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DEPARTMENT OF LABOR

OCCUPATIONAL SAFETY AND HEALTH REVIEW BOARD

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ROBERT W. LANDAU, HEARING OFFICER

STATE OF ALASKA,
DEPARTMENT OF LABOR,

Complainant,

v.

STATE OF ALASKA,
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES,

Contestant.

Docket No. 94-1029S

DECISION AND ORDER

This matter arises from an occupational safety and health inspection by the Department of Labor (OSHA) following an accident involving an employee of the Department of Transportation and Public Facilities (DOTPF) on July 26, 1993. As a result of the inspection, OSHA issued two citations to DOTPF for alleged violations of Alaska occupational safety and health laws.

Citation 1 alleges that DOTPF violated Alaska Statute 18.60.075(a)(4) by failing to ensure that employees adhere to an equipment manufacturer's required safe operating procedure for an asphalt distributor, resulting in one employee being severely burned while operating the distributor. This alleged violation was classified as "serious" and a penalty of $5,000 was assessed. Citation 2 alleges that DOTPF failed to timely report the

accident to OSHA in compliance with AS 18.60.058(a). This alleged violation was classified as "other than serious" and a penalty of $3,250 was assessed.

DOTPF timely contested both citations and requested an informal conference. Pursuant to the informal conference, OSHA vacated Citation 2. Citation 1 remained in contest and was processed to the OSHA Review Board (Board) for adjudication.

A hearing was held before the Board on May 20, 1994. OSHA was represented by Dennis Smythe, Chief of Enforcement. DOTPF was represented by George "Mick" Hotrum, Regional Safety Officer, and Clark Milne, Director of Maintenance and Operations for the Northern Region. At the outset of the hearing DOTPF moved to dismiss Citation 1 on the grounds that OSHA did not timely issue the citation within the 180-day statute of limitations in AS 18.60.091(c). The Board heard argument but reserved its ruling on the motion to dismiss and proceeded to hear OSHA's case in support of the citation. Because DOTPF was unprepared to present its own case on the merits, the Board agreed to schedule an additional hearing for this purpose during its next round of hearings.

On June 24, 1994, the Board issued a written ruling denying DOTPF's motion to dismiss based on the 180-day statute of limitations. DOTPF's subsequent request for reconsideration of that ruling was also denied.

An additional hearing before the Board was held on August 26, 1994 for the presentation of DOTPF's case on the merits of Citation 1, rebuttal evidence and closing argument. Based on the evidence and arguments submitted by the parties, the Board makes the following findings of fact, conclusions of law and order in this matter.

FINDINGS OF FACT

1. On July 26, 1993, Charles R. "Bob" White, an equipment operator employed by DOTPF, was severely burned while operating an asphalt distributor on McGrath Road in Fairbanks.

2. The asphalt distributor involved in the accident was manufactured by E.D. Etnyre & Company of Oregon, Illinois. The distributor had been in service for DOTPF since approximately 1979. Bob White joined the DOTPF asphalt crew in approximately 1983 and began to operate the distributor on a regular basis beginning in the summer of 1987.

3. Prior to the accident, the foreman of the DOTPF's asphalt crew, Mike Blanning, learned that the AC-5 bitumen (oil) in the distributor's supply tank had become contaminated with carbon deposits which could clog the spray bar nozzles when the hot oil was sprayed onto the roadway. The oil level in the tank was relatively low at the time, estimated at 500-800 gallons. DOTPF's oil supplier, Emulsion Products, was unwilling or unable to accept the contaminated oil. Blanning and White discussed how to empty the distributor tank of oil so that the tank could be cleaned out. It was decided the best way to dispose of the remaining oil would be to spray it onto the roadway at McGrath Road which was being resurfaced. White was assigned this task as the regular operator of the distributor.

4. On the morning of July 26, 1993, White drove the distributor to McGrath Road to dispose of the remaining oil. Following his usual practice, he heated the AC-5 oil by lighting the two burners at the rear of the tank until the oil temperature was between 300 and 350 degrees. At this temperature the oil was sufficiently liquid so that it

could be easily sprayed onto the road surface. After heating the oil White made his first run over the road surface to spray out the oil. He then waited for the rest of the asphalt crew to catch up with him.

