SECRETARY OF LABOR, Complainant, v. ENVIRONMENTAL ENTERPRISES, INC., Respondent.	OSHRC Docket No.03-1170

DECISION AND ORDER

On August 30, 2004, Administrative Law Judge Ken S. Welsch issued a decision and order affirming three citation items and vacating two items. The judge characterized the three affirmed violations as serious and assessed a total penalty of $11,200. His decision and order was docketed on September 17, 2004. On September 7, 2004, Respondent filed a motion for a reconsideration of the penalty, and on September 9, 2004, the judge denied the motion. On October 18, 2004, the Secretary filed with the Commission an unopposed motion to set aside the judge's decision and to substitute a settlement agreement. On the same day, the Chairman directed the matter for review.

While settlement is permitted and encouraged by the Commission at any stage of the proceeding, affected employees and authorized employee representatives are afforded a ten-day period from the time of the posting of a settlement agreement, to communicate objections to the agreement. *See* Commission Rules 100(a) and 100(c), 29 C.F.R. §2200.100(a) and (c). Because we are unaware when the ten-day period for

comment will begin to run, we set aside Judge Welsch's decision and order and remand the case to him so that he can review any objections and determine whether to approve the settlement agreement. So Ordered.

Date: October 20, 2004

/s/
W. Scott Railton
Chairman

/s/
Thomasina V. Rogers
Commissioner

/s/
James M. Stephens
Commissioner

United States of America
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION
1924 Building - Room 2R90, 100 Alabama Street, S.W.
Atlanta, Georgia 30303-3104

Secretary of Labor, Complainant v. Environmental Enterprises, Inc., Respondent.	OSHRC Docket No. **03-1170**

Appearances:

Patrick L. DePace, Esq.
Office of the Solicitor, U. S. Department of Labor, Cleveland, Ohio,
For Complainant

Charleston C. K. Wang, Esq.
Cincinnati, Ohio,
For Respondent

Before: Administrative Law Judge Ken S. Welsch

DECISION AND ORDER

Environmental Enterprises, Inc. (EEI) is an environmental service company in Cincinnati, Ohio, engaged in the collection and remediation of hazardous waste. EEI's activities include the treatment of wastewater to remove/reduce hazardous metals, such as lead, zinc and mercury, before safely discharging it into the metropolitan sewer system. On December 11, 2002, while attempting to reduce the mercury level and adjust the pH level of wastewater in the clarifier tank, an EEI manager, over a period of six hours, added in 50 pounds of sodium sulfide and then three-55 gallon drums of poly-aluminum chloride (a weak acid). This caused the generation of hydrogen sulfide (H_2S) which rendered an employee, who was walking through the treatment area, unconscious. The employee was moved to an adjacent area, given oxygen and taken to the hospital where he was released in the evening. After investigating the H_2S release, the Occupational Safety and Health Administration (OSHA) issued EEI serious and willful citations on June 10, 2003. EEI timely contested the citations.

Serious citation no. 1, as amended, alleges that EEI violated § 5(a)(1) of the Occupational Safety and Health Act[1] (item 1) for failing to maintain a functioning H_2S alarm in the wastewater treatment area; and 29 C.F.R. §§ 1910.1000(b)(2) and 1910.1000(e) (items 2a and 2b), for exposing employees to an excessive level of H_2S and failing to implement feasible engineering or administrative controls. The serious citation proposes a total penalty of $9,600.

Willful citation no. 2, as amended, alleges that EEI violated 29 C.F.R. § 1910.1200(h)(3)(iii) (item 1) for failing to develop, implement and require the use of specific procedures in the wastewater treatment area to control or eliminate the potential for the release of H_2S, and 29 C.F.R. §1910.1200(h)(1) (item 2) for failing to adequately train employees on the hazards of H_2S. The willful citation proposes a total penalty of $126,000.

The hearing was held in Cincinnati, Ohio, on February 9-13, and 23-24, 2004. Jurisdiction and coverage were stipulated (Exh. J-1; Tr. 4). The parties filed post hearing briefs.

EEI denies the violations and asserts that it complied with the cited standards. EEI also argues that if violations under § 5(a)(1) or § 1910.1000 are found, it is due to unpreventable employee misconduct, because its wastewater manager, contrary to operating procedures, disconnected the H_2S monitor and added excessive amounts of sodium sulfide and acid (poly-aluminum chloride) to the wastewater.

For the reasons discussed, the alleged violations of § 1910.1000(b)(2), § 1910.1000(e) and §1910.1200(h)(3)(iii) are affirmed as serious and a total penalty of $11,200 is assessed. The other alleged violations are vacated and no penalties are assessed.

The December 11, 2002 Release of H_2S

EEI operates a full-service, environmental service company which has been in business since 1976. EEI's business includes: the treatment, storage, and disposal (TSD) of hazardous waste under the Resource Conservation and Recovery Act (RCRA); and the treatment of wastewater for safe

[1]OSHA initially cited serious citation no. 1, item 1, and willful citation no. 2, items 1 and 2, as alleged violations under OSHA's "hazardous waste and emergency response" standards at 29 C.F.R. § 1910.120 which standards were subsequently determined not applicable to EEI's wastewater treatment area. The Secretary's pretrial motion to amend the citations to allege a § 5(a)(1) violation, and violations of the hazardous communication regulations at § 1910.1200, was GRANTED by Order dated December 11, 2003.

discharge into the metropolitan sewer system. EEI's offices and principal plant facility are in Cincinnati, Ohio. At the plant, the wastewater treatment area is separated from the hazardous waste area.[2] EEI's president and cofounder is Daniel McCabe (Exhs. J-1, C-1; Tr. 27-28, 38, 56-57).

EEI employed approximately 160 employees in December 2002 and serviced approximately 800 clients including universities, hospitals, and industrial manufacturers (Tr. 30, 62). The wastewate,r which is treated to remove/reduce all hazardous metals before discharge, is derived from EEI's TSD services and directly from clients (Tr. 66, 129). The treated wastewater is discharged daily into the sewer (Tr. 134).

In December 2002, EEI's plant manager was William Barnhill (Tr. 74). The manager of the wastewater treatment area was Anthony Davis (Tr. 78-79). The plant operated two shifts, five days a week, with approximately 30 employees working in the hazardous waste area and 2-3 employees in the wastewater treatment area (Tr. 64, 419, 510).

