

Accident Investigation Report



U. S. Department of Labor
Mine Safety and Health Administration

**REPORT OF FATAL HAULAGE (TRUCK) ACCIDENT
NEVADA MOLY
BROWN AND ROOT, INC.
TONOPAH, NYE COUNTY, NEVADA**

March 29, 1981

by

**R. M. McAlexander
Mining Engineer**

**METAL AND NONMETAL MINE SAFETY AND HEALTH
WESTERN DISTRICT**

**Thomas C. Lukins
District Manager**

**Originating Office
Suite 900, 2721 North Central Avenue
Phoenix, Arizona 85004
Vernon R. Gomez
Acting Subdistrict Manager**

INTRODUCTION

This report is based on an investigation made pursuant to Section 103(a) of the Federal Mine Safety and Health Act of 1977, Public Law 91-173 (83 STAT. 742) as amended by Public Law 95-164 (91 STAT. 1290).

At about 5:06 a.m., March 29, 1981, Jillene Hess Robbins (a.k.a. Jillene Kay Robbins) age 27, Social Security Number 243-88-9157, was crushed when the truck she was driving overturned, threw her out, and pinned her beneath it. Robbins had four 10-hour shifts of driving experience at this mine, and reportedly had 6 years' heavy truck driving experience. Robbins was single, with two minor dependents. The victim had received training under an approved plan as required by CFR Title 30, Part 48.

R. M. McAlexander of the Reno, Nevada Field Office, Mine Safety and Health Administration, was notified by telephone at 6 a.m. by Bill Nelson, safety supervisor, Brown and Root, Inc. An investigation was started immediately.

Information for this report was obtained from an onsite investigation, review of statements of witnesses, and company officials.

GENERAL INFORMATION

The Nevada Moly mine, an open pit molybdenum mine and mill, was owned and operated by the Anaconda Copper Company. The operation was still under construction. Bechtel, Inc. was the prime construction contractor; Brown and Root, Inc. was a subcontractor. The mine was located some 27 miles north of Tonopah, Nye County, Nevada.

A total of 205 persons worked two 10-hour shifts a day, 7 days a week in the Brown and Root, Inc. portion of the project.

Brown and Root, Inc. was constructing a tailings dam for the mill, utilizing material stripped from the mine as borrow for dam fill. The dam completion date was April 27, 1981.

The last Federal inspection of the Nevada Moly, Anaconda Copper Company, was December 3 through 11, 1981.

Brown and Root, Inc. officials were: B. G. McGinnis, project manager; Bill Nelson, safety supervisor; and Jim Richards, shift safety supervisor.

Participants in the investigation were:

Brown and Root, Inc. (Subcontractor)

Jim Richards, safety inspector
Bill Nelson, safety supervisor
B. G. McGinnis, project manager

Bechtel, Inc. (Prime Contractor)

George Campbell, inspector
Norman Kramer, cost engineer

Anaconda Copper Company

Ron Skaer, manager, health, safety and environment
Bill Williams, health and safety engineer
Richard Boswell, security manager

Cashman Equipment Company (Las Vegas)

William Raysen, field mechanic
William Black, field mechanic

PHYSICAL FACTORS INVOLVED

The earth tailings dam was being constructed as a three component earth fill. A sand chimney core was constructed in the center, with the upstream and downstream aprons on each side. The chimney was raised by a 12-inch lift, compacted, the downstream side raised, compacted, and the cycle repeated. Specifications call for a crowned fill, a common construction practice.

Access to the fill was by five inclined ramp dikes on the upstream side. One way traffic was the rule, with a reversed or left driving pattern used throughout the haul.

Dirt was hauled from the pit with 50- to 85-ton trucks. Rubber-tired front-end loaders were used for loading. The trucks were line-dumped on the fill, the material watered, processed, and compacted with self-propelled sheep's-foot rollers. Bulldozers were used to dress the slopes.

