CAI-2012-07

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Surface of an Underground Coal Mine

Fatal Slip/Fall of Person Accident
April 25, 2012

T&B Recycling and Transport
Contractor I.D. A242
Salyersville, Kentucky

at

McCoy Elkhorn Coal Corp.
KC #1 Mine
Mousie, Knott County, Kentucky
15-18747

Accident Investigators

Steaven Caudill
Special Investigator

Keith McElroy
Conference Litigation Representative

Berl Hurt
Coal Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
District 6
100 Fae Ramsey Lane
Pikeville, KY 41501
Norman G. Page, District Manager

TABLE OF CONTENTS

Photograph of the Accident Site 3

Overview 4

General Information 4

Description of Accident 4

Investigation of Accident 5

Discussion 6

Root Cause Analysis....................8

Conclusion 9

Enforcement Actions 10

Appendix A List of Persons Participating in the Investigation 11

Appendix B Engineers Drawing 12

Appendix C Victim Information 15

Appendix D 100% Tie Off Protection....................16

Photograph of accident scene

OVERVIEW

On Wednesday, April 25, 2012, at approximately 8:50 a.m., Delmer Miller (Victim), a 61-year-old Cutter/Welder contract employee for T&B Recycling & Transport (T&B) was in the process of dismantling the elevated conveyor structure from the surface area of a non-producing underground coal mine. When Miller completed the final torch cut from the elevated support beam that contained a counter-weight, the structure fell and contacted the walkway (catwalk) on which Miller was standing. The structure was located down slope 35 feet above the floor of the box cut. A section of the catwalk, approximately 25 feet in length, broke loose from the main structure and bent downward from the weight of the up slope structure that had been cut loose. The catwalk that Miller was standing on came to a sudden stop at 27 feet in height, causing Miller to lose his balance and fall.

GENERAL INFORMATION

McCoy Elkhorn Coal Corp. KC #1 Mine (KC #1), MSHA I.D. No. 15-18747, is located 0.1 mile off Kentucky E Hwy 550, at Mousie, Knott County, Kentucky. The mine has been in non-producing status since November 17, 2010. A regular safety and health inspection (E01) by the Mine Safety and Health Administration (MSHA) was completed on March 9, 2012. The mine's Non Fatal Days Lost (NFDL) incidence rate for 2011 was 0.00, compared to the national average of 3.36 for mines of the same type. The officers listed on the legal identity form are:

Randall Taylor	President
Gary Lockhart	Superintendent
Clifton Preece	Safety Director

No employees of McCoy Elkhorn Coal Corp. were on the mine site at the time of the accident. Persons at the mine site at the time of the accident included four employees of T&B and one security guard who was employed by Appalachian Security.

DESCRIPTION OF ACCIDENT

On Wednesday, April 25, 2012, the T&B crew arrived at the mine site at approximately 8:00 a.m. The crew planned to continue dismantling the elevated belt structure that they started taking down on Monday, April 23, 2012. John Howard, Crew Leader, traveled to the top of the hill to load sections of the belt structure they had previously taken down. Miller and Dwayne Collins, Laborer, were working in the box cut area of the mine, removing small material from the area where they planned to drop the next section of structure. At approximately

8:30 a.m., Miller walked up the catwalk of the belt structure and lowered a rope to attach to his cutting torch and hoses. He then raised them to his work location. Miller tied his torches to the hand rail prior to cutting the structure. At approximately 8:50 a.m., Miller made his final torch cut on the belt structure that contained the counter-weight. The structure fell and contacted the catwalk where Miller was standing down slope. The section of the catwalk Miller was standing on, which was approximately 25 feet in length, broke loose from the main belt structure, causing Miller to fall approximately 27 feet.

Collins saw the victim fall. Collins was the first person to reach Miller, stating during the interview that the victim was breathing, but unconscious and nonresponsive. Collins immediately went to seek assistance and notified security guard Bobby Cole that an ambulance was needed.

Howard was traveling across the yard in his excavator when Collins got his attention to inform him of the accident. At this time, Howard saw the victim lying on the ground in the box cut. He abandoned his excavator and went to the box cut area. Cole contacted emergency personnel in Hazard, KY at 8:52 a.m. and requested an ambulance.

Trans Star Ambulance was dispatched at 8:54 a.m. At 8:58 a.m., Cole contacted David Williamson (independent third party contractor), the person he believed to be the contact person for McCoy Elkhorn. Trans Star Ambulance arrived on the scene at 9:11 a.m. Gary Lockhart, McCoy Elkhorn Contract Mine Manager, contacted the MSHA hotline at 9:30 a.m. and reported the accident. MSHA issued a non-contributory violation to McCoy Elkhorn Coal Company for not reporting the accident at once, without delay, and within fifteen minutes as required by 30 CFR 50.10.

INVESTIGATION OF ACCIDENT

After several attempts were made to contact mine personnel by Robert Bates, MSHA Electrical Supervisor, Lockhart was contacted at 10:13 a.m., just when other MSHA investigators arrived at the mine. Bates issued a verbal 103(j) order. At 10:15 a.m., the order was modified to a 103(k) order.

An MSHA investigation team was assembled and arrived at the mine site on April 25, 2012. Interviews were conducted with eight contract employees and one management official to determine the circumstances and events leading up to the accident (see Appendix A). A physical examination of the accident site was conducted that consisted of taking photographs, videos, and measurements. The contract employees that were on-site at the time of the accident were available for interviews by the investigation team. Formal Interviews were

conducted at either the Pikeville Office or the Martin Field office beginning on April 26, 2012.