The wastewater treatment area is approximately 60 feet by 150 feet and contains, among other things, two treatment tanks, one filter press, two discharge tanks, and two clarifier tanks (Exhs ALJ-1, R-3; Tr. 69, 516, 518). When the wastewater initially comes into the wastewater treatment area, the wastewater is placed in an enclosed treatment tank where a sample of less than a quart is taken for a "treatability analysis" (Tr. 130, 132, 348, 573-574). The treatability analysis determines, through trial and error, the appropriate chemicals to use for an effective treatment of the wastewater by observing their reaction on the hazardous metals in the sample (Tr. 130, 892). Hazardous metals, such as mercury, lead, chromium, zinc, copper, nickel, arsenic and cadmium, must be removed or reduced, to within acceptable levels, before the wastewater can safely be discharged into the metropolitan sewer system. Also, the pH of the discharged wastewater must be between 7 and 9.9 (Tr. 131, 478, 490, 574, 858). The treatability analysis is described as an empirical test method (Tr. 121).

The chemicals typically used to remove or reduce the hazardous metals include sodium sulfide, sulfuric chloride, poly-aluminum chloride, and lime (Tr. 70). Sodium sulfide is used daily to precipitate metals out of hazardous waste and wastewater (Tr. 84-85).

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[2]Prior to 2000, hazardous waste and wastewater treatment operations were performed together in the same plant area (Tr. 65, 67, 73).

The treatment tank is enclosed and has an agitator, for mixing and ventilation, and a scrubber to remove all hazardous gases (Tr. 348-349, 1223, 1248). After the treatment tank, the wastewater is moved through the press tank for filtration and the removal of solids (Tr. 572-573). The wastewater is then piped into a clarifier tank which is an open tank with no ventilation or scrubber (Tr. 71, 372). The clarifier tank is cylindrical and has no moving parts. It has a cone bottom to allow solids to settle and be removed. The clarifier tank holds approximately 4,500 gallons. Piping connects the clarifier tank to the treatment tank (Tr. 362, 478, 809, 815, 1120, 1223).

When the wastewater is in the clarifier tank, another sample is taken and sent to the EEI laboratory for analysis (Tr. 71). If the laboratory analysis shows that the metals and pH level are within permissible limits, the wastewater is placed into a discharge tank for discharge into the sewer. If the analysis fails, the wastewater receives further treatment until it is within the permissible limits for discharge. Additional chemical treatment can be done in the clarifier tank or the wastewater can be returned to the treatment tank (Tr. 70-71, 131, 854-855, 1220). According to EEI, it is common that additional treatment is necessary and that the additional treatment is preformed in the clarifier tank (Tr. 1220, 2002).

On the morning of December 11, 2002, the laboratory analysis of the wastewater in the clarifier tank showed a mercury level of .064 parts per million (ppm).[3] The permissible level for discharge into the sewer is .02 ppm (Exhs. R-6, R-18; Tr.478, 1151-1152, 1224, 1227).

To reduce the mercury level, wastewater manager Davis added a 50-pound bag of sodium sulfide into the clarifier tank at 6:30 a.m. (Tr. 198). Sodium sulfide is highly alkaline and the manufacturer advises to keep it away from acids because of the potential for the evolution of H_2S (Exh. C-2). Davis set up air agitation on the tank. At 8:30 a.m., because the pH of the solution was too high for discharge (approximately 11.4), he added a 55-gallon drum of poly-aluminum chloride, a weak acid, as a neutralizing agent. (Tr. 198-199, 857-858). He added a second drum of poly-aluminum chloride at 11:00 a.m. and a third drum at 12:30 p.m. (Tr. 199).

After the third drum had been added, EEI maintenance technician/supervisor Richard Lewis, who was walking through the wastewater treatment area, started smelling a dead fish odor. He

[3]The first request for analysis was submitted on December 9,2002 and the mercury level was .066 ppm. On December 10, 2002 a second request for analysis was submitted and the mercury level was .064 ppm (Tr. 1146, 1151-1152, 1227).

testified that he suddenly could not breathe and became unconscious (Tr. 201-202, 241, 249). Lewis was found unconscious by EEI compliance officer Lance McMullen and Lab Pack services director Brian DePeel who removed him from the area (Tr. 294, 965).

McMullen had walked around outside of the wastewater treatment area and had smelled a rotten egg odor at two separate locations (Tr. 293-294). When he walked through the wastewater treatment area, he noted that the stationary H_2S monitor read zero (Tr. 298). McMullen then saw Lewis unconscious on the ground. Also, his personal H_2S meter alarm started sounding its alarm, indicating the presence of H_2S at a level above 10 ppm (Tr. 294, 307). McMullen put his meter on the ground and assisted Lewis (Tr. 294). When EEI technical manager Gary Brunner later retrieved McMullen's H_2S meter, the meter showed a reading of 82-84 ppm of H_2S (Exh. C-14; Tr. 203, 549).

Lewis was observed foaming at the mouth, incoherent and having convulsions (Tr. 295, 309). He was given oxygen and taken to the hospital at 3:05 p.m. (Tr. 242). The doctors at the hospital informed him that he had been exposed to H_2S (Tr. 252). However, the hospital records reflect that Lewis had no adverse effects from the exposure and showed normal mental status and stable vital signs (Exh. J-1). Lewis denied having chest pains, shortness of breath, confusion, vision change, throat irritation, pain or other problems at the hospital (Tr. 205). His laboratory analyses were within normal limits (Exh. J-1). Lewis was released from the hospital at approximately 8:00 p.m. He returned to work the next day without restriction or any continuing course of treatment (Exh J-1; Tr. 248, 250).

On December 18, 2002, based on a referral from another OSHA safety compliance officer, OSHA industrial hygienist (IH) Leonard Zielinski initiated the accident inspection of EEI's wastewater treatment area (Tr. 594). His inspection resulted in the serious and willful citations at issue.

Prior to the 2002 H_2S release, EEI has had one other incident of a H_2S release from its plant.[4] In December 2000, the City of Cincinnati, Office of Environmental Management (OEM), inspected a complaint of a rotten egg odor from the nearby firehouse (Tr. 140). OEM concluded that the odor was the result of an H_2S release from the EEI plant (Tr. 144). EEI had calculated that as much as 45.75 pounds of H_2S gas could have been released. The Cincinnati Fire Division took H_2S

[4]A release in February 2000 was of nitric oxide from a lime slurry tank which was caused by operator error (Exh C-11; Tr. 145, 455-456).

concentration measurements and found an average concentration of 63 ppm of H_2S inside EEI's plant facility (Exh. C-11). In July 2001, OEM and EEI signed a settlement agreement. EEI agreed, among other things, to dissolve sodium sulfide in water before adding it to waste solutions, to install a stationary H_2S monitor near the treatment tanks, and to have at least one "properly trained employee" on site to monitor the treatment process (Exh. C-8; Tr. 142).