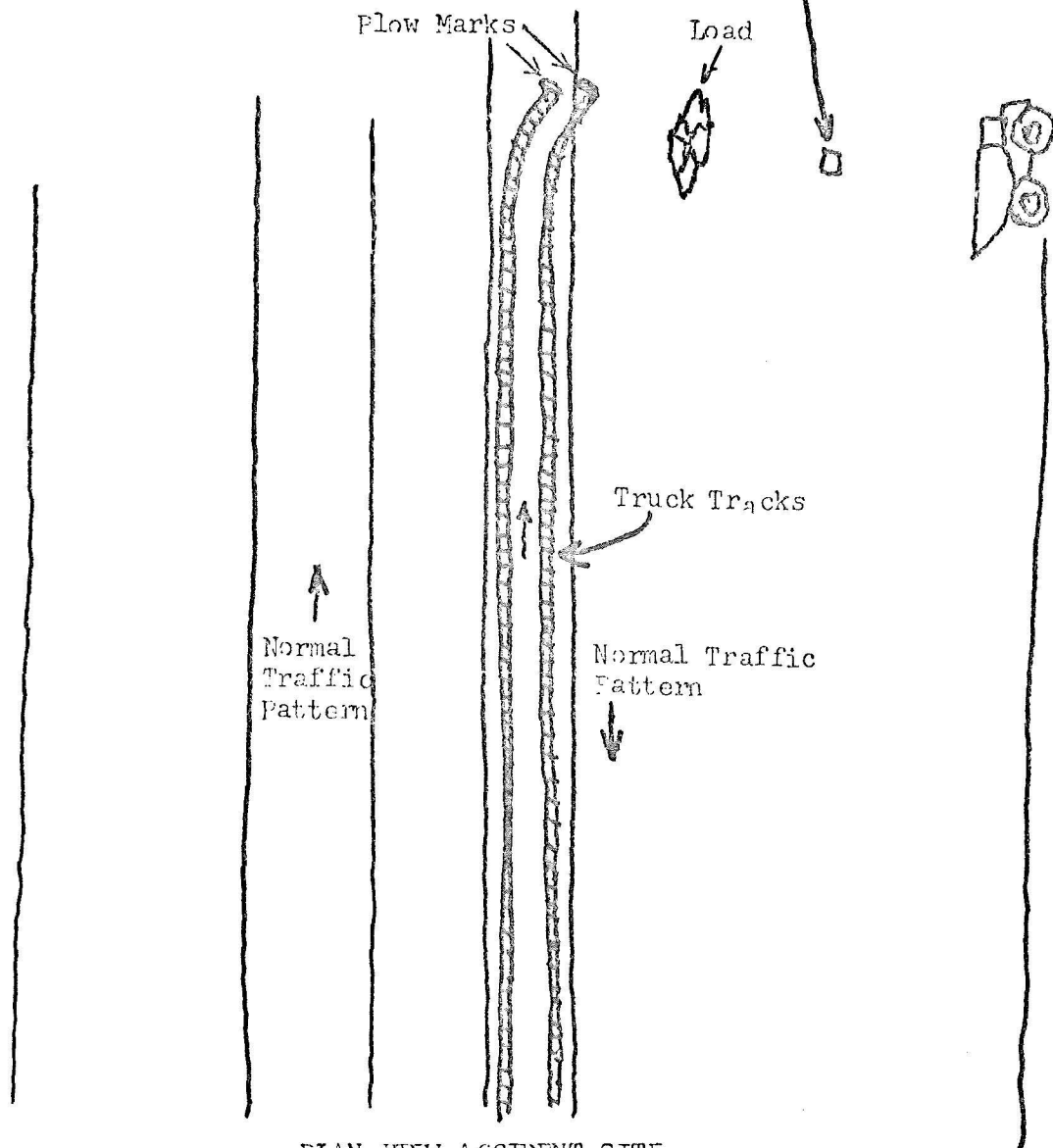
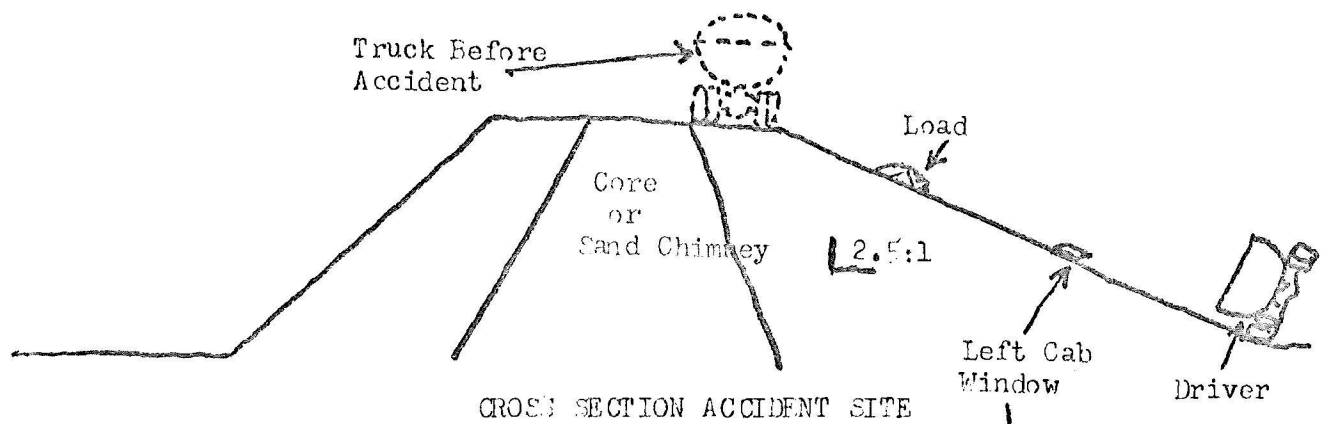
The widths of the fill grade at the time of the accident were;

