[29] BTC's website states that its health and safety plan is based on the OSHA standards and regulations, particularly citing the requirements at Part 1910 and Part 1926 (Exh. C-50).

BTC holds itself out to the public as an expert on lead. The BTC website (which it shares with Environmental Safety Corporation)[30] claims that it "is one of the few demolition contractors in the country that can provide true turnkey demolition, asbestos and *lead paint abatement* service with[]out the use of subcontractors" (emphasis added) (Exh. C-50; Tr. 3396). On its website BTC offers the environmental service of: "Complete Lead Abatement" (Exh. C-50). Additionally, BTC

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[29] Specifically, BTC's safety and health manual ¶ 2.25 "Lead Exposure Plan" references §§ 1910.1025 and 1926.62. The language in that section corresponds directly to §§1926.62(e)(2)(i), 1926.62(e)(2)(ii), and 1926.62(d)(3)(i)(C) (Exh. C-17 at p. 2-141), which the Secretary cited as violations at items 1c, 1d, and 2b. Paragraphs 4.1, "Hygiene," 4.3, "Washing Facilities," and 6 "No eating, drinking, or smoking, in bathrooms or in areas exposed to toxic materials" correspond to §§ 1926.62(d)(2)(v)(B), 1926.62(g)(1)(i), 1926.62(d)(2)(v)(C), 1926.62(i)(2)(i), 1926.62(d)(2)(v)(D), 1926.62(i)(5)(i), 1926.62(i)(3)(i) (Exh. C-17 at pp. 2-142, 2-209), which the Secretary cited as violations at items 4a, 4b, 4c, 4d, 4e, 4f, and 4g. Paragraphs 4.3 "Personal Protective Equipment" (for lead exposure) and 2.37 "Respiratory Protection" correspond to §§ 1926.62(d)(2)(v)(A), 1926.62(f)(1)(i), 1926.62(f)(1)(iii), 1926.62(f)(2)(i), 1926.62(f)(3)(i), 1926.62(g)(1)(i), and 1910.134(f)(2) (Exh. C-17 at pp. 2-142, 2-201 through 2-207), which the Secretary cited as violations at items 3a, 3b, 3c, 3d, 3g, 4b, and 3e. Paragraph 4.4 "Training" (on hazards of lead) corresponds to §§ 1910.134(k)(3), 1926.62(d)(2)(v)(F), and 1926.62(l)(1)(ii) (Exh. C-17 at p. 2-143), which the Secretary cited as violations at items 3f, 6a, and 6b. Paragraph 4.5 "Personal Air Sampling" (for lead projects) corresponds to §§ 1926.62(d)(4)(i) and 1926.62(d)(8)(i) (Exh. C-17 at p. 2-144), which the Secretary cited as violations at items 2e and 2f. Paragraph 4.6 "Signs" (for lead projects) corresponds to § 1926.62(m)(2) (Exh. C-17 at p. 2-144), which the Secretary cited as a violation at item 6c. Paragraph 4.7 "Medical Surveillance" (blood sampling and ZPP levels) corresponds to §§ 1926.62(d)(2)(v)(E) and 1926.62(j)(2)(iv)(A) (Exh. C-17 at p. 2-145), which the Secretary cited as violations at items 5a and 5b. Paragraph 6.1 (Lead) "Hazard Evaluation" corresponds to §§ 1926.62(c)(1), 1926.62(d)(1)(i), 1926.62(d)(3)(iii), and 1926.62(d)(4)(i) (Exh. C-17 at 2-145), which the Secretary cited as violations at items 1a, 2a, 2c, and 2e. Paragraph 6.2 "Hazard Control and PPE" corresponds to § 1926.62(e)(1) (Exh. C-17 at p. 2-146), which the Secretary cited as a violation at item 1b.

[30] For the 8 years that Environmental Safety Corporation (ESC) has been in business David and William Bianchi have been its owners and officers (Tr. 3057). ESC and BTC have the same office address in New York (Tr. 3058).

claims that its management personnel have expertise in lead. The resumes of Jalowiec, Greenwald, Stern, and Skinner list under "expertise" "asbestos/lead abatement" disposal or demolition (Exh. C-52, C-53, C-54, C-55). Eugene Gilbert's resume states that he has a certification in lead awareness (Tr. C-58). BTC and its supervisors had experience in lead abatement in large demolition projects. For example, Skinner, who worked for BTC for 8 to 9 years, stated that of his 25 to 40 jobs, a dozen of them had lead issues, including a Superfund project (Tr. 3430, 4592-4593).

