

BEFORE THE
STATE OF CALIFORNIA
OCCUPATIONAL SAFETY AND HEALTH
APPEALS BOARD

In the Matter of the Appeal of:

PACIFIC RESOURCE RECOVERY
3150 East Pico Boulevard
Los Angeles, CA 90023

Employer

Docket Nos. 00-R4D2-1108
and 1109

**DECISION AFTER
RECONSIDERATION**

The Occupational Safety and Health Appeals Board (Board), acting pursuant to authority vested in it by the California Labor Code and having taken the petition for reconsideration filed in the above-entitled matter by Pacific Resource Recovery [Employer] under submission, makes the following decision after reconsideration.

JURISDICTION

On February 28, 2000, a representative of the Division of Occupational Safety and Health (the Division) conducted an accident investigation at a place of employment maintained by Employer at 3150 East Pico Boulevard, Los Angeles, California (the site). On March 24, 2000, the Division issued to Employer two citations, one alleging a serious violation of section¹ 5420(a)(2) [vapor flammability test] which caused a death, and one alleging a serious violation of section 5168(b) [static electricity], with proposed civil penalties of \$22,500 and \$4,500 respectively.

Employer filed a timely appeal contesting the existence and classification of the alleged violations and the reasonableness of both the abatement requirements and the proposed civil penalties.

On August 21, 2002, a hearing was held before Barbara J. Ferguson, Administrative Law Judge (ALJ), in West Covina, California. Ronald E.

¹ Unless otherwise specified, all section references are to Title 8, California Code of Regulations.

Medeiros, Attorney, represented Employer. David W. Pies, Staff Counsel, represented the Division.

On September 26, 2002, the ALJ issued a decision denying Employer's appeal from the two citations.

On October 31, 2002, Employer filed a petition for reconsideration. The Division filed an answer on December 4, 2002. The Board took Employer's petition under submission on December 13, 2002.

EVIDENCE

Employer is in the business of recycling hazardous waste material at the site. On February 28, 2000, Employer's employees Sergio Ornales [Ornales] and Vincente Perez [Perez] were engaged in a cleaning operation which entailed the removal of sludge² from the bottom of a tanker truck³ owned by A-American Environmental and operated by its driver Salvador Garcia [Garcia]. Prior to the sludge removal the tank had contained flammable solvent which Garcia emptied with the truck's pump. Employer's employees were working from the top of the tanker truck at the third dome in the center of the truck, approximately 10 feet above the ground. They were using a high pressure water sprayer⁴ to dilute the sludge and a "home made" squeegee to push the sludge inside the tanker to the rear where it was pumped out by a small external diaphragm pump. Both of these pieces of equipment, the high pressure water sprayer and the squeegee, were used inside the tank,⁵ although no worker entered the tank itself.

Ornales and Perez were working from a position on top of the tanker truck. Perez left his position on top of the tank to change the water supply hose to the high pressure water sprayer and then stood next to Garcia at the back of the truck. Ornales remained atop the tank. Garcia testified that he saw Ornales using the squeegee inside the tank and that he could hear the noise from the squeegee hitting the bottom of the tank while the sludge was being pushed to the back of the tank. He said it sounded "like when you hit metal." He further

² Employer also referred to the sludge as "heel."

³ The tanker truck was described by Employer's supervisor as a 5,000 gallon tanker with four domes [access openings] spaced along its top.

⁴ The sprayer was described as a two cycle, two cylinder gasoline operated engine with a metal nozzle attached at the end of what appears to be an approximately five-foot long wand.

⁵ In the summary of evidence portion of its petition, Employer admits that "...during such sludge removal operation, they stood outside the tank and inserted the squeegee and pressure washer nozzle into the tank." Employer's petition alleges that "(a)t the time of the accident, the nozzle of the pressure washer was not in or near any opening of the tank." Although the percipient witness to the accident did not testify as to the use of the nozzle at the time of the accident, there is a reasonable inference to be drawn from the photographic exhibits and the testimony of Chiou that the nozzle and its wand were inside the tank when Chiou arrived at the site. The Board sees no logical reason for the wand and nozzle to have been inserted into the tank following the explosion and therefore finds that the nozzle was in fact inside the tank at the time of the accident.

testified that he next heard a sucking noise followed by an explosion and saw Ornales blown up into the air⁶ and then flames coming out of the tank.