| | | |
|-------------------|----------|----------------|
| Upstream apron: | 11.5 | feet |
| Lift slope: | 6 | feet |
| Core: | 14-1/2 | feet |
| Lift slope: | 6 | feet |
| Downstream apron: | 15-3/4 | feet |
| Slope distance: | 140 feet | at 2.5:1 slope |

A berm was not constructed along the fill.

Construction specifications called for a minimum of 95 percent compaction. The normal subgrade compaction for federally-funded general purpose highways was 90 percent. Specifications called for shoulder-to-shoulder compaction.

The truck involved was a Caterpillar Model 773, Co. Number J-706, 50-ton, Serial Number 63G2399.



PLAN VIEW ACCIDENT SITE
Not to Scale

FATAL HAULAGE (TRUCK) ACCIDENT
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The dam fill was lighted by numerous portable light plants. The accident occurred just before sunrise in daylight. The lights on the truck were working. (The investigator was on his patio at 5 a.m. and observed broad daylight in Reno, Nevada - some 125 miles west of Tonopah). A light breeze was blowing. All roads were watered down as was the fill.

DESCRIPTION OF ACCIDENT

Jillene H. Robbins reported for work at 7 p.m., March 28, 1981. This was her normal starting time. She was assigned to drive Caterpillar 50-ton Model 773 truck, Company Number J-706. She drove the truck hauling material from the pit to the fill until the accident. She had been hauling fill to the downstream side of the dam. At about 4:45 a.m., Robert A. Hunter, grade foreman, instructed trucks to begin dumping on the upstream side of the dam.

Robbins' truck was loaded in the pit, and she drove down the road to the fill, up the approach ramp, made a left turn, and then along the fill on the downstream side of the fill. She was not only on the wrong side of the dam, but driving in a backward traffic pattern. She was in the right-hand pattern or normal highway pattern.

Robbins' truck followed a small berm/ditch for some 250 feet. It gradually drifted to the right catching the berm. The right front wheel dropped off the compacted edge. From the tracks, it appeared Robbins realized she was in trouble and attempted to steer the truck back on the road. Plow marks were evident at the end of the tracks. The truck rolled over, lost the load, rolled again, lost the cab window, rolled a third time, coming to rest at the toe of the dam on its left side. Robbins' head was pinned between the cab and rock guard portion of the bed. She was under the truck. Two eyewitnesses saw the truck go over the edge.

