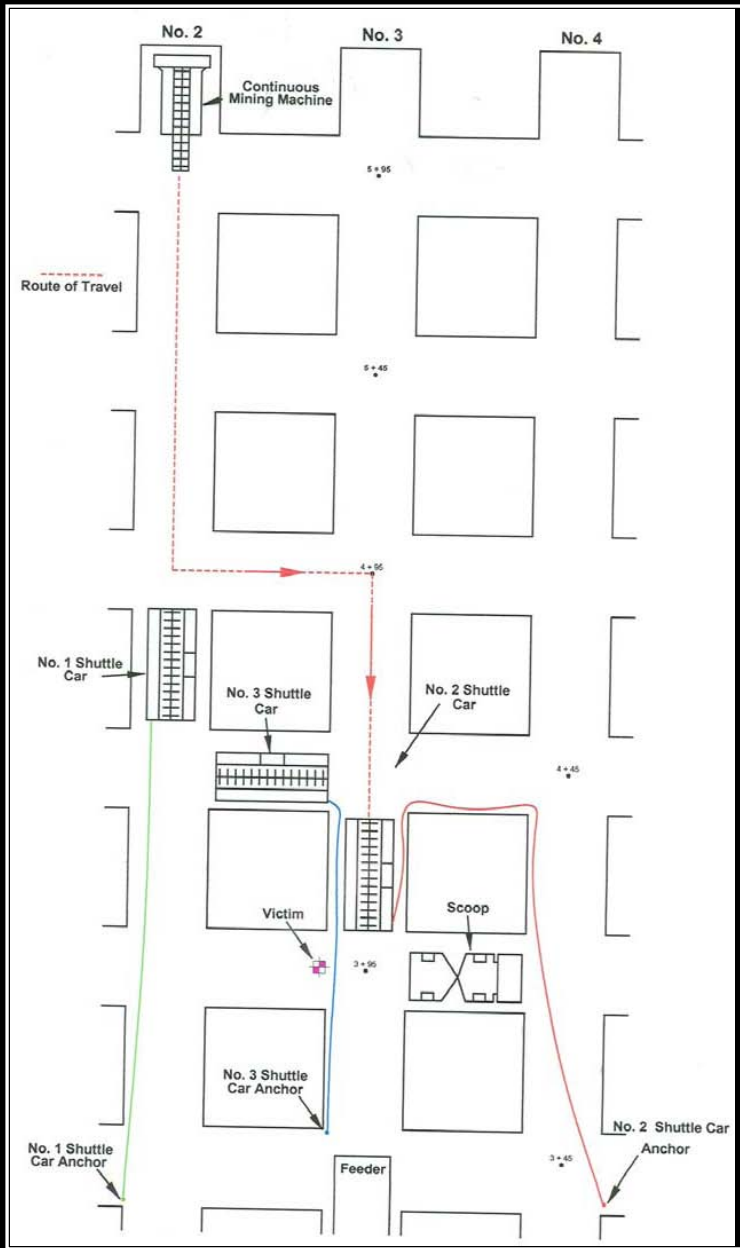
*This presentation is for illustrative and **general** educational purposes only and is not intended to substitute for the official MSHA Investigation Report analysis nor is it intended to provide the sole foundation, if any, for any related enforcement actions.*