5. After his first run over McGrath Road, White realized that there was still additional oil remaining in the tank. The oil temperature gauge indicated 295 degrees, which was lower than the 300-350 degrees at which he preferred to spray the oil, so he decided to reheat the remaining oil before spraying it on the roadway.

6. According to the Etnyre operation, maintenance and safety manual for the asphalt distributor, the oil level inside the tank must be least six inches above the burner flues before heating the oil to prevent explosion. There are two flues on the distributor, one located slightly higher than the other.

7. By his own admission, White knew the oil level was "fairly low" in the tank but he felt safe that the level was above the lower flue after checking the oil level gauge. He also knew, however, that the oil level gauge was not always accurate and was prone to sticking. He lit the lower burner and then climbed to the top of the tank to look into the hatch to make sure the flue was completely covered by oil. As he lifted the hatch cover off the tank, there was a spontaneous explosion and White was engulfed in flames. He sustained second and third-degree burns over 40 percent of his body and was hospitalized for a substantial length of time. As of the date of the hearing he had not returned to work.

8. The accident was investigated by OSHA Compliance Officer Carl Francis. Francis was not able to conduct his investigation until November 1993 due to a backlog of other inspections as well as White's lengthy hospitalization and recovery. As part

of his investigation, Francis interviewed and obtained written statements from White and other persons familiar with the circumstances of the accident. He also obtained the Etnyre operation manual for the asphalt distributor and contacted the manufacturer for additional information.

9. According to the narrative report prepared by Francis, the explosion or spontaneous ignition occurred when White introduced a large quantity of air into the tank by opening the top hatch to check the oil level. Ignition occurred because the oil in the tank had been badly overheated due to an "operating procedure error." The error consisted of heating the oil in the tank when the oil level was below the required safe minimums to cover the burner flues. Moreover, the oil temperature gauge on the distributor is an "immersion" type; when the oil level is below the required minimum to safely heat the oil, the temperature gauge is exposed to air, not oil, therefore the resulting temperature reading is likely to be understated and inaccurate. As a result, it is probable that the AC-5 oil in the tank became seriously overheated producing large quantities of flammable gases. When the tank hatch was opened, outside air mixed with the flammable gases and caused a spontaneous explosion.

10. In Francis' opinion, the operating procedure error that led to the explosion was the result of DOTPF's decision to operate the distributor until the remaining oil was used up. Although he found no evidence of any willful intent to create a hazard, Francis concluded that the failure to adhere to the manufacturer's safe operating procedures was caused by "poor communication and perhaps not enough emphasis on training. Everyone interviewed seemed to have learned to run the machine primarily through OJT [on-the-job training]."

11. Prior to the accident White had operated the asphalt distributor on a regular basis during the summer for approximately seven years. He was given one and one-half days of training in the operation of the distributor in 1987 by the previous operator Jason Regar. White received additional instruction and assistance during 1987-88 from asphalt crew foreman Jack Phipps. Phipps had eight years of experience operating asphalt distributors for DOTPF and was asphalt crew foreman for eleven years, during which time he helped to train other distributor operators and occasionally operated the equipment himself. Since 1988 Phipps has been DOTPF's Denali Area Manager.

12. According to Phipps, White had adequate training and supervision in the proper operation of the distributor. White also had access to the Etnyre operation manual which described the safe operating procedure for the distributor. Phipps stated that he had referred to the manual while training White and had told him to read it. Phipps felt White should have been well aware that the oil in the distributor should not be heated unless the oil level was sufficiently above the heating flues. Phipps also recalled instructing White not to open the tank hatch when the burners were lit. He acknowledged that he may have told White it was permissible to open the hatch to check the oil level inside the tank when the oil was cool and the burners were not lit. However, opening the hatch while the burners were lit was simply not standard procedure.

13. Phipps was of the opinion that White deviated from normal operating procedure by reheating the AC-5 oil even though the temperature gauge was at 295 degrees. According to Phipps, the normal heating temperature for AC-5 is 275-300 degrees. If the temperature gauge read 295 degrees, there was no need to heat the AC-5 any further. This was especially true given the low level of oil remaining in the tank. When White decided

to reheat the oil just prior to the accident, the tank probably contained only 300-400 gallons, which was not sufficient to cover the heating flues or give an accurate temperature reading. Phipps felt that the accident was the result of not following the basic safety rule of not heating the oil without sufficient coverage over the heating flues.