It is well known that torch burning and cutting steel can generate high levels of airborne lead. For this reason the lead standard itself requires employees engaged in those activities to wear respirators, be trained, and take special precautions for hygiene, even before the employer monitors. BTC took none of these precautions because it claimed the historical data exception. For the reasons previously stated, BTC's decision to rely on the historical exception was not reasonable. In the context of BTC's experience and knowledge, that decision was intellectually fraudulent.

In December 2000 BTC had just completed the National Starch demolition project. BTC hired a company to perform lead monitoring for National Starch, something that was not done for Three Rivers Stadium. The decision to rely on the National Starch data seemed an afterthought. No witness had a consistent recollection of when, how, or by whom the decision was made, although O'Rourke agreed that BTC could be use the National Starch data for the stadium project. O'Rourke believed that this occurred when he was on site around January 20, 2001. That date would have been *after* employees burned painted structural steel for about 10 days. Even if BTC had intended to rely on the historical data exception before it began the Three Rivers Stadium demolition, as it claims, the nature of the decision is equally flawed.

BTC asserts that it relied on O'Rourke to perform all its safety and health tasks. For years O'Rourke, Inc., had been, as Skinner characterized it, "our corporate health and safety guy" (Tr. 4640). Pickard acted as if he were integrated into BTC's management. It was BTC, not O'Rourke, which relied on the National Starch data to the exclusion of implementing any of the protective measures required by the lead standard. The fact that BTC hired the small safety and health consultant company does not relieve it of responsibility for conditions it knew were unsafe. BTC's attempt to distance itself from the lead expertise it claimed in other contexts was unconvincing. Its own management, including foremen, had expertise in handling lead, which it could not simply choose to ignore.

When the televised news report briefly showed an employee burning on the steel without a respirator, OSHA immediately suspected a potential lead problem. Because of BTC's experience with lead, it would have had an equal recognition of the problem, especially when coupled with its knowledge of its employees' questions and complaints.

The Secretary may also establish a willful violation if she proves an employer had plain indifference to employee safety. Proof of BTC's plain indifference to employee health is intertwined with proof of BTC's knowing disregard of OSHA's standards. BTC brought employees Pixley and Tarver to the stadium exclusively to burn structural steel 10 hours a day. It hired other laborers to cut and burn seats and structural steel (Tr. 4601, 4612, 4620). BTC's supervisors ignored what they knew about lead when they required employees to perform those tasks without precautions against over-exposure. They also ignored or deflected questions about having an unusual taste in their mouths while burning, questions about the level of lead on site, and requests for respirators (Tr. 2524 – Ace Bertino, 973 – Olbeter, 1247 – Opfar, 1312 – Rupp, 1388 – James Zamaris, 1431 – John Zamaris). Employees who were torch cutting asked about the level of lead. Employees who were torch cutting requested respirators for torch cutting but were not given any (Tr. 2524 – Ace Bertino, 1556 – Nagy, 1312 – Rupp, 1425 – John Zamaris, 1556 – Nagy). Opfar and Clayton Bertino wore their own half-face respirators (Tr. 1245, 1488).) *See Fluor Daniel,* 19 BNA OSHC 1529 (Nos. 96-1729 and 96-1730, 2001) (employer who consciously chose to deprive employees of emergency respirators committed willful violation), *aff'd,* 295 F.3d 1232 (11th Cir. 2002).