GENERAL INFORMATION

Coal Mine Fatal Accident 2005-08

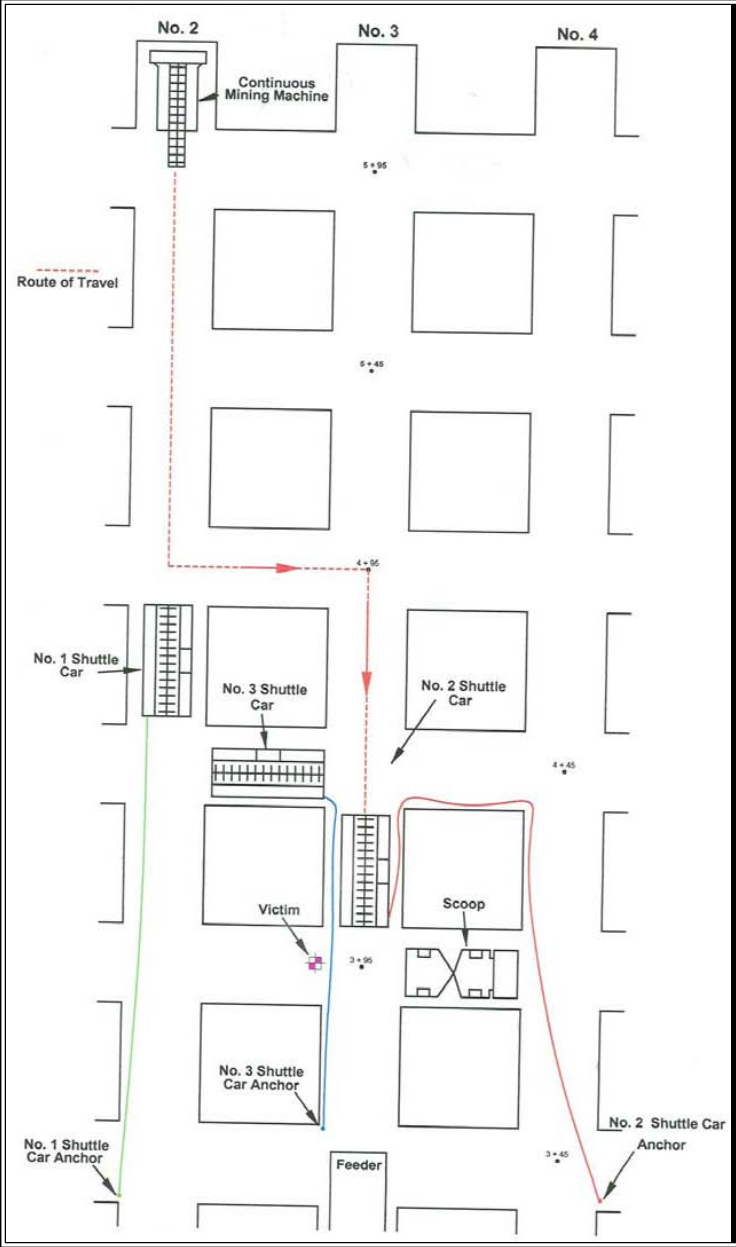
Operator:	Tusky Coal, LLC
Mine:	Tusky # 1
Accident Date:	June 10, 2005
Classification:	Powered Haulage
Location:	Dist. 3, Tuscarawas County, Ohio
Mine Type:	Underground
Employment:	45
Production:	1,450 tons/day

ACCIDENT DESCRIPTION



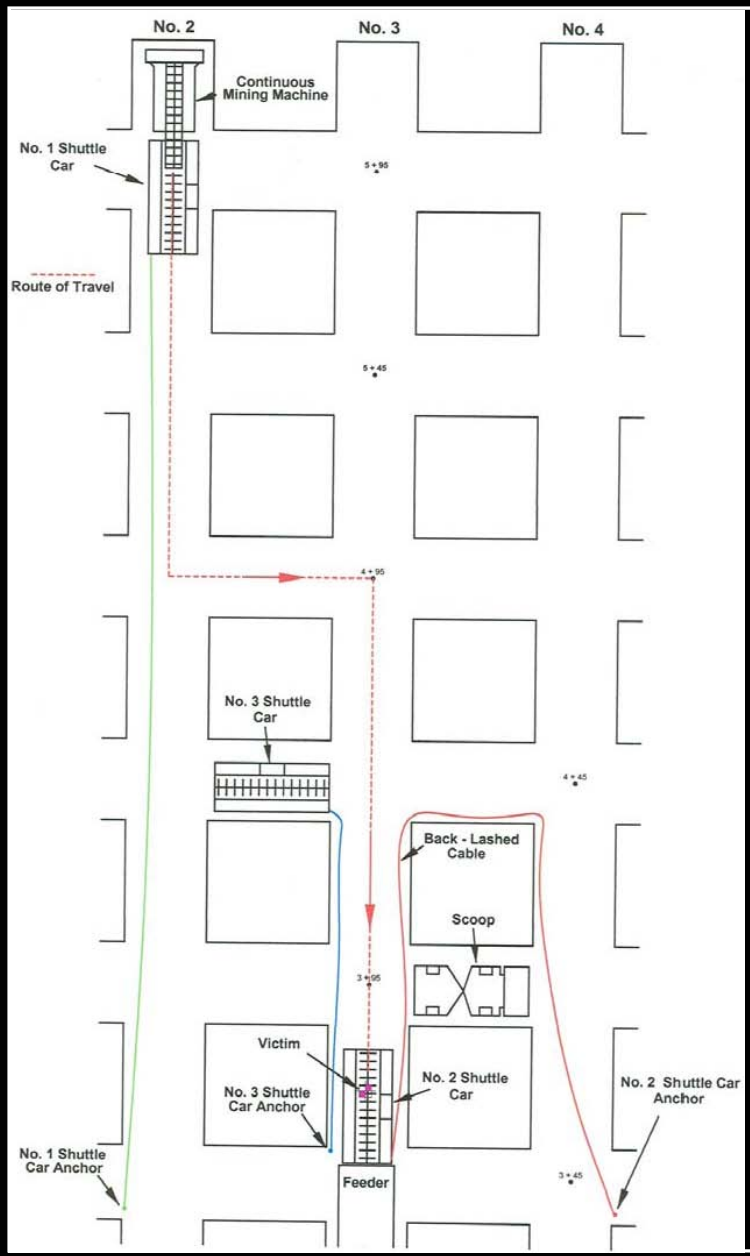
The afternoon shift crew went underground arriving on the working section at 3:30 p.m. After finishing the No. 3 room, the continuous mining machine was moved into the face of the No. 2 entry and mining continued. The No.2 Shuttle Car arrived behind the continuous mining machine. The shuttle car operator informed the victim that he needed to scoop the No. 4 entry. As the shuttle car was being loaded, the victim crawled outby toward the section battery scoop which was located in the first crosscut inby the feeder. The operator drove the loaded No. 2 shuttle car toward the feeder.