14. Jason Regar preceded White as the operator of the asphalt distributor. Regar operated the distributor from approximately 1979 through the 1986 season when he was promoted to Fairbanks Station Foreman. Regar was trained on the distributor by Jack Phipps and in turn trained Bob White. Regar believed White was a competent operator and had a good safety record. Like Phipps, he questioned White's decision to reheat the oil at 295 degrees and then open the tank hatch to check the oil level. According to Regar, these actions were contrary to the training White had been given by himself and Phipps. Regar felt that White had sufficient on-the-job training and experience in the proper operation of the distributor to know that his actions were unsafe.

15. Regar and Phipps further testified that it was standard procedure, and was not prohibited by the manufacturer's operating instructions, to empty the oil in the tank by spraying it out until it was all gone. This opinion was also expressed by David Jacoby, Public Works Director for the City of Fairbanks, who operated an asphalt distributor for approximately five years. Jacoby concurred with Regar and Phipps that it was definitely not safe to open the tank hatch when the oil was hot or the burners were lit.

16. During the years White operated the asphalt distributor he periodically requested additional training on the distributor from his superiors at DOTPF. White felt he needed additional training because there were many aspects of the distributor operation he knew little about. In approximately 1990 he learned of an asphalt distributor training

program outside Alaska and requested DOTPF to send him to the program. DOTPF responded that its budget was not sufficient to provide out-of-state training and denied his request.

17. In 1992, however, White had the opportunity to attend an Etnyre training session conducted in Fairbanks. An Etnyre representative was present to discuss the proper operation of the asphalt distributor and answer questions. White was one of approximately five DOTPF participants in the training.

18. White testified that he never read or saw the Etnyre operation manual for the asphalt distributor. The only manual he saw for the distributor was the parts manual. He stated that he does not read well and learned the operation of the distributor mainly through on-the-job training and hands-on experience. He acknowledged that Jason Regar had instructed him that the burner flues should always be covered prior to heating the oil.

19. Steve Potter, another DOTPF equipment operator, has worked on the asphalt crew for approximately nine years and worked with Bob White for much of that time. Like White, he was trained on the operation of the distributor by Regar and Phipps. According to Potter, most of the training on the distributor was hands-on experience, supplemented by the Etnyre manual which was readily available. Potter believed he had received adequate safety instruction on the operation of the distributor and that DOTPF had a good safety program. Potter concurred with Regar and Phipps that the hatch on the distributor tank never should be opened after lighting the burners while there was a low level of oil in the tank; the oil level should be checked **before** lighting the burners while the oil was still relatively cool.

20. Skip Hamm, a DOTPF equipment operator who was trained to operate the distributor by Bob White and Steve Potter, testified that the Etnyre operation manual was available in the cab of the distributor. Although the manual does not specifically address the hazards of opening the tank hatch while heating the oil, Hamm testified that "the word was out" around the maintenance yard that the hatch should not be opened when the oil level in the tank was low.

21. Other DOTPF equipment operators who had operated the asphalt distributor testified that their training consisted mostly of hands-on experience. Some felt that their training was adequate to operate the distributor while others believed that additional professional training was needed regarding specific aspects of the distributor's operation.

22. Prior to White's accident in July 1993 there were two previous explosion accidents involving the same asphalt distributor. In 1989 an explosion occurred inside the distributor tank when two different oils were inadvertently mixed causing a pressure build-up that blew open the hatch which had been locked down. Another accident occurred in June 1993 when the oil burners were left on causing the oil to get so hot that the tank ignited and exploded. White was not involved in either of the previous accidents.

23. DOTPF has an ongoing safety program that includes regular safety meetings, instructional and warning posters, safety manuals and policies, and training classes. Bob White was a regular participant at safety meetings and also took several training courses in addition to the Etnyre training in 1992.