Division Inspectors I-Yen Chiou [Chiou] and Rami De Los Reyes [De Los Reyes] began an accident investigation on the day of the explosion. Chiou interviewed Employer's president, Sandra Berg [Berg] and its supervisor Gonzalo Castillo [Castillo]. Both Berg and Castillo stated they lacked equipment to test for flammable vapors inside the tanker truck before the explosion and thus did not conduct such a test.

Chiou inspected both the power spray nozzle and the squeegee used in the cleaning operation. He determined that each was a potential source of ignition. Chiou testified that water flowing through the nozzle at high pressure generates friction which causes a static electric charge to build up with the possibility of creating a spark. He observed that the nozzle had no bonding mechanism and Castillo told him that he was unaware of any requirement that the nozzle be bonded. Chiou further testified that his examination of the squeegee disclosed exposed ferrous metal which could generate a spark by contact with the interior of the tank.

Chiou issued citations to Employer alleging serious violations of safety orders for failure to test for a flammable atmosphere inside the tank before introducing a source of ignition into the tank and for failure to bond the nozzle of the high pressure washer to the tank. Chiou testified that to be a violation a source of ignition need not actually create a spark; it suffices that the insertion of either one of these sources into the tank is a violation [of § 5420(a)(2)] if a test of the atmosphere inside the tank is not done.

De Los Reyes' testimony confirmed that water going through a nozzle, that is a restrictive device, creates static electricity that is a source of ignition. In addition, he also testified that if there were a wire from the nozzle to the truck the effect would have been to carry off to ground the static charge generated by the flow through the nozzle since the truck itself was grounded. De Los Reyes also testified that the ferrous metal contained in the squeegee was also a source of ignition.

Chiou classified the violations as serious because in the event of an accident resulting from the violations employees could suffer burns, bone fractures, head trauma, internal injuries, or even death.

ISSUES

1. Did the Division establish serious violations of sections 5420(a)(2) and 5168(b)?

⁶ Ornales died.

2. Did the violation of section 5420(a)(2) cause the accident which resulted in the death of Employer's employee?

FINDINGS AND REASONS

FOR

DECISION AFTER RECONSIDERATION

1. The Division Established Serious Violations of Sections 5420(a)(2) and 5168(b).

Employer's petition for reconsideration challenges the ALJ's affirmation of the violations of sections 5420(a)(2) and 5168(b), their classification as serious, and the determination that the violation of section 5420(a)(2) caused the accident.

Section 5420(a)(2) provides, in relevant part:

(a) When ... cleaning operations are performed on tanks ... which ... last contained a flammable liquid ... the following procedure shall be followed:

...

(2) If work involving the use of flame, arc, spark, or other source of ignition is to be done, the vessel shall be emptied, flushed or otherwise purged of flammable vapors. A test for flammability of the vapors in the vessel shall be made, using an appropriate device for this purpose, and no source of ignition shall be permitted in or in contact with the vessel if the percentage of combustible vapor is greater than 25 percent of the lower explosive limit.

Section 5168(b) provides

(b) The nozzle of air, inert gas and steam lines or hoses, when used in the cleaning or ventilation of tanks and vessels that may contain hazardous concentrations of flammable gases or vapors, shall be bonded to the tank⁷ [sic] or vessel shell. Bonding devices shall not be attached nor detached in hazardous concentrations of flammable gases or vapors.

The citations specifically alleged, respectively:

On 02-28-00, one of employer's employees was killed in an explosion while cleaning out the inside of a tanker truck, which had last contained flammable liquids. The employer did not empty, flush or purge the tanker truck of flammable vapors and did not test the flammability of the atmosphere inside the tanker truck. The cleaning procedure being utilized introduced sources of

⁷ Should read "tank."

ignition due to generation of static electricity from the use of a pressure washer and sparks which could be generated by friction between the metal scraper being used to clean the tank and the tank interior.

—AND—

On 02-28-00, employers [sic] employees were using a pressure washer to clean out the inside of a tanker truck which had last contained flammable liquids. The pressure washer nozzle was not bonded to the tank shell.

a. Section 5420(a)(2)

Employer's argument that the violation of section 5420(a)(2) was improperly affirmed by the ALJ rests on its contention that the Division was required to identify the source of ignition that *actually* caused the explosion. The Board disagrees. The language of the cited regulation [§ 5420(a)(2)] is clear; if a source of ignition is to be used in a cleaning operation involving a tank which last contained a flammable liquid "(a) test for flammability of the vapors in the vessel **shall** be made ... and no **source of ignition** shall be permitted **in or in contact with** the vessel" [Emphasis added]

There is no dispute that a test for flammable vapors inside the tank was not performed. The Division, through the testimony of Chiou and De Los Reyes, established that static electricity is a source of ignition. The Division also established through the testimony of both Chiou and De Los Reyes that the nozzle of the pressure washer was capable of generating static electricity through friction of the water flowing through the restrictive orifice of the metal nozzle. Also established is the fact that the high pressure water sprayer was used in the cleaning operation and that its nozzle was inserted into the tank which had contained flammable liquid before any test of the atmosphere inside that tank was conducted.