ACCIDENT DESCRIPTION



He turned the shuttle car into the third crosscut inby the feeder from the Nos. 2 to 3 entries. As he attempted to turn into the crosscut, he had to stop and back up to re-align the shuttle car in order to make the turn. The operator then trammed through the crosscut and entered the No. 3 entry. Visibility was limited due to the mining height and the coal load in the shuttle car. Daniels could see a light to his right in the first crosscut inby the feeder and assumed it was the victim. He was also aware that the trailing cable for the No. 3 Shuttle Car was lying along the right rib line (facing outby) and that this shuttle car was parked in the second crosscut inby the feeder between Nos. 2 and 3 entries.

ACCIDENT DESCRIPTION



As he began tramming in the No. 3 entry toward the feeder, he abruptly stopped between the first and second crosscuts inby the feeder in order to avoid this cable which was lying along the right side rib line. When he stopped, the front bumper of his shuttle car was in close proximity to the intersection of the first crosscut inby the feeder. The No. 2 shuttle car operator then directed his attention to the left rib line because he was back lashing his trailing cable. He continued to the feeder, stopped and began unloading his shuttle car. During the unloading process, the conveyor chain stalled. He raised the shuttle car boom and restarted the conveyor which ran sluggishly. He finished unloading, dismounted the shuttle car and crawled to the front to check the chain. He saw the victim under the front of the shuttle car. The victim received fatal crushing injuries as a result of being caught under the front end of the shuttle car.

