23 Crushed by soil during a trench collapse – Inspection #1182123

A **28 year old male** employee was fatally injured when he was crushed by soil during a trench collapse. On the day of the incident the victim was laying sections of 4 inch PVC heavy wall sewer pipe to replace the current sewer pipe in a trench measuring approximately 100 feet long, 3 foot wide, and 7 feet deep. At the end of the day, the victim was in the trench picking up his tools and equipment, handing them up to another employee that was standing on the edge of the trench. Suddenly, a large section of the west trench wall collapsed, trapping the victim chest deep, against the opposite side of the trench. A protective system was not in place for the victim at the time of the accident, nor during the entire project. The site competent person misclassified the soil as type "A". The company owned a trench box, but it was not used at this site.

Citation(s) as Originally Issued

A complete inspection was conducted at the accident scene. Some of the items cited may not directly relate to the fatality.

Citation 1 Item 1a

29 CFR 1926.96	The employer did not ensure employees wear proper footwear which meets the requirements and specifications in American National Standard for Men's Safety-Toe Footwear, Z41.1-1967. In that an employee that was working during excavation and trenching activities was not wearing steel toe boots to protect him from being struck with dropped tools, rocks, and materials while installing a 4 inch heavy wall sewer line.

Citation 1 Item 1b

29 CFR 1926.100(a)	Employees were not protected by protective helmets while working in areas where there was a possible danger of head injury form impact, or from falling or flying objects, or from electrical shock and burns. In that the employees were working throughout the job site without wearing head protection to protect them from dropped tools, materials, and debris such as rocks and concrete while conducting excavations and trenching activities while installing a 4 inch heavy wall sewer line.

Citation 1 Item 1c

29 CFR 1926.102(a)(1)	Eye and face protective equipment were not used when machines or operations presented potential eye or face injury from physical, chemical, or radiation agents. In that an employee was exposing himself to a struck by hazard by wearing non-safety rated Ray-ban sunglasses while applying cooling water to a concrete saw during cutting operations.

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Citation 1 Item 2a

29 CFR 1926.651(c)(2)	A stairway, ladder, ramp or other safe means of egress was not located in trench excavations that were 4 feet (1.22m) or more in depth so as to require no more than 25 feet (7.62m) of lateral travel for employees. In that an employee was working in a trench that measured approximately seven feet six inches deep with the nearest exit point approximately seventy feet away.

Citation 1 Item 2b

29 CFR 1926.652(a)(1)	Each employee in an excavation was not protected from cave-ins by an adequate protective system designed in accordance with 29 CFR 1926.652(c). In that an employee was working in an excavation at a depth of approximately 7 feet 6 inches with vertical walls with no protective system in place.

Citation 1 Item 3

29 CFR 1926.651(k)(1)	An inspection of the excavations, the adjacent areas, and protective systems was not conducted by the competent person prior to the start of work and as needed throughout the shift. In that a competent person did not inspect the trench that was approximately 7 feet 6 inches deep prior to the employees entering it to work to determine what type of soil was present, what type of protective system was needed, and to ensure no safety hazard existed in and around the trench.

Citation 1 Item 4a

29 CFR 1926.1203(a)	Before it began work at a worksite, the employer did not ensure that a competent person identified all confined spaces in which one or more of the employees it directed may have worked, and/or did not identify each space that was a permit space, through consideration and evaluation of the elements of that space, including testing as necessary. In that a competent person did not identify the confined space manholes on Old Jasper Road prior to the employees entering them to stop the flow of raw sewage by installing an eight inch pneumatic plug in the sewage line exposing them to a potentially hazardous atmosphere.

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Citation 1 Item 4b

29 CFR 1926.1203(d)	Before it began work at a worksite the employer did not have a written permit space program that complies with 1926.1204 implemented at the construction site. The written program was not made available prior to and during entry operations for inspection by employees and their authorized representatives. In that employees were exposed to confined spaces with potentially hazardous atmospheres while entering the manholes on Old Jasper Road to install an eight inch pneumatic plug to block the flow of raw sewage in the old sewer line without identifying the hazards, testing the atmosphere, preparing emergency equipment or informing the employees of the dangers while performing the task.

Citation 1 Item 4c

29 CFR 1926.1205(a)	Before entry was authorized, the employer did not document the completion of measures required by paragraph 1926.1204(c) of this standard by preparing an entry permit. In that the employer had not developed or implemented an entry permit for permit required confined space entries which were conducted by entering the manholes along Old Jasper Road to install an eight inch pneumatic plug to stop the flow of raw sewage.

Citation 1 Item 4d

29 CFR 1926.1207(a)	The employer did not provide training to each employee whose work is regulated by this standard, at no cost to the employee, and did not ensure that the employee possessed the understanding, knowledge, and skills necessary for the safe performance of duties assigned under this standard. In that the employer had not provided confined space entry training to the crew members that were entering the manholes along Old Jasper Road to stop the flow of raw sewage by installing an eight inch pneumatic plug in the old sewer lines.

Citation 1 Item 4e

29 CFR 1926.1212(a)	Employers did not consult with affected employees and their authorized representatives on the development and implementation of all aspects of the permit space program required by 1926.1203. In that employees were unaware of the confined space entry program requirements and safe working expectations while being exposed to potentially hazardous atmospheres when entering the manholes along Old Jasper Road to stop the flow of raw sewage by installing an eight inch pneumatic plug in the old sewer line.

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Citation 2 Item 1a

29 CFR 1910.1200(e)(1)	The employer did not develop, implement, and/or maintain at the workplace a written hazard communication program which describes how the criteria specified in 29 CFR 1910.1200(f), (g), and (h) will be met. In that the employer did not have a written hazard communication program developed to educate the employees on the hazards of working with diesel fuel, gasoline, hydraulic fluids, grease and pipe lubricant.

Citation 2 Item 1b

29 CFR 1910.1200(g)(8)	The employer did not ensure that safety data sheets were readily accessible to the employees in their work area during each work shift. In that the employer did not maintain safety data sheets on the worksite for the hazardous chemicals such as diesel fuel, gasoline, hydraulic fluids, grease and pipe lubricant.

Citation 2 Item 1c

29 CFR 1910.1200(h)(1)	Employees were not provided effective information and training on hazardous chemicals in their work area at the time of their initial assignment and whenever a new hazard that the employees had not been previously trained about was introduced into their work area. In that the employees on site stated that they had not received any training on hazard communication, and could not identify any hazardous chemicals that they were exposed to on site such as diesel fuel, gasoline, hydraulic fluids, grease and pipe lubricant.

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Photo 1 of 1 – Approximate location of the west trench wall that collapsed trapping the victim against the opposite side. The trench was completely back filled when TOSHA arrived for the investigation. TOSHA requested the trench be dug back out to show the condition of it at the time of the incident.