



UNITED STATES OF AMERICA  
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION  
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WASHINGTON, DC 20006-1246

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**SECRETARY OF LABOR**  
Complainant,  
v.

**STONE CONTAINER CORPORATION,**  
Respondent,

**UNITED PAPERWORKERS INTERNATIONAL  
UNION, HELLGATE LOCAL 885,**  
Authorized Employee  
Representative.

**OSHRC DOCKET  
NO. 91-3457**

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

The Administrative Law Judge's Report in the above referenced case was docketed with the Commission on February 18, 1993. The decision of the Judge will become a final order of the Commission on March 22, 1993 unless a Commission member directs review of the decision on or before that date. **ANY PARTY DESIRING REVIEW OF THE JUDGE'S DECISION BY THE COMMISSION MUST FILE A PETITION FOR DISCRETIONARY REVIEW.** Any such petition should be received by the Executive Secretary on or before March 10, 1993 in order to permit sufficient time for its review. See Commission Rule 91, 29 C.F.R. 2200.91.

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

Executive Secretary  
Occupational Safety and Health  
Review Commission  
1825 K St. N.W., Room 401  
Washington, D.C. 20006-1246

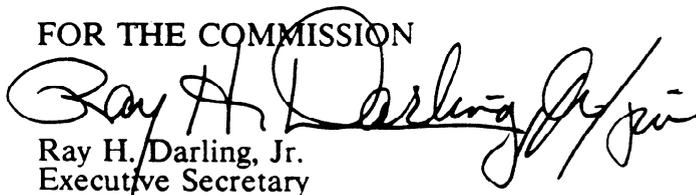
**Petitioning parties** shall also mail a copy to:

Daniel J. Mick, Esq.  
Counsel for Regional Trial Litigation  
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Room S4004  
200 Constitution Avenue, N.W.  
Washington, D.C. 20210

DOCKET NO. 91-3457

If a **Direction for Review** is issued by the Commission, then the Counsel for **Regional Trial Litigation** will represent the Department of Labor. Any party having **questions** about review rights may contact the Commission's Executive Secretary or call (202) 634-7950.

FOR THE COMMISSION

A handwritten signature in cursive script, reading "Ray H. Darling, Jr.", written in black ink.

Ray H. Darling, Jr.  
Executive Secretary

Date: February 18, 1993

DOCKET NO. 91-3457

NOTICE IS GIVEN TO THE FOLLOWING:

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Benjamin R. Loye  
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SECRETARY OF LABOR,  
Complainant,

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STONE CONTAINER CORPORATION,  
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UNITED PAPERWORKERS  
INTERNATIONAL UNION,  
HELLGATE LOCAL 885,  
Authorized Employee  
Representative.

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NO. 91-3457

**APPEARANCES:**

Tobias B. Fritz, Esq., Office of the Solicitor, U.S. Department of Labor,  
Kansas City, Missouri

John M. Husband, Esq., Holland & Hart, Denver, Colorado

**Before: Administrative Law Judge Benjamin R. Loye**

DECISION AND ORDER

This proceeding arises under the Occupational Safety and Health Act of 1970  
(29 U.S.C. Section 651 et seq.; hereafter called the "Act").

**Respondent, Stone Container Corporation (Stone), at all times relevant to this action maintained a worksite and place of business at Mullan Road, Frenchtown, Montana, where it was engaged in paper and linerboard manufacturing (Answer ¶1). Stone admits it is an employer engaged in a business affecting commerce and is subject to the requirements of the Act (Tr. 23, Answer ¶2).**

**On May 15, 1992, an Occupational Safety and Health Administration (OSHA) Compliance Officer (CO) conducted an inspection of Stone's Frenchtown worksite (Tr. 50). Following the inspection, Stone was issued a "serious" citation alleging violation of 29 CFR §1910.132(a), together with proposed penalty. Stone filed a timely notice of contest to the citation bringing this proceeding before the Occupational Safety and Health Review Commission (Commission).**

**On October 21-22, 1992 a hearing was held in Missoula, Montana, on the contested item. The parties have submitted briefs and this matter is ready for disposition.**

#### Alleged Violations

**Serious citation 1, item 1 states:**

**1**

**29 CFR 1910.132(a): Protective equipment was not used when necessary whenever hazards capable of causing injury and impairment were encountered.**

