CAI-2014-13

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Surface Coal Mine
Fatal Powered Haulage Accident

October 18, 2014

Dennis McCoy & Sons, Inc.
2820 Townsgate Rd Ste 206
Westlake Village, California 91361
MSHA ID No. 8WY

at

North Antelope Rochelle Mine
Peabody Powder River Mining LLC
Wright, Campbell County, Wyoming
ID No. 48-01353

Gary J. Wilson
Coal Mine Safety and Health Lead Investigator

David D. Hamilton
Coal Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
District 9
P.O. Box 25367
Denver, Colorado 80225
Russell J. Riley, District Manager

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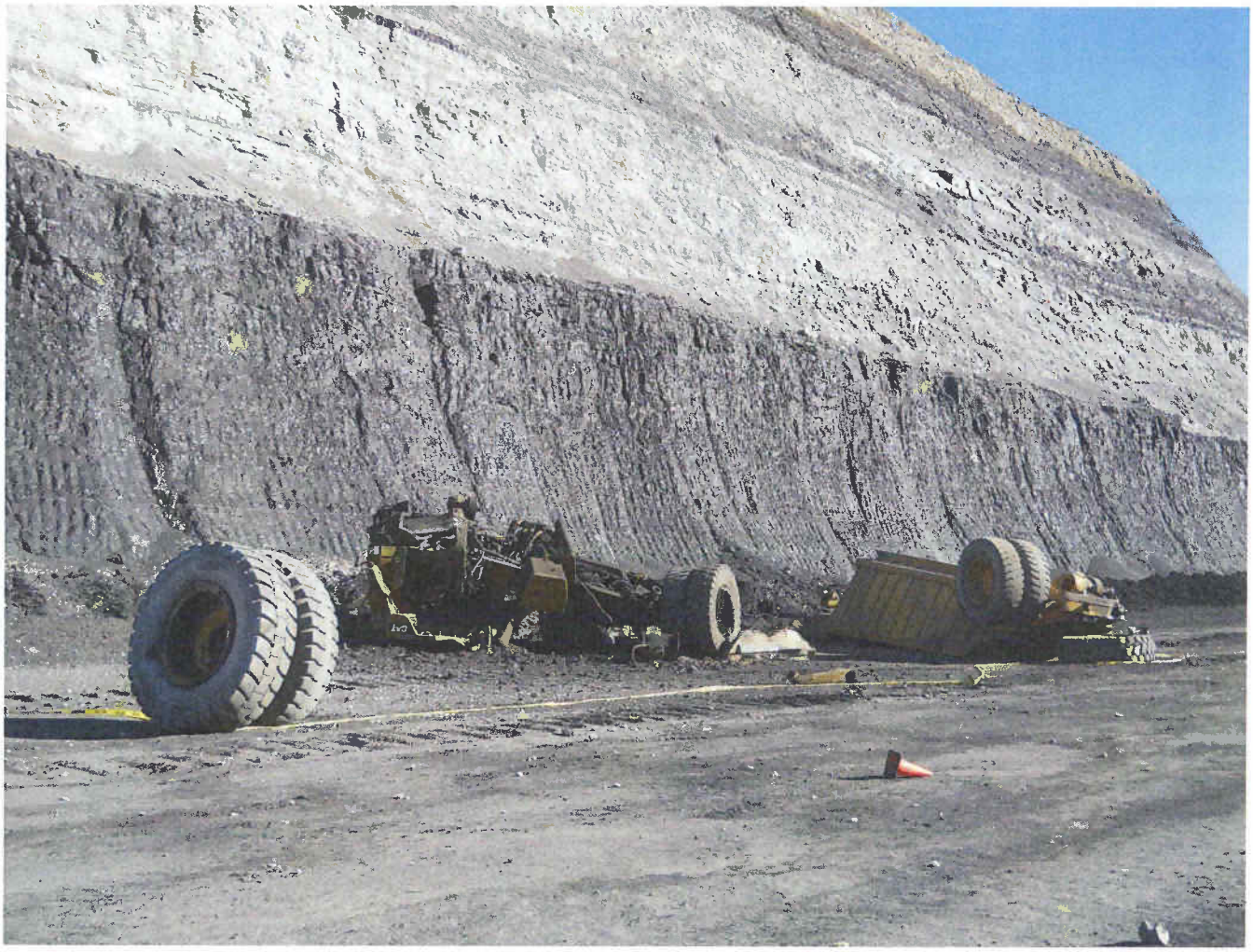
PHOTO SHOWING ACCIDENT SCENE