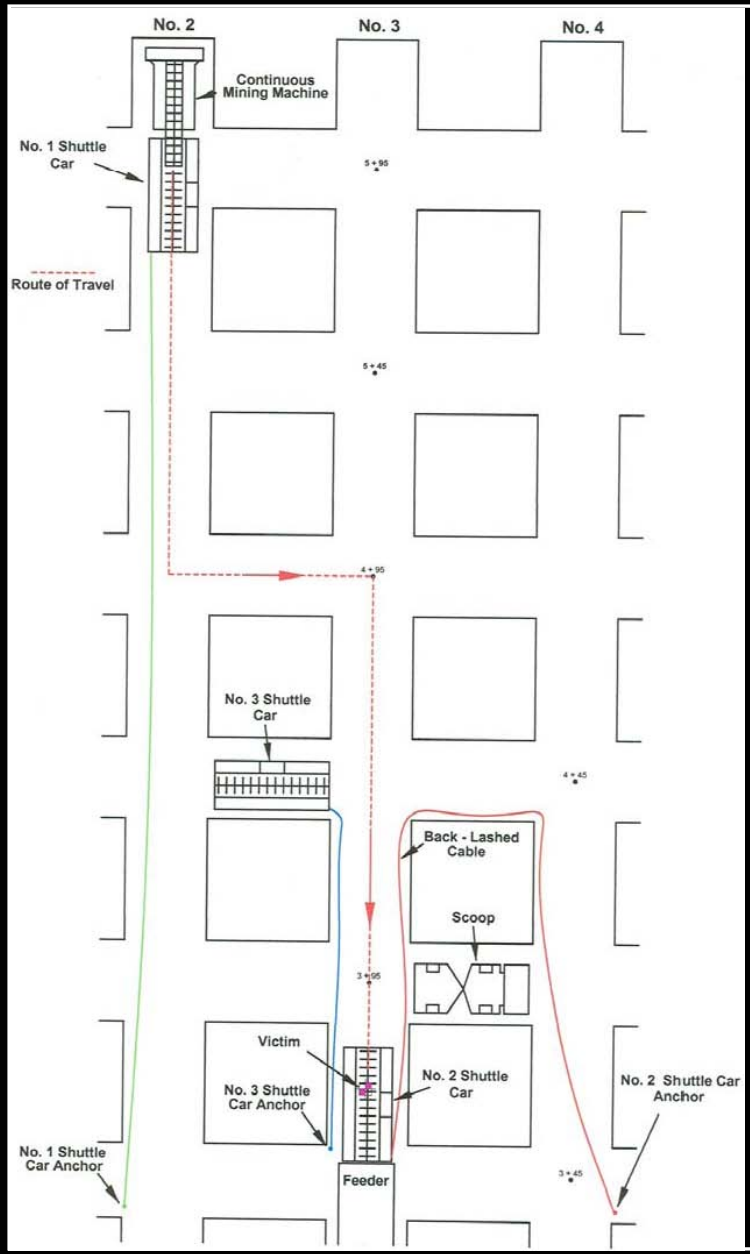
DISCUSSION

Mining Equipment - The machine involved in the accident was a rubber tired, 480 VAC Joy Shuttle Car, Model 21SC, which was rebuilt by Auxier Welding. The shuttle car measured 27 feet, six inches in length and nine feet, four inches in width. The operator's compartment was located mid-machine, standard side. The operator sits in the compartment with his body facing in the direction of travel. The distance from the mine floor to the bottom of the shuttle car was eight inches. The distance from the top of the machine to the mine roof (in the entry where the accident occurred) averaged five inches.

DISCUSSION

<u>Mining Equipment Continued</u> - A record of the weekly electrical and permissibility examinations did not indicate any defects or deficiencies. A visual examination and a permissibility examination were conducted during the investigation and revealed no defects or deficiencies. Operational tests were also conducted. No defects or deficiencies pertaining to tramming, brakes, steering, hydraulic system, de-energization device, or lights were revealed.

