

Case 397. 62-year-old Caterpillar Model 320 excavator operator died when a 45-47 foot long, 25-inch diameter oak tree fell on the cab of the excavator.

A 62-year-old male Caterpillar Model 320 excavator operator died when a 45-47 foot long, 25-inch diameter oak tree fell on the cab of the excavator. The excavator was not reinforced (retrofitted with a falling object /roll over protective structure). The site clearing operation occurred in a drainage ditch/ravine with a slope of approximately 10 degrees. The incident oak tree had been topped by a tree service company one week prior to the fatal incident. The decedent had been instructed to push trees away from the excavator to remove them, including the incident oak tree. The oak was located approximately 2/3 of the way down the ravine. The excavator was positioned approximately 1/4-1/3 of the way down the ravine wall. Based on pictures taken by the responding police department, it appeared a scoop of sand had been removed near the base of the oak tree (unknown when the sand was removed). At some point, the decedent either contacted the root system with the bucket or the root system lost its integrity and the tree fell uphill, striking the arm of the excavator and then landing on the excavator cab. A coworker at road level was processing trees hauled up to the road by the decedent. When the decedent did not bring up the next tree for processing, his coworker started to walk down the ravine wall. As he was walking, a nearby contractor yelled to him: How long has that tree been on the excavator? His coworker ran to the excavator and attempted, unsuccessfully, to shut down the machine while the contractor called for emergency response.

MIOSHA Construction Safety and Health Division issued the following Serious citations to the employer at the conclusion of its investigation.

SERIOUS: MICHIGAN OCCUPATIONAL SAFETY AND HEALTH ACT, RULE 408.1011(a), ACT 154:

Furnish to each employee, employment and a place of employment that is free from recognized hazards that are causing, or are likely to cause, death or serious physical harm to the employee.

Employee engaged in a site-clearing operation exposed to a crushed-by hazard. The cab of the Caterpillar excavator was not equipped with a Falling Object Protective Structure to provide protection to the operator during a site-clearing activity.

Among others, one feasible and acceptable method to correct the violation is to install Falling Object Protective Structure [FOPS] on any excavator or equipment used for site-clearing operations.

SERIOUS: MICHIGAN OCCUPATIONAL SAFETY AND HEALTH ACT, RULE
1926.604(a)(2):

All equipment used in site-clearing operations shall be equipped with rollover guards meeting the requirements of this sub-part. In addition, rider-operated equipment shall be equipped with an overhead and rear canopy guard meeting the following requirements:

- (i) The overhead covering on this canopy structure shall be of not less than 1/8-inch steel plate or 1/4-inch woven wire mesh with openings no greater than 1 inch, equivalent.
- (ii) The opening in the rear of the canopy structure shall be covered with not less than 1/4-inch woven wire mesh with openings no greater than 1 inch

Employees engaged in a site-clearing operation were exposed to a crush-by hazard. The cab of the Caterpillar excavator was not equipped with a Rollover guard.