OVERVIEW

At approximately 10:05 p.m. on October 18, 2014, Darwin Lee Reimer (victim) age 51, received fatal injuries when the Caterpillar 777B haul truck he was operating went over a 238 foot highwall. The haul truck traveled 2,296 feet over the top soil limit area, through the old top soil berm section (previously stripped), through the cast berm, and through the drill pattern section; before it went over the highwall and crashed on the pit bottom.

The accident occurred because the drug and alcohol prevention programs did not prevent excessive alcohol use. In addition, the seat belt had not been secured by the machine operator at the time of the accident.

GENERAL INFORMATION

The North Antelope Rochelle Mine (NARM) is a surface coal mine that became active on June 1, 1981. Peabody Powder River Mining, LLC is the current operator. The mine's general location is approximately 25 miles southeast of Wright in Campbell County, Wyoming. The mine currently employs 1,367 miners and uses various contractors to aid in its operation. The mine has nine active pits, operating four draglines and several shovels. The mine utilizes typical drill and blast methods, such as casting overburden material to reduce time and equipment usage. The overburden is removed by one of the four draglines in operation. Once removal of the overburden is complete, the coal is mined with shovels, loaded onto haul trucks, transported to the plant for rail loadout, and shipped. The mine produced 111,005,549 tons of coal in 2013 and the quarterly average for 2014 is 29,098,006 tons which equates to approximately 320,639 tons per day. The mine operates on 12 hour shifts, two shifts per day, seven days a week.

The principal officers for North Antelope Rochelle Mine at the time of the accident were:

Alan E. Aldrich.....Vice President of Operations
Jack Laakso.....General Manager
Deborah L. Diedrich.....Director of Safety for Powder River Basin
Duane A. Myers.....Director of Safety and Training
Jeff Ternes.....Safety Team Leader

The Mine Safety and Health Administration's (MSHA) last regular safety and health inspection (E01) of this mine was started on July 9, 2014, and completed on September 25, 2014. An E01 inspection was not ongoing at the time of the accident. The 2014 non-fatal days lost (NFDL) incidence rate for North Antelope Rochelle Mine was 0.66. The national average for mines of this type was 0.98. A miner who worked for another contractor was fatally injured at this mine on June 4, 2014.

DESCRIPTION OF ACCIDENT

On Saturday, October 18, 2014 at 6:45 p.m., Reimer, an employee of Dennis McCoy & Sons, Inc. (McCoy), arrived for the night shift. He and the other crew members of the night shift met at area 101 of NARM. They held their nightly meeting to discuss safety and receive their respective job assignments for the shift. The miners performed their pre-operational checks. On the pre-operational examination form filled out by Reimer for the Caterpillar 777B haul truck, company ID No. 77-08, serial No. 4XJ0023, he did not document any defects that affected the safe operation of the truck.

The shift was proceeding normally until approximately 9:45 to 9:50 p.m., when Reimer, after completing his fifth load, pulled into the staging area. He turned out his truck lights and sat in his truck. Two of the haul truck drivers checked on Reimer as they drove past his haul truck

on their way to the loading area. Both drivers reported that Reimer looked all right and driver Mike Orozco stated Reimer was sitting up, and waved as he drove past. The second driver, Leroy Bohne, stated Reimer's head was resting on his arm, his arm was positioned on the top of the steering wheel. Bohne stated Reimer raised his head when he honked his horn while driving past.

Victor Kirshner, Excavator Operator, made repeated attempts to contact Reimer by radio and have him pull forward, but Reimer did not answer. Reimer remained in his haul truck, with the lights out, for 10 to 15 minutes. At approximately 10:00 p.m., Kirshner radioed the McCoy night shift foreman, Craig Sadler, telling him there was a problem with one of his trucks. Sadler radioed back that he was leaving the dump area and coming that way. At that time, Reimer put his haul truck in gear, turned the wheels sharply to the left, and exited the staging area at a high rate of speed.