It was also established that the squeegee used by the deceased at the time of the accident was inside the tank. Chiou testified that his examination of the squeegee disclosed exposed ferrous metal which, in contact with the tank shell, has the potential of creating a spark and thus is a source of ignition. The Board's independent review leads it to agree with the ALJ's finding that the Division's witnesses were credible as to the possible sources of ignition and the Board will not disturb such finding unless opposed by evidence of considerable weight.⁸

The Board finds that a violation of section 5420(a)(2) was established because no testing was done and that it occurred at the time that either the

⁸ *Lamb v. Workmen's Compensation Appeals Board* (1974) 11 Cal.3d 274, 280.

nozzle of the high pressure sprayer or the squeegee was introduced into the tank because each was a source of ignition and no test for flammable vapor had been conducted.

b. Section 5158(b)

Employer next argues that the ALJ's affirmation of the violation of section 5168(b) was improper because that section expressly limits its application to conditions involving nozzles through which air, inert gas, or steam travels and that Employer's pressure washer sprayed only cold water through the nozzle. In essence, Employer's position is that because water passes through the nozzle it is exempt from the bonding requirement of section 5168(b).

The ALJ drew a distinction in the regulation between the reference to "lines" and "hoses;" she determined that because of the structure and punctuation of the language in the regulation the reference to "hoses" stands alone and is not dependent upon the word "steam" for its application. The Board disagrees with the ALJ's interpretation of the regulation but comes to the same conclusion that it is applicable to Employer's nozzle albeit for a different reason. The Board notes that steam is water vapor, or water in its gaseous state.⁹ Therefore, the Board finds that water is included in the reference to steam in the regulation. The regulation refers to the "nozzle of ... hoses, when used in the cleaning or ventilation of tanks ... that may contain... flammable gases or vapors" A hose is defined as "**3a:** a flexible tube (as of rubber, plastic, or fabric) for conveying fluids (as air, steam, powdered coal, or water from a faucet or hydrant). **3b:** such a tube with nozzle and attachments."¹⁰

The Board finds no merit in Employer's argument that its interpretation of section 5168(b) expressly limits its application to exclude water and finds that the nozzle of Employer's power washer was subject to section 5168(b)'s bonding requirement. Chiou observed the absence of bonding on the nozzle as did Garcia; Employer's supervisor was unaware that there was such a requirement.

The Board finds, therefore, that the nozzle was not bonded to the tank and that the tank had contained flammable solvent which Garcia emptied prior to Ornales' use of the power spray nozzle to clean out the tank. Because the tank had previously contained a flammable liquid, it is also found that there were hazardous concentrations of flammable *gases or vapors* in the tank. This condition required that the nozzle be bonded to the tank. Thus, a violation of section 5168(b) was established.

⁹ McGraw-Hill Dictionary of Scientific and Technical Terms, (6th ed. 2003) p.2025.

¹⁰ Webster's Third New International Dictionary (1981) p.1093.

c. The Classification of the Violations

Chiou classified the violations of sections 5420(a)(2) and 5168(b) as serious and testified to the types of injuries that could occur as a result of the violations. At the beginning of the hearing the parties stipulated that since the citations related to the same event all the evidence would relate to both of the citations.

Employer argues that there is no evidence that addresses the substantial probability that death or serious physical harm could result from the violations as required by Labor Code section 6432. The Board disagrees and for the following reasons finds that the record in this case has established that there was a substantial probability of death or serious physical harm occurring as a result of the violations of sections 5420(a)(2) and 5168(b).

Supervisor Castillo described the tanker truck as a 5,000 gallon tank with four domes (access covers) on top of the tank. He estimated the inside height of the tank to be 4½ to 5 feet. He also testified that the squeegee is used at a 45° to 50° angle to push the sludge (or “heel”) at the bottom of the tanker truck a distance of 5 to 6 feet to the rear of the truck so that it can be removed using a pump. He said it was necessary to use the force of your body to push the heavy material with the squeegee.