OEM also inspected the H_2S release on December 11, 2002 (Tr. 436). OEM found that EEI had violated the July 2001 settlement agreement and fined EEI $25,000 (Exh. C-12). Specifically, OEM found that the H_2S monitor near the treatment tanks was inoperable and that the sodium sulfide was added without first dissolving it in water. OEM was closed during 2003 by the City and the matter was not further pursued (Tr. 432).

Discussion

The Secretary has the burden of proving a violation.

> In order to establish a violation of an occupational safety or health standard, the Secretary has the burden of proving: (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).

EEI stipulates that H_2S was released on December 11, 2002, from the clarifier tank in the wastewater treatment area (EEI Brief, p. 2; Tr. 22, 91). H_2S is a toxic, colorless gas. It is heavier than air and flammable. It has a characteristic odor often referred to as a "rotten egg" smell (Exhs. C-3, R-10). The odor threshold is very low, but continued exposure can result in "olfactory fatigue" where an individual loses the ability to smell H_2S (Tr. 105-106). H_2S can be generated from mixing a sulfide, such as sodium sulfide, and an acid (Tr. 86, 91). H_2S is the second leading cause of death in the workplace related to toxic chemicals (Exh. C-3; Tr. 465). The acceptable ceiling concentration limit for exposure to H_2S is 20 ppm for an 8-hour period, and the maximum peak exposure is 50 ppm for 10 minutes (*see* § 1910.1000, Table Z-2). Symptoms of exposure include eye and respiratory irritation, shortness of breath, headache, dizziness, vomiting or nausea, convulsions, unconsciousness, and coma or death due to respiratory failure (Exh. R-10, Tr. 97).

SERIOUS CITATION NO. 1

Item 1 - Alleged violation of § 5(a)(1) of the Act

The citation alleges that EEI 's H_2S monitor in the wastewater treatment area was not functioning properly to warn employees of high levels of H_2S. Section 5(a)(1) of the Act requires that an employer:

> 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.

After the H_2S release in December 2000, EEI installed a stationary H_2S monitor in the wastewater treatment area (Exh. C-8; Tr. 94, 158, 173, 505). The monitor was set to activate at 5 ppm (Tr. 94). It had a visible readout and an audible alarm (Tr. 750). The monitor was mounted on the wall between the treatment tanks and clarifier tanks (Tr. 505, 749). There is no evidence that the monitor ever detected any quantity of H_2S inside the EEI facility prior to the release in December 2002 (Tr. 94, 158).

During the H_2S release on December 11, 2002, EEI stipulates that neither the visible readout nor the audible alarm on the stationary H_2S monitor in the wastewater treatment area was triggered (EEI Brief, p. 2; Tr. 202). EEI agrees that the monitor was not functioning. EEI argues that it was disabled by manager Davis[5] and the actual concentration of H_2S is unknown.

Although the actual concentration may not be known, the record shows that the hand-held H_2S meter, near where Lewis was unconscious, gave a reading in excess of 80 ppm which exceeds OSHA's maximum peak exposure of 50 ppm (Tr. 203, 385-386, 549). EEI determined that approximately two pounds of H_2S was released (Tr. 210).

Director of lab pack services Brian DePeel testified that Davis, on the day of the release, told him that he had disconnected the monitor the night before because the alarm and red flashing light kept going off (Tr. 324, 961-962, 975). Although the monitor may have been disconnected the prior evening, the record shows that it was connected but not functioning during the release on December 11, 2002. DePeel testified that he believed the monitor had been reconnected

[5]EEI's unpreventable employee misconduct defense as to the § 5(a)(1) violation is rejected. Davis' conduct, as a supervisor, is imputed to EEI and there is no showing that EEI had any work rules regarding the maintenance of the monitor or maintained any regular inspections of the monitor. Also, Davis' statement to OSHA does not indicate that the monitor was disconnected (Exhs. C-18, C-19).

(Tr. 975-976). EEI compliance officer McMullen testified that during the release he observed the stationary monitor and it was reading "zero" despite the very strong, sulfide, rotten egg odor (Tr. 294, 298, 319, 325-326). Because he saw the red light on, McMullen also did not believe that the monitor was disconnected (Tr. 271-272). Technical manager Gary Brunner also confirmed that the monitor was reading "zero" (Tr. 547). The day after the release, Lewis discovered that the sensor on the unit was bad, not that it had been disconnected (Tr. 243, 272). Barnhill also concluded that the element which measures H_2S was not functioning (Tr. 340). There was no evidence that the monitor was disconnected during the release of H_2S on December 11, 2002.

IH Zielinski testified that when he observed Davis calibrating the monitor on December 18, 2002, it was only reading 32 ppm after a 50 ppm calibration test gas was applied (Tr. 761, 765). He speculated that EEI had attempted to get the monitor functioning after the accident without success (Tr. 766).

To establish a violation of § 5(a)(1) of the Act, the Secretary must show that: (1) there was an activity or condition in the employer's workplace that constituted a hazard to employees; (2) either the cited employer or its industry recognized that the condition or activity was hazardous; (3) the hazard was causing or likely to cause death or serious physical harm; and (4) there were feasible means to eliminate the hazard or materially reduce it. *Waldon Healthcare Ctr.*, 16 BNA OSHC 1052, 1058 (No. 89-2804, 1993).

The purpose of an H_2S monitor is to warn employees of excessive concentrations of H_2S in order to initiate emergency procedures and precautions. A non-functioning monitor is a hazard. A "hazard" is defined in terms of conditions deemed unsafe over which an employer can reasonably be expected to exercise control. *Morrisson-Knudson Co./Yonkers Contracting Co., A Joint Venture*, 16 BNA OSHC 1105, 1121-1122 (No. 88-572, 1993). Although the record in this case indicates only one prior incident of an H_2S release, "there is no requirement that there be a 'significant risk' of the hazard coming to fruition, only that if the hazardous event occurs, it would create a 'significant risk' to employees." *Waldon Healthcare Center*, 16 BNA OSHC 1052, 1060 (No. 89-2804, 1993).

On December 11, 2002, the H_2S monitor was not functioning and EEI's employees were exposed to H_2S in excess of the maximum peak exposure. Based on EEI's regular use of sulfides and acids in its treatment of wastewater, the possibility for the release of H_2S existed and the

potential for serious injury to employees increased due to a non-functioning H_2S monitor. One employee who received no warning was rendered temporarily unconscious from his H_2S exposure. *Coleco Industries, Inc.*, 14 BNA OSHC 1961, 1964 (No. 84-546, 1991) (an accident may demonstrate that a condition presents a hazard to employees). If the stationary H_2S monitor had sounded its audible alarm, employees including Lewis, may have been able to take emergency precautions to avoid exposure. The City's environmental office found that "the failure of this meter led to the absence of the warning alarm, which gave the employees a false sense of security. As a result, employees unknowingly wandered into the hydrogen sulfide release and suffered health effects" (Exh. C-12).