24. In 1991 DOTPF issued the fifth edition of its safety manual to all employees. Chapter V of the manual addresses "Power Equipment" and includes a section

on asphalt distributors, kettles and hot boxes. The following provisions in Chapter V are pertinent:

> **1. Operators' Qualifications**
>
> . . .
>
> No one shall be permitted to have full responsibility for the operation and care of power equipment unless they have been fully trained in the operation and care by an experienced employee.
>
> The supervisor shall instruct the power equipment operator as to the hazards connected with the particular work or job and shall inform them of the safe methods of operation.
>
> Operator Manuals will be followed for the operation of all equipment if available.
>
> . . .
>
> **10. Distributors, Asphalt Kettles and Asphalt Hot Boxes**
>
> Have positive knowledge of the grade and type of asphalt materials being used prior to heating it. Never heat the asphalt materials in excess of the maximum temperature set up by the laboratory. Always use a thermometer to check temperature.
>
> . . .

DOTPF employees were expected to be familiar with the safety manual and comply with its requirements.

CONCLUSIONS OF LAW

Citation 1 alleges that DOTPF violated AS 18.60.075(a)(4) by failing to ensure that employees adhere to the equipment manufacturer's required safe operating procedure for the asphalt distributor. AS 18.60.075(a)(4) provides:

> An employer shall do everything necessary to protect the life, health and safety of employees including, but not limited to:

. . .

> (4) furnishing to each of his employees employment and a place of employment which are free from recognized hazards which, in the opinion of the commissioner, are causing or are likely to cause death or serious physical harm to his employees.

This provision is commonly known as the "general duty clause" and is designed to address serious workplace hazards to which no specific OSHA standard applies. *See* Mark A. Rothstein, *Occupational Safety and Health Law* § 141, at 178 (3rd ed. 1990) (hereinafter "Rothstein").

To establish a violation of the general duty clause, OSHA must prove each of the following elements by a preponderance of the evidence: (1) the employer failed to keep the workplace free of a hazard to which employees were exposed; (2) the hazard was "recognized" by the employer or its industry; (3) the hazard was causing or likely to cause death or serious physical harm; and (4) there were feasible and effective measures the employer could have taken to correct or abate the hazard. Rothstein, § 141 at 179 and § 150 at 194; *see also National Realty & Construction Co. v. OSHRC*, 489 F.2d 1257, 1265, 1267 (D.C. Cir. 1973).

As with violations of specific OSHA standards, a general duty clause violation does not require the actual occurrence of an accident, nor does the occurrence of an accident, by itself, prove the existence of a violation. Rothstein, § 141 at 179. Moreover, the general duty clause was not intended to impose strict liability on employers. Only "feasibly preventable" hazards can support a general duty clause violation. *Id.* Courts and other authorities have held that OSHA's burden of proving a general duty clause violation

is greater than the burden of proving a violation of a specific standard or code provision. Rothstein, § 150 at 194.

In response to an alleged general duty clause violation, an employer may assert a number of defenses, several of which are similar to defenses against alleged violations of specific OSHA standards. Because general duty clause violations often involve peculiar or idiosyncratic circumstances, one of the most common employer defenses is that any safety hazard or violation was caused by unforeseeable and unpreventable employee misconduct. The crucial question that must be decided is whether the employer could have taken realistic and feasible steps to prevent the hazard. Rothstein, § 152 at 195. In *National Realty*, the court outlined the test of preventability:

> Hazardous conduct is not preventable if it is so idiosyncratic and implausible in motive or means that conscientious experts, familiar with the industry, would not take it into account in prescribing a safety program.

489 F.2d at 1266-67 and n.37. The court went on to add that when the defense of unpreventable employee misconduct is raised against a general duty clause citation, OSHA must prove that (1) the employee's misconduct involves a substantial risk of harm and that the misconduct is substantially probable under the employer's safety precautions, and (2) that the employer could have known through the exercise of reasonable diligence that its safety precautions were inadequate. *Id.* at 1268 n.41.

We now apply the foregoing legal criteria to the facts of this case. First, we agree with OSHA that there were hazards associated with the asphalt distributor to which DOTPF employees, including Bob White, were exposed. The primary hazard was the risk of an explosion which could occur if the oil in the tank was significantly overheated beyond

its normal operating temperature; or if the oil was heated when the oil level was less than six inches above the heating flues; or if the tank hatch was opened while the oil level was low and the oil was hot.