**(a) At Stone Container: On or about 05/14/91 and at times prior thereto respiratory protection for emergency evacuation was not worn when employees were exposed to the hazards of hot steam and caustic chemicals while working outside of the explosion proof control room in the #4 black liquor recovery boiler building.**

**(b) At Stone Container: On or about 05/14/91 and at times prior thereto protective clothing was not worn when employees were exposed to the hazards of hot steam and caustic chemicals while working outside of the explosion proof control room in the #4 black liquor recovery boiler building.**

**The Complaint amends item (a) to include the allegation: "No such respiratory protection was provided in this area subsequent to the fatal accident." Item (b) was amended to include: "No such protective clothing was provided subsequent to the fatal accident."**

**The cited standard provides:**

**Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.**

**Alleged Violation of §1910.132(a)**

***Facts***

On May 14, 1991, the burners went out in Stone's #4 black liquor recovery boiler (a "blackout," or "upset" condition<sup>1</sup>) (Tr. 61, 206). A fireman (boiler tender) was relighting the burners when the boiler exploded (Tr. 62). The explosion was unforeseeable, and its cause was never determined (Tr. 53, 124-25).

The fireman sustained burns which resulted in fatal "pulmonary consolidation" (Tr. 64-65; Exh. C-10). Two other employees also sustained minor burns (Tr. 63-64). At the time of the explosion, the employees<sup>2</sup> were wearing hard hats and hard-toed boots, safety glasses and shields, but not fireproof protective clothing or self contained respirators (Tr. 64-65). Respirators and protective equipment were, however, maintained in the control room for emergency evacuation of the operators<sup>3</sup> (Tr. 118).

Thomas Grace, president of T.M. Grace Co., Inc., a chemical recovery consulting firm, testified for Stone (Tr. 195). Grace explained that the black liquor recovery boiler is used to burn off organic waste and recover spent wood pulping

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<sup>1</sup> Thomas Grace, Stone's expert defined an upset condition as "anything that is different from a normal steady state of operation which in a recovery boiler would be operating at its normal load on black liquor alone and operating steadily. ..." (Tr. 205).

<sup>2</sup> Employees, including the fireman and his helper, who perform periodic inspections and relight burners, work in the area of the boilers on a daily basis, sometimes for their entire eight hour shift (Tr. 100-1, 167).

<sup>3</sup> Mr. Petrilli, one of the employees injured on May 14, 1991 donned a self-contained breathing apparatus following the explosion (Tr. 168).

chemicals from the waste produced during the pulping process (Tr. 201-2). The waste solution, or "black liquor," is heated in the boiler, creating a waste product, which is burned off (Tr. 202, 206), and a concentrated sodium and sulfur compound, which runs out of the furnace as a liquid "smelt" (Tr. 202-3).

Grace stated that the boilers are subject to combustion explosions from the accidental ignition of uncontrolled fuel or black liquor gases, as well as from any contact of the smelt with water, which can generate steam at an explosive rate (Tr. 204, 206). The incidence and cause of boiler explosions has been tracked by the industry (Tr. 94, 205). A loss prevention brochure from Factory Mutual System, Stone's insurer, states that in the last 18 years 215 critical exposures (near misses) involving recovery boilers have been reported. In addition, 128 boiler explosions have been reported in the last 35 years (Exh. C-6, p.22). Auxiliary fuel was involved in 26 of the explosions, only one which occurred after 1980, while smelt/water reactions were responsible for 96 (Exh. C-6, p.22).

Grace testified that there are warning signs in the majority of smelt/water explosions, allowing boiler personnel to institute emergency shutdown procedures and evacuate (Tr. 214-15, 238, 273-75). Nonetheless, Grace admitted that with the current technology, it is possible that any given boiler could explode without warning (Tr. 240-42, 247). Moreover, Grace testified that there is "a definitely higher risk of a combustible type of explosion during an upset period, particularly if it involves lighting a burner" (Tr. 249).

Stone recognized the explosion hazard, providing explosion proof control rooms for employees working in boiler rooms (Tr. 78, 213-14), conducting audits of its boilers (Tr. 91, 95, 200; Exh. C-5), and providing training in emergency recognition for its employees (Tr. 216-217).