EEI recognizes the potential for an H_2S release even at the clarifier stage of wastewater treatment (Tr. 507). A hazard is deemed 'recognized' when the potential danger of a condition or activity is either actually known to the particular employer or generally known in the industry. *Pepperidge Farm Inc.*, 17 BNA OSHC 1993 (No. 89-0265, 1997).

EEI uses sodium sulfide and poly-aluminum chloride daily in its treatment of wastewater (Tr. 85). EEI was aware of the hazardous nature of the materials processed and that H_2S was dangerous to humans at sufficient concentrations (Tr. 60, 97). It understood that H_2S could be evolved when sodium sulfide and an acid, such as poly-aluminum chloride, are mixed (Exh. C-2; Tr. 86, 91). EEI recognizes that, if H_2S was released, a malfunctioning H_2S monitor would not be able to properly warn employees of the presence of the toxic gas and direct them to initiate emergency procedures and preventions. EEI agreed to install the H_2S monitor after the release in 2000 (Exh. C-8).

In addition to establishing a recognized hazard, there is no dispute that the lack of a functioning H_2S monitor can cause serious injury or possibly death to employees. Also, the feasibility of abatement is not an issue (EEI Brief, p. 2). Because of the lack of any warning, Lewis, who was just walking through the area to retrieve a tool, collapsed and was rendered unconscious due to his exposure to H_2S (Tr. 201, 241). The means of abatement include proper maintenance and calibration of the monitor.

In addition to establishing the elements of a violation of § 5(a)(1) of the Act, the record shows that EEI knew or should have known of the non-functioning H_2S monitor. The Secretary must show that the employer knew, or with the exercise of reasonable diligence could have known, of a

hazardous condition. *Dun-Par Engd Form Co.*,12 BNA OSHC 1962, 1965-66 (No. 82-928, 1986). An employer has constructive knowledge of a violation if the employer fails to use reasonable diligence to discern the presence of the violative condition. *Pride Oil Well Serv.*, 15 BNA OSHC 1809, 1814 (No. 87-692, 1992).

There is no showing in this case that EEI had a regular program of maintenance and calibration of the H_2S monitor (Tr. 213). Plant manager William Barnhill was not aware of any regular calibration or maintenance of the monitor (Tr. 340). During his interview with OSHA, McCabe conceded that the monitor was not working because it was not properly maintained (Tr. 214). Maintenance technician Richard Lewis testified that he never performed maintenance on the H_2S monitor although he maintained other meters in the plant (Tr. 243, 245). EEI offered no documentation nor presented any evidence that the monitor was regularly maintained or calibrated since its installation in 2001.

Despite the lack of a regular program, the record reflects without dispute that three weeks before the December 2002 H_2S release, manager Davis and Lewis calibrated the H_2S monitor (Tr. 243, 253). The calibration of the monitor is part of proper maintenance. They completed the calibration in accordance with the manual (Tr. 254). Industrial hygienist Leonard Zielinski testified that it was his understanding that the H_2S monitor should be calibrated every 90 days and that such calibrations would satisfy the manufacturer's requirements (Tr. 751-752). Although this statement was not verified and the manufacturer's manual was not presented, the statement was not disputed. The record therefore establishes that the monitor was properly calibrated three weeks prior to the release well within the manufacturer's requirements. Also, there is no showing of an intervening condition or cause which would have made EEI aware that the monitor was not properly functioning at the time of the H_2S release in December 2002. Manager Davis' statement to OSHA does not indicate that he was aware the monitor was not functioning at the time of the release (Exhs. C-18, C-19).

A violation of § 5(a)(1) of the Act is not established.

Items 2a and 2b - Alleged Violations of §§ 1910.1000(b)(2) and 1910.1000(e)

The citation alleges that EEI's employees were exposed to airborne concentrations of H_2S in excess of the 50 ppm acceptable maximum peak concentration (item 2a), and that EEI failed to

implement feasible engineering or administrative controls to reduce employees' exposure to H_2S (item 2b). Section 1910.1000(b)(2) provides that:

> An employee's exposure to a substance listed in Table Z-2 shall not exceed at anytime during an 8-hour shift the acceptable ceiling concentration limit given for the substance in the table, except for a time period, and up to a concentration not exceeding the maximum duration and concentration allowed in the column under "acceptable maximum peak above the acceptable ceiling concentration for an 8-hour shift."

Table Z-2 identifies the acceptable ceiling concentration for H_2S as 20 ppm during an 8-hour shift and the acceptable maximum peak as 50 ppm for 10 minutes, once only if no other measured exposure occurs.

Section 1910.1000(e) provides that:

> To achieve compliance with paragraphs (a) through (d) of this section, administrative or engineering controls must first be determined and implemented whenever feasible. When such controls are not feasible to achieve full compliance, protective equipment or any other protective measures shall be used to keep the exposure of employees to air contaminants within the limits prescribed in this section. Any equipment and/or technical measures used for this purpose must be approved for each particular use by a competent industrial hygienist or other technically qualified person. Whenever respirators are used, their use shall comply with 1910.134.

EEI stipulates that the release on December 11, 2002, was H_2S (Tr. 22, 91). The record also shows that the personal hand-held H_2S meter carried by EEI compliance officer McMullen started sounding its audible alarm while he was in the wastewater treatment area (Tr. 294). The audible alarm was set to sound when the level of H_2S exceeded 10 ppm (Tr. 307). When the meter was read later, it showed that the exposure level was in excess of 80 ppm (Tr. 203, 385-386, 549, 1249). Although the meter was on the ground, the reading reflects Lewis' exposure while on the ground unconscious nearby. McCabe stated that when he arrived at the facility after Lewis was taken to the hospital, the H_2S reading was still 20 ppm at the doorway to the alleyway and entrance to the wastewater area (Tr. 197-198). He did not take a reading inside the wastewater area. Also, it is noted that Lewis suddenly collapsed and was rendered unconscious. He was observed convulsing, foaming at the mouth and incoherent which are symptomatic of an exposure to high levels of H_2S

(Exh. C-3; Tr. 241, 295, 309, 783).

Thus, the record establishes by logical inference that Lewis' exposure exceeded the acceptable maximum peak of 50 ppm for H_2S exposure, contrary to the requirement of § 1910.1000(b)(2).

With regard to feasible administrative and engineering controls under § 1910.1000(e), OSHA is recommending ventilation controls, including a scrubber on the clarifier tanks, and the implementation of effective work practices (Secretary's Brief, p. 22). EEI does not dispute that a scrubber and work practices are feasible and can be implemented (EEI Brief, p. 2).