The haul truck then traveled 2,296 feet through a top soil limit area, through a drainage ditch and over a 4 foot high berm. The truck continued traveling south across the old top soil berm section, and went over a 3 foot high berm in the process. The truck continued traveling south through the cast berm section and it broke through the cast berm which measured approximately 6 to 9 feet high and 32 feet wide. The truck continued traveling in a southerly direction through the drill pattern section (cast section). The truck traveled through the shot pattern, running over drill material 3 to 5 feet in height and over six loaded shot holes. The truck then traveled over the north highwall of the East Elk Pit. The left front side of the truck's operator compartment struck the top bench of the highwall before falling to the pit bottom. The victim was ejected at some point. This portion of the event lasted approximately 4 minutes according to testimony. See Appendix A for the haul truck's path of travel.

A mayday call went out at 10:19 p.m., when Sadler, Harry Ruffing, McCoy Mechanic, and Trevor Frogge, Blasting Crew Member, Western Explosives Systems Company (WESCO), followed the truck tracks through the blasting area to the highwall. They observed the truck wreckage in the bottom of the pit. NARM management personnel and the Surface Mine Emergency Team (SMET) were called. They helped with the search, rescue, and recovery of the victim. Some of the first to arrive were John Heimann, Overburden Supervisor, Matt Sudbeck, NARM Dragline Supervisor, and Josh Turner, Step up or Lead man. Sudbeck and Brian McDermott, Equipment Operator NARM, were first to arrive at the bottom of the East Elk Pit. They crawled over the berm blocking the roadway and noticed a small fire at the wreckage site from their position at the berm area. They continued to the wreckage of the Caterpillar 777B. Sudbeck and McDermott searched the wreckage area but they did not locate the victim at the scene. They noticed reflective material (vest) on the highwall on a coal bench approximately 65 feet above the pit bottom. The SMET team, led by incident commander (IC) Justin Malone, was dispatched to the scene at 10:24 p.m. A rubber-tired bulldozer had been called to the scene earlier to breach the berm and allow rescue personnel into the pit area. Malone and others searched the accident scene and confirmed no one was in the wreckage. The Campbell County Sheriff's office was notified at 10:36 p.m. The county sheriff and rescue

personnel arrived at the mine site at 10:57 p.m. They arrived at the accident scene at approximately 11:15 p.m. Search, rescue, and recovery operations were already in progress. The victim was recovered from a coal ledge on the highwall, which was approximately 65 feet above the pit floor. The victim was transported from the scene by Campbell County Deputy Coroner, Gail Graham who pronounced him dead at 5:59 a.m., October 19, 2014. An autopsy was performed by Campbell County Coroner Tom Eekhoff.

INVESTIGATION OF ACCIDENT

On October 18, 2014, at 11:53 p.m., the Mine Safety and Health Administration (MSHA) National Call Center received notification that a serious accident had occurred at NARM. Sid Hansen, Coal District 9 Supervisory Mining Engineer – Roof Control, received notification on the District's emergency call phone at 12:08 a.m., October 19, 2014. A verbal 103(j) order was issued to Duane Myers at 12:15 a.m., October 19, 2014.

Citation No. 8483420 was issued to Duane Myers, NARM Director of Safety and Training, for a violation of 30 CFR § 50.10 for a failure to report this fatal accident immediately, at once, without delay, and within 15 minutes.

MSHA Inspector David D. Hamilton from the Gillette, Wyoming, MSHA Field Office was dispatched to the mine. After assessing the scene, the 103(j) order was modified to a 103(k) order to ensure the safety of all persons involved in the accident investigation. MSHA accident investigator Gary J. Wilson was dispatched from the Price, Utah, MSHA Field Office, on October 19, 2014.

Photos and measurements were taken of the route of travel of the Caterpillar 777B driven by the victim. Hamilton began the investigation of existing physical conditions. He also conducted initial interviews with mine personnel and McCoy personnel who were present at the scene.

The investigation of the physical aspects of the accident was completed on October 22, 2014. Digital photographs, relevant measurements, and sketches of the scene were developed as part of the investigation. The investigation included a review of training records, mine and contractor examination records, and contractor maintenance records. Interviews were conducted on October 20, 21, 22, 23, and 24, 2014, with individuals having knowledge of the accident.

The investigation was conducted in conjunction with the Wyoming Department of Workforce Services, State Mines Division. Those persons who were interviewed are listed in Appendix B.