CO Wolf testified that a lightweight Gortex material is available from Dupont which can protect against steam burns at temperatures up to 700°, the operating temperature of the recovery boiler (Tr. 104). No protective clothing using the Gortex material is available on the market (Tr. 160); however, Wolf testified that he found

Gortex suits in use in two companies in Montana and Texas (Tr. 104). Neither company is in the pulp/paper business or uses black liquor recovery boilers (Tr. 167-68).

Wolf admitted that the protective clothing recommended by OSHA had not been tested for use around black liquor boilers (Tr. 161), and that he did not know whether it would have protected Stone's fireman during the May 14, 1991 explosion (Tr. 113).

Wolf conceded that the boiler areas are "relatively warm areas to work in," and so would not recommend that heavier protective equipment be worn, or that any equipment be worn at all times (Tr. 102). Wolf recommended that the equipment be worn, and respirators carried, only during upset conditions (Tr. 103, 110, 165). Black-outs, an upset condition, may occur many times on a given day, and are considered fairly routine (Tr. 61, 157, 205-207).

Neither Grace nor Frank Hockmuth, an expert retained by OSHA to investigate the explosion, recommended the use of protective equipment (Tr. 124-129). Grace stated that he had not recommended protective equipment because it would be unwieldy and would be ineffective in protecting against unanticipated incidents unless worn at all times by everyone in the boiler areas (Tr. 251, 254, 276). Grace also noted that protective equipment is ineffective in protecting against flying debris in the event of an explosion (Tr. 209). No other employers or trade organizations in the pulp and paper industry require or recommend the use of respirators and protective clothing in the boiler areas<sup>4</sup> (Tr. 136-37, 185-186).

#### *Discussion*

The Commission has held that:

to establish the existence of a hazard requiring the use of personal protective equipment, the Secretary must either show that the employer had actual knowledge that such a hazard existed or that a reasonable person familiar with the circumstances surrounding the hazardous condition, including any facts unique to the particular industry, would recognize a hazard warranting the use of

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<sup>4</sup> BLRBAC does recommend face shields and full protective clothing around smelt dissolving tanks and spouts (Tr. 227-28, 269).

personal protective equipment. Evidence of industry custom and practice will aid such a determination, but it is not necessarily determinative.

*Armour Food Co.*, 14 BNA OSHC 1817, 1820, 1990 CCH OSHD ¶29,088, p, 38,881 (No. 86-247, 1990).

The Secretary amply demonstrated the hazardous nature of black liquor recovery boilers. The record establishes that employees in Stone's boiler area are exposed to the possibility of injury from the unexpected explosion of such boilers. The record also shows that Stone had actual knowledge of the hazard, and attempted to protect its employees from injury by instituting hazard recognition training and emergency shutdown and evacuation procedures, and by installing explosion proof control rooms in its boiler areas.

The Secretary failed to show, however, that Stone recognized, or that a reasonable person familiar with black liquor recovery boilers would recognize, that the possibility of explosion warrants the use of personal protective clothing and respirators during boiler upset conditions.

The pulp/paper industry does not use protective clothing in boiler areas. The incidence of upset conditions is frequent and the undersigned agrees with Stone's expert, Grace, that in order to provide protection from the danger of *unforeseen* explosions, protective equipment and respirators would have to be worn at all times in the boiler area. Grace testified and CO Wolf admitted that existing heat resistant clothing is not practical for consistent use in the hot boiler rooms. Moreover, Wolf's testimony is insufficient to establish that there exists an effective alternative. Although Wolf stated that a lightweight Gortex is available from Dupont, no clothing made from the material is available on the market, nor has such clothing been tested for use around black liquor recovery boilers. Finally, Wolf admitted that he did not know whether the recommended equipment would be effective in protecting boiler area workers in the event of an explosion.

The undersigned finds that the Secretary failed to carry her burden of proof, and the cited violation will be vacated.

**Findings of Fact and Conclusions of Law**

All findings of fact and conclusions of law relevant and necessary to a determination of the contested issues have been found specially and appear in the decision above. See Rule 52(a) of the Federal Rules of Civil Procedure. Proposed Findings of Fact or Conclusions of Law that are inconsistent with this decision are denied.

**ORDER**

Serious citation 1, item 1, alleging violation of §1910.132(a) is VACATED.



Benjamin R. Loye  
Judge, OSHRC

Dated: February 5, 2008