The treatment tanks, where initial alkaline precipitation and sulfide precipitation are applied, are vented through a 3,000 cubic feet per minute (cfm) scrubber (Tr. 461). The purpose of the scrubber is to remove any particulate or acid gases, such as H_2S, that would result from the precipitation process (Tr. 465, 786). EEI's written procedure instructs that the fume scrubber must be prepared before initiating the procedure in the treatment tank to remove any H_2S (Exh. C-6).

If additional treatment is needed after the treatment tank, it is generally done in the clarifier tanks (Tr. 524, 1220). It is common in EEI's treatment process that hazardous metals continue to exist outside the mandatory parameters for discharge when the wastewater reaches the clarifier tank (Tr. 2002). It is also common for additional treatment to take place in the clarifier tank (Tr. 1220). EEI concedes that if treatment is done in the clarifier tank, the potential for an H_2S release is present when additional chemicals such as sodium sulfide and acids are used (Tr. 507). The use of such chemicals in the clarifier tank is acceptable and common at EEI (Tr. 524, 1220).

Unlike the treatment tanks, however, there are no ventilation and scrubbers on the clarifier tanks (Tr. 339, 371, 372). The clarifier tanks are open. According to former plant manager Barnhill, a hazard to employees exists if there is no proper ventilation on the tank and if it has not been scrubbed appropriately (Tr. 336). The clinical reports on H_2S indicate that "workers at risk should be made aware of the dangers of H_2S. Exhaust ventilation should be used when applicable" (Exh C-3). EEI's argument, that the treatment tanks are for gross treatments of wastewater and the clarifier tanks are limited to polishing, is irrelevant (Tr. 372). The record fails to define what constitutes gross treatment or polishing. Also, the potential for an H_2S release exists in the clarifier tanks even if large quantities of sodium sulfide and an acid are not used. The need for ventilation including a scrubber on the clarifier tanks is established and was feasible. In fact, EEI installed a

ventilation system for the clarifier tanks after the citation (Tr. 1247).

In addition to establishing the noncompliance with §§ 1910.1000(b)(2) and 1910.1000(e) and employee exposure, the Secretary must also show that EEI knew, or with the exercise of reasonable diligence could have known that H_2S was released. *Dun-Par Engd Form Co.*,12 BNA OSHC 1962 (No. 82-928, 1986).

Anthony Davis was the manager of the wastewater treatment area. As manager, Davis supervised the area. There is also no dispute that Davis caused the violative condition by adding poly-aluminum chloride to a wastewater solution containing sodium sulfide (Tr. 198-199). When a supervisory employee such as Davis has actual or constructive knowledge of the violation conditions, knowledge is imputed to the employer and the Secretary satisfies the burden of proving knowledge. *Dover Elevator Co.*, 16 BNA OSHC 1281, 1286 (No. 91-862, 1993). Based on manager Davis' involvement in adding the acid and sodium sulfide, EEI's knowledge of a potential release of H_2S is established unless EEI prevails on its employee misconduct defense.

Unpreventable Employee Misconduct Defense

An employer can avoid the imputation of knowledge based on supervisory misconduct by establishing that it "took reasonable measures to prevent the occurrence of the violation." *Dover Elevator Co.*, 16 BNA OSHC 1281, 1286 (No. 91-862, 1993). EEI argues that Davis failed to follow its proper procedures against adding excessive amounts of sodium sulfide and poly-aluminum chloride into the clarifier tank (Tr. 17).

Davis was hired in 2001 and had been working for EEI for more than one year at the time of the H_2S release (Tr. 527). His prior work experience included managing other wastewater treatment facilities for approximately 10 years. However, the other facilities involved treatment of oily waters as opposed to wastewater containing hazardous metals such as at EEI (Tr. 79-80, 512-513).

In order to establish unpreventable employee misconduct, an employer must show that: (1) it has established work rules designed to prevent reasonably anticipated unsafe conditions; (2) it has adequately communicated the work rules to its employees; (3) it has taken steps to discover violations of the rules; and (4) it has effectively enforced the work rules when violations have been discovered. *Nooter Construction Co.*, 16 BNA OSHC 1572, 1578 (No. 91-237, 1994). When a supervisory employee such as manager Davis is involved in the alleged misconduct, the defense is considered more difficult to establish since a supervisor's duty includes protecting the safety of employees under

his supervision. *Archer Western Contractors, Ltd.*, 15 BNA OSHC 1013, 1017 (No. 87-1067, 1991). The "fact that a supervisor would feel free to breach a company safety policy is strong evidence that the implementation of the policy is lax" *Mel Jarvis Constr., Co.*, 9 BNA OSHC 2117, 2123 (No. 78-6265, 1981), citing *Jensen Construction Co.*,7 BNA OSHC 1477 (No. 76-1538, 1979).

The record in this case shows that EEI provided employee training including 40-hour HAZWOPER (hazardous waste operations) training (Tr. 256, 1171). Also, employees received 8-hour refresher courses (Exh. R-2; Tr. 261, 300, 303). Davis received this training (Exh. R-2). Davis was a certified safety and health instructor (Exh. C-18). He also received on-the-job training from Brunner and others on the procedures and processes in the wastewater treatment area (Tr. 484, 1173). Brunner testified that he trained Davis to dissolve sodium sulfide before adding it (Tr. 556). According to plant manager Barnhill, Davis was trained on the procedures including pretreatment in the clarifier tank (Tr. 374).

Also, EEI has a disciplinary program. The disciplinary program as written in the employees' manual states that "[d]iscipline including immediate termination of employment may be required as corrective procedure and will be determined by the Company in its sole discretion." (Exh. R-12, p. 18; Tr. 136, 281, 1167). Based on the written program, EEI implemented a progressive disciplinary program which included verbal warnings, written discipline, suspension and termination (Tr. 136, 338, 568). Employees were aware of the discipline program. Also, the record reflects that employees have been terminated for safety infractions (Tr. 1170). Davis was disciplined for failing to dissolve the sodium sulfide in water (Tr. 173). He also received verbal warnings for smoking in the area, not wearing safety glasses, and not wearing a hard hat (Tr. 379, 402, 1231). EEI disciplined Davis for the 2002 H_2S release by a verbal reprimand and requiring him to work three Saturdays without pay (Tr. 402, 1076, 1253).[6]

Despite having a training program and a disciplinary program, the record fails to establish that EEI had work rules or procedures regarding the use or amounts of sodium sulfide and acids in the same solution which was effectively monitored. These are critical elements of the employee misconduct defense.

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[6]Unrelated to the H_2S release, Davis terminated his employment in August 2004 because he pleaded guilty to interstate transportation of stolen securities and was sentenced to one year in prison. This offense occurred while he was president of another wastewater company. McCabe was aware of Davis' problem when Davis was hired by EEI. (Exh. R-13; Tr. 527, 538, 1079, 1253).