DISCUSSION

The path of the haul truck

The haul truck's path according to an engineered report using global positioning satellite (GPS) plotting shows the following:

The truck exited the staging area by taking a sharp left hand turn and traveled to the top soil limit area. It went over the 3 foot cut where the excavator had removed the top soil. Then the truck traveled north before making a turn to the west, and continued on a wide looping turn, eventually turning back to the south toward the staging area. Next, the truck traveled 786 feet across the topsoil limit section, before it went over a ditch (clearing a 5 foot wide section of the ditch) and traveled through a 4 foot berm. The truck continued traveling south 669 feet across the old topsoil berm section and went over a 3 foot high berm. Afterwards, the truck continued traveling south 280 feet through the cast berm section. It then turned slightly to the west where it went through the cast berm, which is approximately 6 to 9 feet high and 32 feet wide. The axle height of a Caterpillar 777B haul truck is 4 feet and 1 inch. Next, the truck continued in a slight southwesterly direction of travel through the drill pattern section for 382 feet. The truck continued on this route for 179 feet through the shot pattern, running over drill material 3-5 feet in height. Lastly, the truck ran over six loaded shot holes before going over the north highwall of the East Elk Pit.

Caterpillar 777B Haul Truck

The wreckage of the Caterpillar 777B haul truck was too severe for MSHA Technical Support to evaluate the condition of the truck. The maintenance records, pre-operational checks, and work orders for the McCoy equipment at this site were reviewed for any reported equipment problems. The only maintenance record for this truck was the repair to a broken air line to the operator's seat, on October 9, 2014. The operator of this haul truck from the day shift (on the day of the accident) was interviewed. He stated the truck was in sound condition and this truck was one of the best the contractor owned. After the truck was removed from the pit, the operator's compartment was examined. The seat belt was found unbuckled with no visible damage to the buckle or the latch. The buckle was tested several times and the latch worked perfectly each time. No visible damage was observed to the belt itself and no cutting or scarring was visible.

Weather Conditions

The weather was determined to not be a factor. Clear weather and warmer than normal temperatures were present. No inclement weather was experienced at the time of the accident.

Training and Experience

Reimer was an experienced haul truck operator, having 5 years, 42 weeks, and 6 days of experience; with 42 weeks and 6 days at this mine.

Training records were reviewed by MSHA Education Field Services training specialists Kathy Cattles and Edward C. Edwards. They determined that the training for Reimer was current in accordance with 30 CFR § Part 48. Reimer received new task training for the Caterpillar 777B haul truck on July 1, 2013, site specific hazard training on June 27, 2014, and annual refresher training on July 9, 2014.

Illumination at Staging and Loading Site

Light plants were readily available but were not in use. During interviews, several of the miners and the safety department stated they preferred the machine lights due to the glare of the light plants.

Toxicology Report

A blood ethanol test was performed and revealed Reimer's ethanol level was 109 mg/dl, which equates to 0.093% blood alcohol content. This is above the legal limit for driving in Wyoming of 0.08% blood alcohol content. An empty pint whiskey bottle was found at the scene near the operator's compartment.

McCoy's Program of Oversight

McCoy's drug and alcohol policy states, "The consumption of alcohol or drugs, (even some over the counter medications and prescriptions), can slow reactions, blur vision, reduce the ability to determine distance, and impair judgment. It is, therefore, a violation of our safety policy for any employee to operate a vehicle with illegal drugs in his/her system or while impaired by alcohol, prescription drugs, or over-the-counter medications. You must inform your supervisor if you are taking or using any prescription drug that bears a warning label. Failure to follow this procedure is grounds for reprimand or dismissal."

Prior to the accident, McCoy's policy included a pre-employment drug test and allowed for unannounced searches for illegal drugs or alcohol while on company property, work sites, facilities, and equipment. The policy allowed for random drug testing any time during the working hours, and included testing for any employee who is involved in an accident. There was no established frequency for these unannounced tests. Any employee who violated this policy was subject to termination.

Since the accident, the contractor has contracted with a third party (Gillette Employment Testing, Gillette, WY) to perform computer generated drug and alcohol testing. They

randomly test 20% of McCoy employees monthly for drug and alcohol usage. The results of these tests are given to NARM on the 1st and 15th of each month.