DISCUSSION

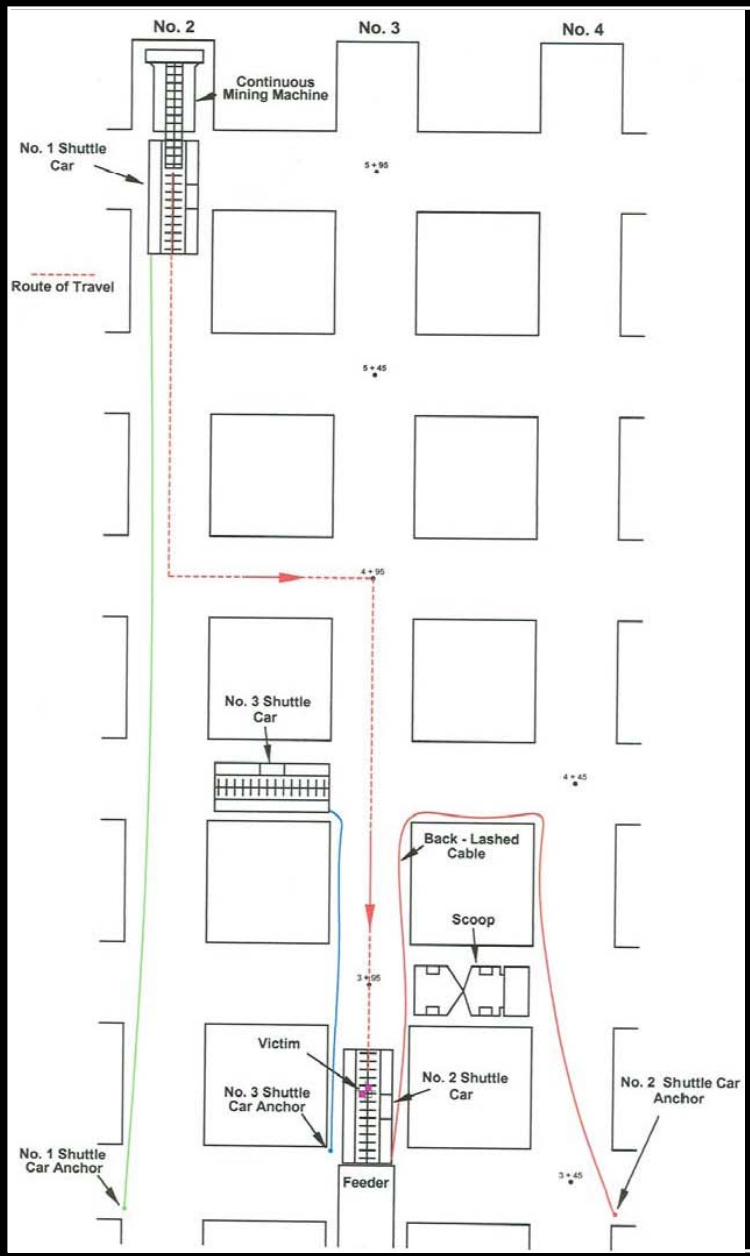


The mine floor in the immediate area was slightly damp, even, and free of extraneous materials. The average mining height in the entire section was 42 inches and the average width was 16 feet.

The No. 3 shuttle car operator, who was parked in a crosscut adjacent to Daniel's stopped position, indicated that he did not hear Daniels give an audible warning before starting up again. It is uncertain whether Wright attempted to communicate his intentions to the shuttle car operator.

The operator did not have a formalized comprehensive safety program.

DISCUSSION



During a re-creation of the conditions and events, it was discovered that the light from a miner's cap lamp could be seen by the operator, but only if the light was focused on the mine roof. The shuttle car operator could see light from a miner's cap light to the right and across the front of the shuttle car in the first crosscut inby the feeder, but only if the light was shining on the mine roof. Also, it was necessary for the operator to remain focused on the location of that light to keep it under constant surveillance, and it was also necessary for that light to be constantly focused, on the mine roof for it to be seen. When the shuttle car was trammed to the feeder, the operator's visibility of the right side of the entry and any crosscuts to the right were severely limited by the mining height.

ROOT CAUSE ANALYSIS

Causal Factor: No procedures, rules, or policies were in place to ensure that self-propelled equipment operators are certain that all persons are in the clear before starting or moving the equipment. The No. 2 shuttle car operator did not give an audible warning where persons may be endangered by the movement of the shuttle car. The shuttle car operator did not ring his equipment mounted signal bell before starting from a stopped position.

Corrective Action: Management has instituted a policy where all self-propelled equipment operators will sound an audible warning prior to starting or moving mobile equipment. A safety meeting was held instructing all underground personnel regarding the safe operation of self-propelled equipment. Management should routinely observe work habits and monitor enforcement of the newly established policies in the mine safety program.

ROOT CAUSE ANALYSIS

Causal Factor: No procedures, rules, or policies were in place addressing walking, crawling, approaching, or working near self-propelled equipment.

Corrective Action: Management has instituted a policy which addresses the safe location of persons and their actions around operating self-propelled equipment. A safety meeting was held instructing all underground personnel regarding the safe location of persons and communications with the mobile haulage equipment operator. Management should routinely observe work habits and monitor enforcement of the newly established policies in the comprehensive mine safety program.

ENFORCEMENT ACTION

A 314(b) Notice to Provide Safeguard was issued to requiring the operator(s) of all self propelled equipment to assure all persons are clear prior to moving such equipment and to sound an audible warning device whenever persons may be endangered by the movement of the equipment. The audible alarm must be distinguishable from surrounding noise and be loud enough to be heard by all persons potentially endangered.

BEST PRACTICES

- Remain in a safe area away from mobile equipment.
- Before operating mobile equipment, always ensure that other miners are not in the area of your intended travel.
- Wear reflective clothing to ensure high visibility when necessary to walk or work in the area of moving mobile equipment.
- Exercise caution and signal your presence to mobile equipment operators.