A work rule is defined as "an employer directive that requires or proscribes certain conduct and that is communicated to employees in such a manner that its mandatory nature is made explicit and its scope clearly understood." *J.K. Butler Builders, Inc.*, 5 BNA OSHC 1075, 1076 (No. 12354, 1977). The rule must be clear and specific enough to advise employees of the hazards associated with their work and must be designed to prevent the cited unsafe condition. *Beta Construction Co.*, 16 BNA OSHC 1434, 1444 (No. 91-102, 1993).

EEI's written health and safety program does not address the use of sodium sulfide and acids during the treatment processes (Exh. C-4). Also, its written procedures, including the procedure applicable to the wastewater treatment area for precipitation filtration and a procedure for the precipitation with sodium sulfide, are silent except to advise that the "reaction of sodium sulfide and acid generates hydrogen sulfide, a toxic and ignitable gas. At no time can the generator be allowed" (Exhs. C-5, C-6, C-7; Tr. 118, 232).

The use of sodium sulfide and an acid such as poly-aluminum chloride is acceptable in EEI's treatment of hazardous wastewater. However, EEI's procedures were not shown to instruct employees when, under what circumstances and how much sodium sulfide or poly-aluminum chloride to add during the treatment process, particularly if done in the open clarifier tank (Tr. 113, 119). EEI has no rule stating "Don't add 50 pounds of sodium sulfide (Tr. 1211). EEI's procedures also do not describe at what rate to add poly-aluminum chloride (Tr. 887). There was no specific work rule offered by EEI, written or verbal, regarding the addition of sodium sulfide and an acid such as poly-aluminum chloride into the clarifier tank.

EEI argues that if large quantities of chemicals were needed for treatment, the solution should have been transferred to the treatment tank (EEI Brief, p. 33). However, EEI's work rules were not shown to distinguish between the gross chemical treatment done in the treatment tank from the treatment done in the clarifier tank. A gross treatment or polishing treatments were not defined and nothing was presented prohibiting such treatments in the clarifier tanks.

According to McCabe, the problem with written processes is that it is an empirical procedure and varies according to contents of the wastewater (Tr. 526). EEI argues that its processes are communicated through training because of the number of chemicals involved. However, as evident by the activities of manager Davis, such information was not adequately conveyed to employees. An unwritten work rule may lead to questions about its effectiveness in preventing employee exposure

to a hazard. Certainly, EEI could establish general written procedures and guidelines including specific prohibitions for employees to follow to prevent exposure to excessive concentrations of hazardous chemicals. As stated, EEI's treatability analysis may identify the chemicals and amounts needed to remove/reduce the hazardous metals in wastewater, but it was not shown to identify the hazard to employees from exposure to such chemicals or the by-products.

Also, effective implementation of a safety program requires "a diligent effort to discover and discourage violations of safety rules by employees." *American Sterilizer Co.*, 18 BNA OSHC 1082, 1087 (No. 91-2494, 1997). In this case, EEI failed to show that it took steps to monitor Davis' compliance. Brunner testified that he initially monitored Davis for a period of a couple months watching him adjust the pH, add sodium sulfide, and add poly-aluminum chloride (Tr. 877-878). However, after the initial period, EEI concedes that plant manager Barnhill and technical manager Brunner were unaware of Davis' activities in the wastewater treatment area (EEI Brief, p. 34).

EEI's employee misconduct defense is rejected and alleged violations of §§ 1910.1000(b)(2) and 1910.1000(e) are established.

Serious Classification

The violations of §§ 1910.1000(b)(2) and 1910.1000(e) are classified as serious. In order to establish that a violation is "serious" under § 17(k) of the Occupational Safety and Health Act (Act), the Secretary must establish that there is a substantial probability of death or serious physical harm that could result from the cited condition, and that the employer knew or should have known with the exercise of reasonable diligence of the violative condition. The likelihood of the accident is not an issue. *Spancrete Northeast, Inc.*, 15 BNA OSHC 1020,1024 (No. 86-521, 1991).

As demonstrated by the accident in this case, an employee who was exposed to H_2S at levels of 84 ppm, suddenly collapsed and became unconscious. He had to receive oxygen and was taken to the hospital. Clearly, exposure to high levels of H_2S, a toxic gas, could result in serious physical harm or death.

The record also reflects that EEI should have known of the violations with exercise of reasonable diligence. Manager Davis, who caused the release of H_2S, was a supervisor for EEI whose knowledge is imputed to EEI. Also, he was adding the acid over a 4-hour period before the release. 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. *Pace Constr. Corp.*, 14 BNA OSHC 2216,

2221 (No. 86-758, 1991).

Therefore, the violations of §§ 1910.1000(b)(2) and 1910.1000(e) were properly classified as serious violations.

WILLFUL CITATION NO. 2

Item 1 - Alleged Violation of § 1910.1200(h)(3)(iii)

The citation alleges that EEI failed to train employees in measures to protect themselves from the physical and health hazards of chemicals including the use of adequate specific wastewater treatment procedures to control or eliminate the potential for the release of H_2S. Section 1910.1200(h)(3)(iii) provides that employee training shall include at least:

> The measures employees can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used;

The "hazard communication" standards (HAZCOM) apply "to any chemical which is known to be present in the workplace in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency." *See* § 1910.1200(b)(2). The purpose of HAZCOM is to ensure that information concerning chemical hazards is transmitted to employees through a comprehensive program. *See* § 1910.1200(a).

There is no dispute that employees in the wastewater treatment area regularly use sodium sulfide and acids such as poly-aluminum chloride in the treatment of wastewater. Sodium sulfide is highly alkaline and a corrosive to eyes and skin. It is a systemic poison, causing headaches, dizziness, and unconsciousness in the dust form. The material safety data sheet (MSDS) advises users to keep it away from acids and the potential of H_2S evolution. The MSDS informs an employer that "this product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard, 29 C.F.R. 1910.1200. It is classified as toxic on ingestion information and corrosive based on its alkalinity" (Exh. C-2; Tr. 85).

H_2S occurs as a by-product in more than 70 occupational settings including sewage treatment plants (Exh. C-3). H_2S is not some product EEI purchases (Tr. 98). However, like sodium sulfide,

EEI recognizes that H_2S is hazardous and can be potentially released during its treatment processes (Exh. C-4, Sec. 5.2; Tr. 86, 112, 507). H_2S is a highly toxic, colorless, soluble gas (Exh. C-3). Although the odor threshold is extremely low and is described as reminiscent of rotten eggs, prolonged exposure may result in olfactory paralysis. The smell of H_2S is not a reliable indicator of a dangerous concentration (Exh. C-3; Tr. 106-107).