BTC did not even begin working on a lead compliance plan until February 15, 2001, the first day of the OSHA health inspection (Exh. C-23, C-24, C-25). That plan simply recited the conclusion that the National Starch data established no exposure above the AL or PEL for the stadium.[31]

BTC failed to establish a good faith defense to willfulness. *See Morrison-Knudsen,* 16 BNA OSHC at 1124 and 1127. Its failure to address employee concerns supports the existence of a willful state of mind. When employees asked supervisors about an unusual taste while burning, they were

[31] In the circumstances of the torch work being performed, the simple recitation in the February 16 plan that there was no exposure above either the AL or PEL (based on National Starch) was unreasonable and showed plain indifference to employee health (item 1d). The fact that the revised plan of February 26, 2001, was defective is not a part of the willful classification for that item.

brushed off. Olbeter testified: "Yes, I talked to Marlon about it [the funny taste]. You know, I told him I thought it was probably lead base paint, and he said he didn't know, but he said, 'It's a possibility,' and that was about it" (Tr. 973). James Zamaris testified that John, Billy, Dave, Chuck, and he asked about the presence of lead because of the sweet smell, and "They said the results were that we were fine to burn" (Tr. 1388). When employees asked about the lead content of the paint, they were told that the lead test results were not available (Tr. 1432). When employees who were burning asked for respirators, they were told by their supervisors they did not need respirators (Shawn told Rupp "You're outside. You don't need a respirator"; Marlon told Nagy, "Stay downwind and you'll be all right"; Marlon told Ace Bertino "it wasn't necessary") (Tr. 1312, 1556, 2524). Requests for protective burning equipment were denied because BTC "didn't have [any]" (Tr. 1381). The violations affirmed for Citation No. 1 are properly characterized as willful.

Penalty Assessment for Health Case

The statutory penalty factors of size, good faith, and past history have been discussed. A gravity assessment and the classification of willfulness are the primary penalty considerations for the health case. The gravity of items 1a, 1b, 1c, and 1d is high. At least two employees were over-exposed to lead during their 8 hour shifts on February 21 and 22 while no feasible controls were implemented to lessen exposure. BTC failed to have a written lead protection plan for the many teams of employees who torch burned on painted steel from January 4 through February 14, 2001. Its belated plan excluded important information to lessen lead exposure A grouped penalty of $42,000 is assessed.

The gravity for items 2a, 2b, 2e, and 2f is high. BTC made no assessments of lead exposure or gave employees information to help them avoid lead exposure. Many teams of employees performed torch burning and cutting, some in close quarters, during 10 hour shifts. For some employees that intensive torch work extended over a month's time. Later, on February 13 and 14 at least four testifying employees were exposed to airborne lead during their 8 to 10 hour shifts. A grouped penalty of $35,000 is assessed.

The gravity for items 3a, 3b, 3c, 3d, 3e, 3f, and 3g is high. Use of respirators and related issues (such as training on respirators) target inhalation of airborne lead, the most serious form of exposure. The penalty reflects the fact that two items were vacated but that for item 3a the period of violation extended through February 13 and 14. The number of employees varied from the many

employees who were not afforded any lead protection to the few employees who were not fit tested with their own respirators. The duration of the violation also varied, but some employees were exposed to airborne lead for about one month. A grouped penalty of $35,000 is assessed.

The gravity for items 4a, 4b, 4c, 4d, 4e, and 4f is moderate to high. Protective clothing, hand washing, and change areas primarily protect against ingestion of lead and carry a somewhat lesser gravity. At least three testifying employees wore street clothes while burning, after BTC turned down a request for protective clothing. Others wore incomplete protective clothing and equipment. Many employees were exposed to lead when burners and non-burners shared an eating place where lead contaminated clothing was hung. Three items were vacated as duplicative but the period of exposure for the non-duplicative "paired" violations extended through February 14, 2001. A grouped penalty of $25,000 is assessed.

The gravity for items 5a and 5b is high. None of the teams of burners received biological monitoring for well over a month and some fifteen employees did not receive the results of their February 15, 2001, blood test. A grouped penalty of $27,000 is assessed.