The spot checks performed by McCoy never indicated that the victim had used illegal drugs or alcohol. On one occasion, the victim's use of prescription drugs was detected, but he had a valid prescription for the drugs.

NARM Program of Oversight of Contractors

Prior to the accident NARM's policy under section 15.0 Drug and Alcohol Testing, on page 18 of the Contractor Services Agreement booklet stated:

The Contractor and all sub-contractors will maintain a drug and alcohol free workplace by instituting and maintaining policies and procedures for pre-employment, random, and post-accident testing that are at least as extensive as the policies and procedures in place at Peabody for mine employees. Failure to comply may result in penalties and work stoppage. All levels of supervisory personnel shall know these policies and procedures.

NARM safety personnel discussed the Contractor Service Agreement Booklet with the contractors prior to them working onsite. The contractors were required to initial all areas addressed. This agreement booklet addressed the MSHA Title 30 Code of Federal Regulations (CFR), training, equipment, and other areas. The agreement also required a Designated Safety Person to be at the site at all times.

NARM conducted spot inspections on the contractors, and required the contractors to do random drug/alcohol testing with an independent tester. The results had to be provided to NARM on the first and fifteenth of the month.

Since the fatal accident, NARM has instituted additional requirements including background checks of the contractor employees. Also, training classes were held in Gillette, Wyoming on November 13, 2014, for contractors to address the drug and alcohol policies, detecting depression, and risk management. Additional bi-monthly training classes in Gillette began on February 4, 2015, for other NARM contractors. This training will be mandatory for the contractors.

ROOT CAUSE ANALYSIS

An analysis was conducted to identify the underlying causes of the accident that were correctable through reasonable management controls. Listed below are root causes identified during the analysis and the corresponding corrective actions implemented to prevent a recurrence of the accident.

1. Root Cause: The drug and alcohol policy of contractor Dennis McCoy & Sons, Inc. was not adequate to prevent noncompliance.

   Corrective Action: The contractor has implemented an enhanced drug and alcohol testing program. Management has implemented more intense hands on monitoring of work activities at all job areas by supervisors. This monitoring will be recorded.

2. Root Cause: NARM oversight of independent contractor Dennis McCoy & Sons was not sufficient to prevent violation of the drug and alcohol policy.

   Corrective Action: NARM management held a training meeting with their contractors on November 13, 2014, in Gillette, Wyoming. This meeting was attended by 113 contractors. The training addressed drug and alcohol policies, detecting depression, and risk management. Additional training began on February 4, 2015. These classes will be taught twice monthly for all contractors. All contractors are required to attend.

3. Root Cause: The contractor failed to ensure seatbelts were used where there was a danger of overturning mobile equipment and that all employees were trained in the use of seat belts.

   Corrective Action: The contractor has held extensive retraining classes for all employees on seat belt use while operating mobile equipment. The contractor developed a written procedure to perform random spot checks. Supervisors will perform random visual checks to ensure seat belts are being worn. These checks include sub-contractors and all checks will be documented.

CONCLUSION

The victim was fatally injured when the vehicle he was operating went over a highwall. The contractor's drug and alcohol prevention program did not prevent the victim from driving while having a blood alcohol content that was greater than that allowed by the State of Wyoming. In addition, the victim was not wearing his seatbelt.

Approved By:

Russell J. Riley

Russell J. Riley,
District Manager

3/12/2015
Date

ENFORCEMENT ACTIONS

1. A verbal 103(j) order was issued on October 19, 2014 at 12:15 a.m.

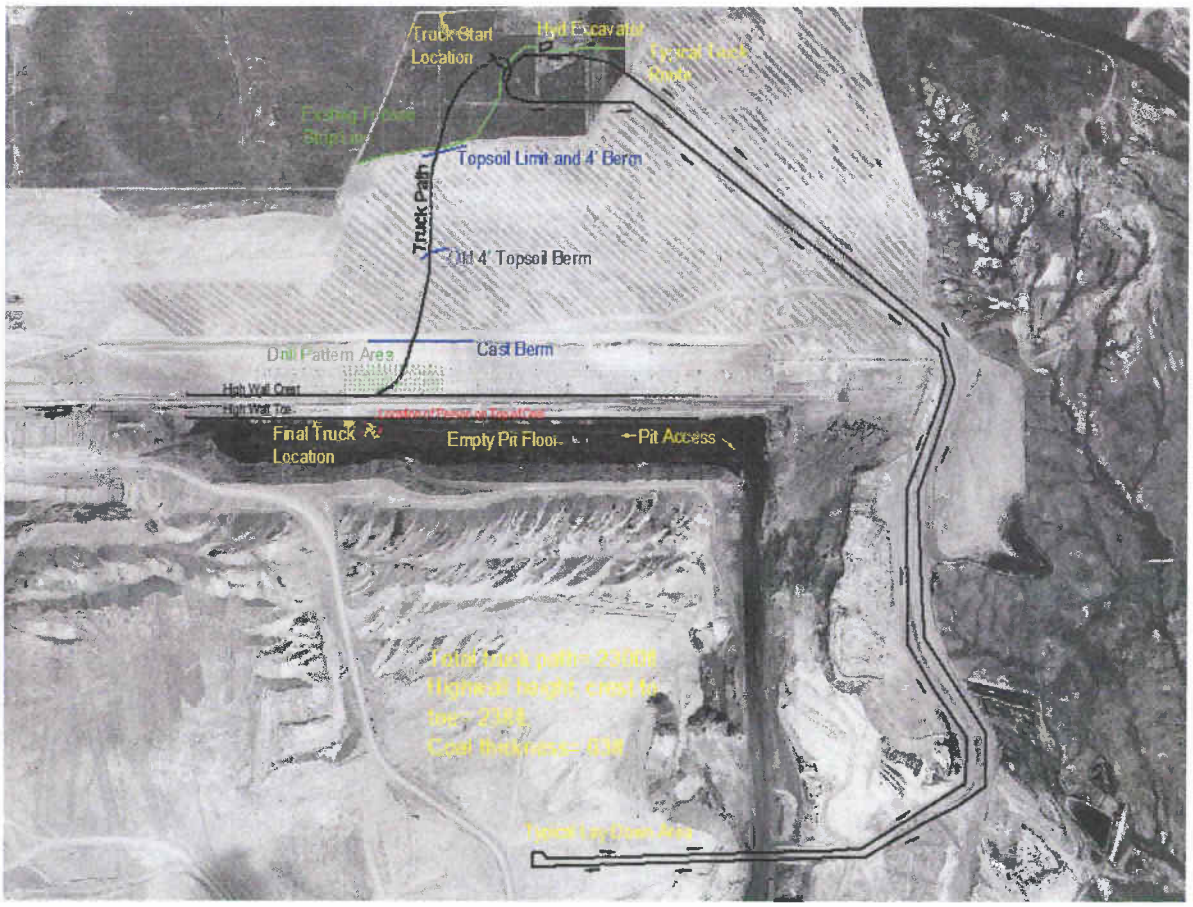
2. The 103(j) order was modified to a 103(k) Order, No. 8476781 and issued on October 19, 2014 at 3:00 a.m., to ensure the safety of miners until the investigation could be completed.

   Condition or Practice: An accident occurred at this operation on 10/18/2014 at approximately 10:05 p.m. As recovery work is necessary, this order is being issued, under Section 103(j) of the Federal Mine Safety and Healthy Act of 1977, to assure the safety of all persons at this operation. This order is also being issued to prevent the destruction of any evidence which would assist in investigating the cause or causes of the accident. It prohibits all activity at the bottom of the East Elk Pit from the East entrance to the coned and flagged area around the Cat 777 belly dump truck McCoy C/N 77-08, and the top of the highwall berm 400 feet from the highwall and the area 500 feet wide designated by cones and flagging, until MSHA has determined that it is safe to resume normal mining operations in this area. This order applies to all persons engaged in the recovery operation and any other person on-site. This order was initially issued orally to the mine operator at 12:15 a.m. 10/19/2014 and now has been reduced to writing.

3. A 104(a) Citation, No. 8483423, was issued on for a violation of 30 CFR § 77.403-1(g)

   Condition or Practice: A Caterpillar 777B haul truck, company ID No. 77-08, serial No. 4XJ0023, was involved in a fatal accident at approximately 10:05 p.m., on October 18, 2014, at the North Antelope Rochelle Mine, East Elk Pit. 30 CFR § 77.1710(i) requires seat belts where there is a danger of overturning and roll protection is provided. 30 CFR§ 77.403-1(g) states seat belts required by § 77.1710(i) shall be worn by the operator. The victim was ejected from the truck and the seat belt was not engaged when the wreckage was examined. The seat belt functioned properly when tested.