The representatives of the truck vendor, Cashman Equipment Company (Las Vegas), examined the truck. William Raysen and William Black, field mechanics, made the examination.

The major control components were intact and working at the time of the accident. The engine could not be started. Damages to the truck due to the accident were: left cab window missing; cab running board bent up over the door; left front tire flat; and the supply line to the power steering pump broken. The left cab door was wired shut which indicated a latch failure prior to the accident. There were no malfunctions reported on the driver's check sheets or maintenance records. The seatbelt was attached and usable after the accident.

Nye County Sheriff's Department was summoned at 5:45 a.m. They were near the Anaconda Main Gate. Deputies Lieseke and Newman made the initial investigation and departed by the time the MSHA investigator had arrived. Their conclusions were essentially the same.

The truck was righted after the Nye County coroner pronounced the victim dead at 6:51 a.m. The body was removed to a mortuary in Tonopah, Nevada.

CAUSE OF ACCIDENT

The exact cause of the accident could not be determined.

A contributing cause to the severity of the accident was the apparent failure of the driver to wear the seatbelt.

CITATION ISSUED

Citation 595941 104(a) issued March 29, 1981 at 1330 hours.
Part and Section 55.9-2

The left (driver's side) cab door was wired shut, on Caterpillar truck Co. No. J-706. The door was wired shut prior to the accident. The door being wired shut did not apparently contribute to the accident, nor to the driver's injuries.


ACKNOWLEDGMENT

The cooperation of all persons contacted during the investigation is gratefully appreciated.

/s/ R. M. McAlexander

R. M. McAlexander
Mining Engineer

APPROVED:


Vernon R. Gomez
Acting Subdistrict Manager

Section I (Coal Only)

MSHA and/or State Certification and/or Qualification

Mine ID 26-01483-W27

Date Training
Plan Approved _____

Date Training
Received _____

Date Training
Received _____

* ☐ Certified Person
(Underground) _____

☐ Dust (Sampling) _____

* ☐ Certified Person
(Surface) _____

☐ Dust (Calibration) _____

* ☐ Methane & Oxygen
Deficiency Testing _____

☐ Noise _____

* ☐ Electrical _____

* ☐ Impoundments _____

* ☐ Energized Surface
High Voltage _____

* ☐ Hoisting Engineer _____

* Annual Retraining Required

Section II (Metal-Non-metal and Coal)

MSHA Training Programs Completed

Date of Hire 3-23-81

Date Training Plan Approved _____

Required Training
(Victim)

Date Training
Received _____

☐ Required Training
(Victim)

Date Training
Received _____

☐ New Miner (U.G.) _____

☐ Hazard Training (U.G.) _____

☒ New Miner (Sur.) _____

3-24-81

☒ Hazard Training (Sur.) _____

3-24-81

☐ Newly Employed
Experienced (U.G.) _____

☐ Newly Employed
Experienced (Sur.) _____

☐ Annual Refresher (U.G.) _____

☐ Annual Refresher (Sur.) _____

Task Training

Specify Type:

Truckdriver 50-ton Cat. _____

Section III

Company Training Program Completed:

Training

OJT/Formal

Instructor

Date
Completed

Truckdriver 50-ton Cat. _____

Geraldine Rogers _____

3-24-81

Contractor doing new construction - was under Part 48-C.

Section IV

DID VICTIM HAVE TRAINING SPECIFICALLY RELATED TO THE TASK BEING PERFORMED
AT THE TIME OF THE ACCIDENT?

☒ YES ☐ NO WHEN? _____

BY WHOM? Geraldine Rogers HOW WAS TRAINING GIVEN? on job

Section V

RECOMMEND TRAINING PLAN EVALUATION BY EDUCATION & TRAINING OFFICE

☐ YES ☐ NO

Contractor under 48 Subpart C