HAZCOM directs an employer to train employees on measures to take to avoid exposure to a hazardous chemical such as H_2S. Such training should include specific procedures to protect against chemical exposure such as appropriate work practices, emergency procedures, and the use of appropriate personal protective equipment (PPE). The standard does not require that the specific procedures be written (Tr. 722, 734).

EEI does have written procedures for "precipitation and filtration" (Exh. C-5), "preparation of reactants" (Exh. C-6), and "metal precipitation with sodium sulfide" (Exh. C-7).[7] The three procedures were written in 1992-1993 and have not been revised. They were written before the wastewater treatment area was separated from the hazardous waste treatment area. According to EEI, the procedures were in effect at the time of the H_2S release in December 2002 (Tr. 232).

EEI's written procedures, however, do not identify the specific chemicals and quantities to be used in removing/reducing the hazardous metals from the wastewater and maintaining the pH level to within acceptable levels for discharge into the sewer system (Tr. 113, 119). Also, EEI's procedures do not identify measures employees can take to prevent or protect against exposure to hazardous chemicals. Also, in the "preparation of reactants procedure," operators are correctly advised that "the reaction of sodium and acid, generates hydrogen sulfide, a toxic and ignitable gas." However, it misstates that saturation of the sense of smell will enable the ability to detect its continued presence (Exh. C-6). Such statements fail to advise employees that the sense of smell is not a good indicator of dangerous concentrations.

In terms of procedures identifying specific chemicals to be added or the amounts, this appears discretionary with the employee based on EEI's "treatability analysis" of the wastewater. McCabe stated that there was no procedure in place to tell an employee when or how much of sodium sulfide or any other chemical to add to the wastewater (Tr. 113, 119). EEI's "treatability analysis" is

[7]CO Zielinski's testimony that Exhibit C-7 satisfies the requirements of § 1910.1200(h)(3)(iii) is confusing and does not establish compliance. His testimony appears limited to the hydration of the sodium sulfide (Tr. 729-730).

designed to show the effect of various chemicals on removing/reducing hazardous metals in a sample through trial and error (Tr. 131). Such analysis relies on judgment and observation. McCabe described it as "an empirical test method for an employee to determine the treatment mechanisms for each batch" (Tr. 121-122). According to McCabe, EEI's treatability analyses are done repeatedly, thousands of times (Tr. 119). The analysis tells the employees how the chemical may precipitate the hazardous metals out of the solution.

Although done routinely, the processes are modified regularly (Tr. 119-120). Also, EEI's processes were not shown to distinguish between the treatment done in the treatment tank and treatment done in the clarifier tank. For example, although EEI considered it excessive in the clarifier tank, it was common to add 50 pounds of sodium sulfide to a treatment tank (Tr. 1221).

Further, although the analysis may show the precipitation of hazardous metals, the record does not show that the "treatability analysis," or its procedures, warns the employee of the potential health and safety hazards from the use of various chemicals, and that certain toxic gases (such as H_2S) may be released in hazardous concentrations. EEI confuses the difficulty in designing procedures sufficient for its numerous processes for removing/reducing various metals from wastewater with work practices to prevent or reduce the hazards to employees associated with the use of various chemicals. For example, according to EEI the use of sodium sulfide and poly-aluminum chloride was an appropriate choice by Davis to reduce the mercury level and adjust the pH level (Tr. 521-522, 1208). The use of these chemicals was within EEI's policies and practices. However, it was not shown that EEI had procedures in place to prevent the release of H_2S.

EEI's argument with Davis' conduct was the amount he added which EEI characterizes as excessive (Tr. 1213). However, the procedures used by EEI do not address the issue of the amount and apparently rely upon an employee's judgment which unfortunately in this case resulted in the H_2S release in December 2002. It was Davis' choice as to what to add[8] (Tr. 485). Plant manager Barnhill testified that the December 2002 incident happened because Davis "did not receive enough guidance from his supervisor in regard to the amount of quantities he should have added" (Tr. 339-340). Employees are apparently supposed to just know what to do based on the conditions (Tr. 119-120,

[8]EEI had prior concerns about Davis' judgment. Davis was described as "too much of a cowboy," his "effectiveness of treatments was not as good as it could be" and he was "not accurate as should be" (Tr. 217-218, 221). Plant manager Barnhill testified that Davis pushed "too hard for productivity" (Tr. 242).

485). Barnhill admitted that there was no set procedure in place for adding sodium sulfide (Tr. 387). He could not even say that adding 50 pounds of sodium sulfide was a mistake by Davis (Tr. 399).

Despite characterizing Davis' treatment as excessive, irresponsible and overkill, no established procedures were shown which, if were followed, would have protected employees from the hazards of H_2S (Tr. 200, 575, 1074). Also, the use of specific procedures to prevent hazards, if in place, may have guided Davis in applying the proper amounts or could have warned EEI's management of Davis' improper treatment (Tr. 139). EEI's written and verbal procedures as required by § 1910.1200(h)(3)(iii) were inadequate to prevent a potential hazard such as the release of H_2S.

Willful Classification

The Secretary classified the violation of § 1910.1200(h)(3)(iii) as willful. 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). "The Secretary must show that the employer was actually aware, at the time of the violative act, that the act was unlawful or that it possessed a state of mind such that if it were informed of the standards, it would not care." *Propellex Corp.*, 18 BNA OSHC 1677, 1684 (No. 96-0265, 1999).

In 1999, EEI received a prior citation for a violation of hazard communication training under § 1910.1200(h)(Tr. 593-594). Also, EEI's history shows one earlier release of H_2S in December 2000 which was investigated by the City of Cincinnati (Exhs. C-8, C-11). Other than a rotten egg odor, however, there is no evidence that employees were affected. In fact, prior to the December 2002 release, there is no evidence of a detectable amount of H_2S inside EEI's wastewater treatment area (Tr. 158).

After the 2000 incident, which was an odor complaint outside the plant, EEI separated the wastewater treatment area from the TSD facility (Tr. 38, 65). EEI installed an H_2S monitor in the treatment tank area and began dissolving sodium sulfide in water before adding it to solution (Exh. C-8). A mix tank, to liquefy the sodium sulfide in water before adding it to a treatment tank, was installed (Tr. 413). Also, ventilation and a scrubber were installed at the treatment tanks to prevent the release of H_2S (Tr. 1247). EEI required employees in the wastewater treatment area to wear tyvek suits, gloves, steel toed shoes, hard hats, safety glasses, and face shields. Employees in the wastewater area are issued respirators (Tr. 1231).