Next, we find that the risk of explosion from improper operation of the asphalt distributor was a "recognized" hazard, both by DOTPF and the industry as a whole. From its knowledge of prior explosion accidents involving the same asphalt distributor, DOTPF was aware or should have been aware of the explosion risks in operating the distributor. Additionally, the warnings and instructions in the Etnyre operation manual leave little doubt that the industry as a whole, including DOTPF, was on notice of the explosion risks from improper operation of the distributor.

We further conclude that the explosion hazard from improper operation of the asphalt distributor could cause death or serious physical harm. The serious injuries sustained by Bob White are unfortunate proof of this element of a general duty clause violation.

However, OSHA has failed to persuade us that DOTPF could reasonably have foreseen White's actions preceding the accident and could have taken additional feasible and effective steps to abate or correct the explosion hazard. We agree with Compliance Officer Francis that White's accident was caused by an operating procedure error, but we disagree that DOTPF could have prevented this error through additional communication and training. At the time of the accident White had almost seven seasons of experience operating the distributor. He was regarded as a competent and safe operator, and had even trained other employees in the operation of the distributor. Although we do not disbelieve his testimony that he never read or was shown a copy of the Etnyre operation manual, we

find that the manual was readily available at the workplace and that at least one of his supervisors (Jack Phipps) had instructed him to review it. We also note that DOTPF's own safety manual issued to all employees specifically provides that "Operator Manuals will be followed for the operation of all equipment if available."

Even if White was not familiar with the Etnyre operation manual, he knowingly took a safety risk by reheating the oil when he knew the oil level was very low. By his own admission he had been trained that the oil in the distributor tank should not be heated unless the oil level was above the heating flues. He admitted knowing that the oil level was low when he lit the lower burner just prior to opening the tank hatch. He was also aware that the oil level gauge was not always accurate and was prone to sticking, meaning that the actual oil level might be lower than the reading on the gauge. Moreover, he had been trained by Phipps not to open the hatch when the oil was hot. In short, White had sufficient knowledge, training and experience to realize that reheating the oil with a low oil level and then opening the hatch was not a safe practice. We conclude that his accident was caused by his knowing deviation from established safe operating procedures and that such a deviation could not reasonably have been foreseen or prevented by DOTPF.

We also conclude that DOTPF cannot fairly be held responsible for White's deviation from safe operating procedures merely because it directed him to empty the remaining oil in the distributor tank. The evidence establishes that this was an accepted and customary method of emptying oil in the tank and could be done safely without violating the manufacturer's operating instructions. Further, there is no evidence that the asphalt distributor itself was unsafe when operated according to the manufacturer's operating

instructions. OSHA did not allege that the distributor itself was unsafe nor did it cite DOTPF cited for providing unsafe equipment.

Finally, we conclude that the training provided by DOTPF to White in the operation of the distributor was adequate and sufficient under the circumstances. He had ample hands-on training provided by Jason Regar and Jack Phipps in 1987-88. In addition, White had the opportunity to participate in the Etnyre training program in 1992. White's performance evaluations, as well as the assessments of his co-workers, indicate that he was a competent and qualified operator. While additional training is always desirable, we do not believe that classroom-type training would have abated the hazard or prevented this accident. White himself stated that he is not a good reader and learns primarily through hands-on experience. Although his accident was extremely unfortunate, we conclude that he had sufficient training and experience to know that his actions prior to the accident deviated from established operating procedures and posed a substantial safety risk. Further, we are not persuaded that there were any feasible or effective additional steps that DOTPF could have taken to abate the explosion hazard or prevent White's accident. Accordingly, we conclude that OSHA has failed to meet the heightened burden of proof necessary to establish a general duty clause violation.

ORDER

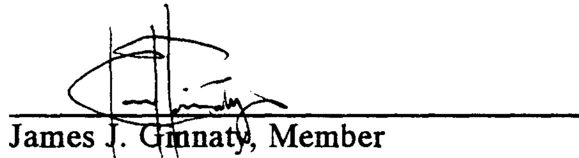
Citation 1 is DISMISSED.

DATED this 7th day of December, 1994.

ALASKA OCCUPATIONAL SAFETY
AND HEALTH REVIEW BOARD

Wayne A. Gregory, Chairman

NOT PARTICIPATING
Donald F. Hoff, Jr., Member



James J. Ginnaty, Member