Garcia, the tanker truck driver who witnessed the accident, testified that the deceased was using the squeegee to push the sludge inside the tank from a position on top of the tank at the time of the explosion. Garcia said he saw the deceased go up in the air and then flames came out of the tank.

Chiou, without contradiction and with the squeegee physically present in the hearing room, described it for the ALJ as having an eight-foot long handle. The Board finds that this squeegee, with its eight foot handle when operated at a 45° to 50° angle from the top of the tank to a distance 4½ to 5 feet below, which requires the force of the body to push heavy sludge a distance of five to six feet, places an employee so using the squeegee in a position in very close proximity to the dome opening through which explosive gas and fire vents with violent force. In the presence of an explosion under these facts, the Board finds that there is a substantial probability that death or serious injury could result from these violations where the employee is located at the dome opening where the explosive gas and fire vents.

Employer attempts to show that it did not, and could not with the exercise of reasonable diligence, know of the presence of the violation [§ 5168(b)] by pointing to its “Owner’s Manual” [EXH C] for its pressure washer and the lack therein of a reference to any hazard associated with the potential generation of static electricity resulting from any use of the machine. The

Board notes that the “Owner’s Manual” referred to by Employer is also devoid of any contemplation that the nozzle of the unit might be introduced into a potentially explosive atmosphere.

Employer is in the business of recycling flammable liquids. The “Owner’s Manual” for its “Cyclone Pressure Washer” contemplates its use as a *washer*, and it contains four pages relating to “*cleaner* troubleshooting.” Employer’s supervisor testified to the pressure washer being used to *dilute* the sludge in the tanker truck. Under these circumstances the Board finds that Employer has not satisfied the reasonable diligence requirement of Labor Code section 6432(b)(1) sufficiently enough to reclassify the violation from serious to general by simply pointing to an absence of a warning in a manual that did not contemplate Employer’s use of the manufacturer’s product. Therefore, the Board finds that these violations were properly classified as serious violations.

2. The Serious Violation of Section 5420(a)(2) Caused an Accident Resulting in Death.

If an employer commits a serious violation and the Division determines that the violation caused death or serious injury, the penalty shall not be reduced except for the size of the business where there are more than 100 employees¹¹. Employer argues that the violation of section 5420(a)(2) was improperly characterized as having caused the accident pursuant to section 336(c)(3) which resulted in the death of Ornales. Employer contends that the Division failed to establish whether the pressure washer or the squeegee was the *actual* source of ignition and which *actually* caused the accident in question. In addition, it claims that the Division failed to offer any competent evidence in support of its position that the employee’s death was in any way related to the alleged violation of section 5420(a)(2).

Section 5420(a)(2) requires that flammable vapors be removed from the vessel and a test be made where work involving a source of ignition is to be done. The Board has found above that the violation occurred when a source of ignition—either the nozzle of the high pressure sprayer or the squeegee, was introduced into the tank because no test for flammable vapors in the tank had been conducted. The Division determined that the violation caused the accident because no test was performed by Employer to detect the presence of flammable vapors. Had a test been conducted Employer would have discovered the flammability of the vapors¹² in the tank and proceeded to empty the tank as required under section 5420(a)(2).¹³

¹¹ Section 336(c)(3)

¹² The Board believes that the most logical inference to be drawn is that the vapors were flammable because of the explosion and ensuing fire.

¹³ Failure to so empty the tank after learning of the nature of the vapors would cast Employer’s action in a willful category.

The Board finds that the admitted failure to test the tank for the presence of flammable vapors was the cause of the accident which resulted in the death of Employer's employee irrespective of which of the two sources of ignition set off the explosion. Thus, competent evidence exists in this record to support the finding that the violation of section 5420(a)(2) caused the death of the employee. Employer stipulated that the penalties were calculated in accordance with the Director's regulations and we find that they were.

DECISION AFTER RECONSIDERATION

A serious violation of section 5420(a)(2) which caused the death of Employer's employee is established and a civil penalty of \$22,500 is assessed; a serious violation of section 5168(b) is established and a civil penalty of \$4,500 is assessed.

MARCY V. SAUNDERS, Member
GERALD PAYTON O'HARA, Member

OCCUPATIONAL SAFETY AND HEALTH APPEALS BOARD
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