Such changes demonstrate good faith on the part of EEI and the lack of voluntary disregard or plain indifference. The test of good faith is objective and based on "whether the employer's belief concerning the factual matters in question was reasonable under all the circumstances." *Morrison-Knudson Co./Yonkers Contracting Co*., 16 BNA OSHC 1105, 1124 (No. 88-572, 1993). The employer's good faith effort to comply does not have to be entirely effective or completely eliminate the hazard. *Valdek Corp*., 17BNA OSHC 1135, 1136 (No. 93-0239, 1995), aff'd 73 F.3d 1466 (8th Cir. 1996). Although not completely eliminated, EEI took significant steps to reduce the potential for employees' exposure and there is no showing that EEI's employees were exposed to any hazardous chemicals including H_2S inside the wastewater treatment area prior to the December 2002.

The violation of § 1910.1200(h)(3)(iii) is reclassified as serious. The lack of effective procedures resulted in an employee becoming unconscious from an over exposure to H_2S. EEI knew or should have known that procedures were lacking and not updated.

Item 2 - Alleged Violation of § 1910.1200(h)(1)

The citation alleges that EEI failed to adequately train employees on the hazards of H_2S. Section 1910.1200(h)(1) provides that:

> Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and material safety data sheets.

EEI's written health and safety program identifies the training provided to employees including hazard communication training (Exh. C-4, chapter 2 and 5). OSHA maintains that employees Davis and Lewis did not receive training on the hazards of H_2S and olfactory fatigue. Other employees, CO Zielinski agreed, were trained (Tr. 712). It is noted that chemicals such as sodium sulfide and poly-aluminum chloride are used daily by EEI and that H_2S is a potential by-product.

Davis' interview statement indicates that he was not trained on the hazards of H_2S. He stated that chemicals were generally discussed but there was nothing specifically on H_2S. He also stated that

EEI never mentioned olfactory fatigue. He stated that he could not smell the rotten egg odor, but others could smell it on him (Exh. C-18).

Richard Lewis also stated that he did not know about olfactory fatigue (Tr. 712). He testified that he was not trained on the hazards of H_2S, but he was trained on a number of different chemicals which he could not remember (Tr. 245-246, 281).

EEI's written safety program does not specifically reference H_2S. However, there is no dispute that new employees are provided the 40-hour HAZWOPER (Hazard Waste Operations and Emergency Response Standard) training under § 1910.120 and eight hours of refresher training. Although Davis and Lewis did not work in the RCRA permitted hazardous waste treatment area, they were required to take the HAZWOPER training (Tr. 1045-1046). The record shows that Davis and Lewis did receive the 40 hours of training and eight hours of refresher training (Exh. R-2; Tr. 256-257, 261, 263). The HAZWOPER training included training on H_2S. CO Zielinski testified that based on his review, the HAZWOPER training did discuss H_2S and exposure limits (Tr. 757).

EEI compliance officer McMullen testified that his training on the hazards of H_2S was covered during the 40-hour initial training and the 8-hour refresher course (Tr. 300, 303). Employee Nathan Wheeler also testified that he was trained on the hazards of H_2S based on the 40-hour training course and the refresher course (Tr. 408). Former plant manager Barnhill agreed that employees received training on the hazards of H_2S during the initial orientation (Tr. 336). Other employees, including Lance McMullen, told Zielinski that they were knowledgeable (Tr. 712).

Manager William Klum, whose responsibility included employee training, discussed the training provided during the 40-hour and 8-hour courses given to all employees (Tr. 982). He testified that the training included respiratory protection, confined space, hazard communication, and material safety data sheets (Tr. 983). He used H_2S, as well as ammonia, as examples in his course materials (Tr. 983-984). Under hazard communication, Klum testified that H_2S was discussed once regarding its physical description, appearance and odor, and a second time dealing with vapor density (Tr. 987-988). He testified that H_2S information was also provided during the training involving respiratory protection, confined space, and the instruments for testing (Tr. 989). Klum was satisfied that Davis' and Lewis' training included training on H_2S and olfactory fatigue (Tr. 1001). Davis passed a test given by Klum which included questions about H_2S and its ability to overpower the sense of smell (Exh. R-9; Tr. 1012-1013, 1056). Klum's definition of olfactory fatigue is the ability

to overpower the sense of smell (Tr. 993).

The fact that Davis and Lewis did not recall specific training on H_2S does not mean that EEI did not provide the training (Tr. 245-246). It is noted that Davis was correctly able to identify the IDLH (immediately dangerous to life and health) for H_2S as 100 ppm. He also knew the emergency procedure for H_2S (Tr. 670-671). Davis was a certified safety and health instructor (Exh. C-18).

A violation of § 1910.1200(h)(1) is not established.

PENALTY CONSIDERATION

In determining an appropriate penalty, consideration is given to the size of the employer's business, history of previous violations, the employer's good faith, and the gravity of the violation. *J.A. Jones Construction Co.,* 15 BNA OSHC 2201, 2214 (No. 87-2059, 1993).

EEI currently employs approximately 145 employees (approximately 165 at the time of December 2002 release) (Tr. 62). EEI is also not entitled to credit for history, because it received a prior citation for hazard communication violation (Tr. 61-62, 593-594, 1214, 1262). Because of an overall good safety program and safety record, EEI is given credit for good faith.

A grouped penalty of $5,600 is reasonable for violations of §§ 1910.1000(b)(2) and 1910.1000(e). Several employees were potentially exposed to the release of H_2S at a level above the maximum peak concentration of 50 ppm. One employee collapsed and became unconscious. He had to receive oxygen and was taken to the hospital. Such H_2S release demonstrates the potential danger to employees.

A penalty of $5,600 is reasonable for serious violation of § 1910.1200(h)(3)(iii) due to the lack of specific procedures to eliminate or reduce the potential hazard contributed to the H_2S release. One employee became unconscious from exposure to H_2S.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

The foregoing decision constitutes the findings of fact and conclusions of law in accordance with Rule 52(a) of the Federal Rules of Civil Procedure.

ORDER

Based upon the foregoing decision, it is ORDERED that:

Serious Citation No. 1

1. Item 1, alleged violation of §5(a)(1) of the Act is vacated.

2. Item 2a and 2b, alleged violations of §§ 1910.1000(b)(2) and 1910.1000(e), are affirmed and a grouped penalty of $5,600 is assessed.

Willful Citation No. 2

1. Item 1, alleged violation of § 1910.1200(h)(3)(iii), is affirmed as serious and a penalty of $5,600 is assessed.

2. Item 2, alleged violation of § 1910.1200(h)(1), is vacated.

SO ORDERED.

/s/ Ken S. Welsch
Judge **Ken S. Welsch**

Date: September 9, 2004