The gravity for items 6a, 6b, 6c is moderate to high. Training and warnings assists employees to protect themselves from excessive exposure to lead. None of the teams of burners were provided with this information. A grouped penalty of $20,000 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 52a) of the Federal Rules of Civil Procedure. Accordingly, it is ORDERED that:

Docket No. 01-1367 (Safety Case):

Citation No. 1

Item No.	Standard	Disposition	Penalty
1a	§ 1926.416(a)(3)	affirmed as serious	grouped penalty of $2,250.00
1b	§ 1926.850(c) (instances (a) and (b))	affirmed as serious	

2a	§ 1926.451(b)(3)	affirmed as serious	grouped penalty of $2,500.00
2b	§ 1926.451(g)(1)(vii)	affirmed as serious	
3a	§ 1926.452(w)(1)	affirmed as serious	$525.00
3b	§ 1926.452(w)(2)	affirmed as "other-than-serious"	$0.00
3c	§ 1926.452(w)(6)(i)	withdrawn and vacated	--
4a	§ 1926.501(b)(1)	affirmed as serious	grouped penalty of $3,000.00
4b	§ 1926.502(b)(2)(i) (instances (a) and (c))	affirmed as serious	
4c	§ 1926.502(b)(3) (instances (a), (c), and (d))	affirmed as serious	
5	§ 1926.502(d)(16)(iii)	vacated	--
6	§ 1926.851(c)	affirmed as serious	$2,000.00
7	§ 1926.859(a) (instances (a), (b), (c), and (d))	withdrawn and vacated	–
Citation No. 2			
1	§ 1926.850(g) (instances (a), (b), and (c))	affirmed as serious	$2,750.00
2a	§ 1926.850(h) (instances (b), and (d))	affirmed as willful	grouped penalty of $39,000.00
2b	§ 1926.850(i) (instances (a), (b), and (c))	affirmed as willful	

Docket No. 01-1368 (Health Case):

Citation No. 1

Item No.	Standard	Disposition	Penalty
1a	§ 1926.62(c)(1)	affirmed as willful	grouped penalty of $42,000.00
1b	§ 1926.62(e)(1)	affirmed as willful	
1c	§ 1926.62(e)(2)(i)	affirmed as willful	
1d	§ 1926.62(e)(2)(ii)	affirmed as willful	
2a	§ 1926.62(d)(1)(i)	affirmed as willful	grouped penalty of $35,000.00
2b	§ 1926.62(d)(3)(i)(C)	affirmed as willful	
2c	§ 1926.62(d)(3)(iii)	vacated	
2d	§ 1926.62(d)(3)(iv)(B)	withdrawn and vacated	
2e	§ 1926.62(d)(4)(i)	affirmed as willful	
2f	§ 1926.62(d)(8)(i)	affirmed as willful	
3a	§ 1926.62(d)(2)(v)(A)	affirmed as willful	grouped penalty of $35,000.00
3b	§ 1926.62(f)(1)(i)	vacated	
3c	§ 1926.62(f)(1)(iii)	affirmed as willful	
3d	§ 1926.62(f)(2)(i)	affirmed as willful	
3e	§ 1910.134(f)(2)	affirmed as willful	
3f	§ 1910.134(k)(3)	affirmed as willful	
3g	§ 1926.62(f)(3)(i)	vacated	
4a	§ 1926.62(d)(2)(v)(B)	affirmed as willful	grouped penalty of $25,000.00
4b	§ 1926.62(g)(1)(i)	vacated	
4c	§ 1926.62(d)(2)(v)(C)	affirmed as willful	
4d	§ 1926.62(i)(2)(i)	vacated	
4e	§ 1926.62(d)(2)(v)(D)	affirmed as willful	
4f	§ 1926.62(i)(5)(i)	vacated	

4g	§ 1926.62(i)(3)(i)	affirmed as willful	
5a	§ 1926.62(d)(2)(v)(E)	affirmed as willful	grouped penalty of $27,000.00
5b	§ 1926.62(j)(2)(iv)(A)	affirmed as willful	
6a	§ 1926.62(d)(2)(v)(F)	affirmed as willful	grouped penalty of $20,000.00
6b	§ 1926.62(1)(1)(ii)	affirmed as willful	
6c	§ 1926.62(m)(2)	affirmed as willful	

The total penalties for the safety case (OSHRC Docket No. 01-1367) are $52,025.00. The total penalties for the health case (OSHRC Docket No. 01-1368) are $184,000.00. The combined penalties total $236,025.00.

/s/ Nancy J. Spies
NANCY J. SPIES
Judge

Date: January 19, 2004