APPENDIX A – Caterpillar 777B Haul Truck's Path of Travel



Not to Scale

APPENDIX B List of Persons Interviewed

Dennis McCoy & Sons, Inc.

Craig Sadler ..... Haul Truck Operator
Leroy Bohne.....Haul Truck Operator
Harry Ruffing.....Mechanic
Victor Kirshner.....Excavator Operator
Todd Dillon.....Haul Truck Operator
Mike Orozco.....Haul Truck Operator
Carl Holm.....Haul Truck Operator
Andrew Garcia.....Haul Truck Operator
Robert Villarreal.....Safety Manager
Joe Pirelli.....Project Manager
Jess McCoy.....Partial Owner

North Antelope Rochelle Mine

Matt Sudbeck.....Dragline Supervisor
Donnie Franzen.....Dispatch Supervisor
Justan Malone.....SMET team Incident Commander
Lyle Wetz.....SMET team member
Travis Hershbarger.....Campbell County Fire Department
Travis Starks.....Campbell County Fire Department (EMT)
Duane Myers.....Training and Safety Director

Western Explosives Blasting Systems Company (WESCO)

Trevor Frogge.....Blasting Crew Member

Campbell County, Wyoming County Coroner
Gail Grahm.....Deputy County Coroner

APPENDIX C

Persons Participating in the Investigation

State of Wyoming State Mine Inspectors

Terry Adcock.....State Mine Inspector
Doug Bailey.....Deputy State Mine Inspector
Carl Ashley.....Deputy State Mine Inspector

Mine Safety and Health Administration

Gary J. Wilson.....Mine Safety and Health Inspector / Lead Investigator
David D. Hamilton.....Coal Mine Safety and Health Inspector
Dave Maynard.....Coal Mine Safety and Health Inspector
Kathy Cattles.....Training Specialist, Education Field Services
Edward C. Edwards.....Training Specialist, Education Field Services

North Antelope Rochelle Mine Management

Duane Myers.....Training and Safety Director
John Cattles.....Safety Supervisor
Jeff Nelson.....Safety Supervisor
Ray Mazzola.....Safety Supervisor

North Antelope Rochelle Mine Miner's Representatives

Gary Anderson.....Miners Representative
Allen Schaffer.....Miners Representative
Karl Dickerson.....Miners Representative

Dennis McCoy & Sons, Inc.

Morgan McCoy.....Owner
Casey McCoy.....Owner
Jess McCoy.....Owner
Joe Pirelli..... Project Superintendent
Robert Villarreal.....Safety Manager

APPENDIX D - Victim Information

Accident Investigation Data - Victim Information

Event Number: 4 2 6 8 6 0 7

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

Victim Information: 1

1. Name of Injured/Ill Employee:	2. Sex	3. Victim's Age	4. Degree of Injury:
Darwin L. Reimer	M	51	01 Fatal

5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:
a. Date: 10/19/2014 b. Time: 5:59

6. Date and Time Started:
a. Date: 10/18/2014 b. Time: 19:00

7. Regular Job Title:
176 Truck Driver

8. Work Activity when Injured:
055 Operate Haulage Truck

9. Was this work activity part of regular job? Yes X No

10. Experience	a. This Work Activity:	b. Regular Job Title:	c. This Mine:	d. Total Mining:
Years	5	5	0	5
Weeks	42	42	42	42
Days	6	6	6	6

11. What Directly Inflicted Injury or Illness?
076 Surface Mining Machines

12. Nature of Injury or Illness:
370 Multiple Injuries

13. Training Deficiencies:
Hazard: | New/Newly-Employed Experienced Miner: | Annual: | Task:

14. Company of Employment (If different from production operator)
Dennis McCoy & Sons Inc.

Independent Contractor ID. (if applicable)

15. On-site Emergency Medical Treatment:
Not Applicable: | First-Aid | CPR: | EMT: X | Medical Professional: | None:

16. Part 50 Document Control Number: (form 7000-1)

17. Union Affiliation of Victim: 9999 None (No Union Affiliation)