DISCUSION

Location of the accident

The belt structure from the mine box cut to the stockpile area was being sold for scrap metal. T&B, located in Salyersville, Kentucky, is a contractor who conducts demolition and scrap metal recovery on mine sites. On this project, T&B provided three laborers and one crew leader. Miller was starting his third day of work at this project.

McCoy Elkhorn Coal Corporation, Owner/Operator of this mine failed to show any oversight regarding the demolition and removal of the conveyor structure at this mine site. No company representatives were present while any phase of the work was being performed. The company allowed David Williamson, an independent third party contractor, to provide assistance in obtaining the supplies for T&B to perform the demolition of the structure. McCoy Elkhorn provided no oversight of the work the contractors performed on mine property. Additionally, McCoy Elkhorn had no program to provide oversight of contractors working on mine property.

Elevated belt structure accident site

The elevated conveyor structure, located at the KC #1 mine, extends to the stock pile area approximately 70 feet above the floor of the box cut. The structure was supported by three steel columns on concrete platforms. A catwalk 26 inches wide with a hand rail 46 inches above the floor of the catwalk was provided to traverse the belt structure during maintenance and repairs. The victim began his work dismantling the structure 35 feet from the floor of the box cut. After the final cut of the 55 feet long upslope belt structure was completed, it began to fall, and shift down slope, where it caught the catwalk where the victim was standing. As the upslope section continued to fall, the weight of this structure caused the supporting bolts of the down slope catwalk to fail. As the down slope catwalk gave way and bent downward, it came to a sudden stop at approximately 27 feet. The victim then lost his balance and fell to the box cut floor.

Fall protection equipment

The victim was not wearing fall protection equipment. Employees who were present at the scene at the time of the accident were asked about fall protection equipment. They stated they were not aware of any fall protection equipment available at the mine site. Investigators did not find any fall protection at the site. In order to perform the task of dismantling the elevated conveyor belt

structure safely, employees should have been trained and provided with a dual lanyard system. This style of system would have ensured that miners were tied off 100% of the time (see Appendix D).

Training and experience

Miller was a 20-year experienced cutter/welder with surface mining certifications in both Kentucky and West Virginia Miller's application to T&B that indicated he had surface mining certifications in Kentucky and West Virginia, although MSHA could not locate these documents. He had previously been retired before returning to work on April 20, 2012. Miller received Hazard Training from security guard, Billy Caudill on the morning of April 23, 2012, prior to beginning work at the KC#1 Mine.

T&B Recycling and Transport was contracted to dismantle the conveyor stacker belt and pay McCoy Elkhorn Coal Corp. for each ton of scrap metal they recovered. After interviews with all parties and an investigation by MSHA Educational Field Services, it was determined that the work being performed at the mine site was construction work, as specified in the MSHA Program Policy Manual Part 48.2/48.22. MSHA's policy description of construction work includes "the building or demolition of any facility, the building of a major addition to an existing facility, and the assembling of a major piece of new equipment, such as installing a new crusher or the assembling of a major piece of equipment such as a dragline." Only Hazard Training is required under 30 CFR Part 48, if workers are performing construction work.

Examinations

No on-shift examinations were performed at this mine during the demolition of the conveyor belt structure because such exams are not required by the 30 CFR. According to MSHA program policy for 30 CFR § 77.1713, MSHA does not require daily on-shift examinations of the surface work areas of underground coal mines.

ROOT CAUSE ANALYSIS

A root cause analysis was conducted. A root cause was identified that could have prevented or mitigated the severity of the accident. Listed below is the root cause identified during the analysis and the corresponding corrective action taken to prevent the reoccurrence of the accident:

Root Cause: The policies and controls in place at this mine site did not ensure that persons could work safely in dismantling the belt structure where there was a danger of falling. Management failed to ensure that fall protection was provided, utilized, readily available, and that all employees required to work from elevated positions were trained in the use of fall protection. No oversight of the dismantling activity was performed by McCoy Elkhorn.

Corrective Action: Mine management and the contractor (T&B) have made modifications to their safety and contractor oversight plans. On July 30, 2012, McCoy Elkhorn Coal Corporation submitted a supplemental page to their approved training plan, detailing the actions that they will take to prevent a similar accident from occurring at this mine. These actions include a written work plan formulated by the contractor for unusual and unique work assignments to be explained to all employees during hazard training, as well as conducting at least one examination each shift and additional examinations for hazards as necessary. The supplement to the approved training plan also stipulates who shall perform these examinations, and how hazards shall be corrected and recorded.

CONCLUSION

The accident occurred because management policies, procedures, and controls did not ensure that persons could perform demolition of the belt structure safely. Demolition of this structure required employees to work from elevated positions where fall hazards existed. Management's lack of oversight failed to ensure that persons working from elevated positions were trained adequately, and were provided with and wore all necessary safety equipment. The victim was not wearing a safety belt and line where there was a danger of falling.

Approved: William M. Sergent Date: 10-1-2012

William M. Sergent
Acting District Manager

ENFORCEMENT ACTIONS

1. 103 (j) order - A fatal accident occurred at this operation on 04-25-2012 at approximately 09:15 a.m. This order is being issued, under section 103 (j) of the Federal Mine Safety and Health Act of 1977, to prevent destruction of any evidence which would assist in investigating the cause or causes of the accident and to provide for the safety of all personnel working or traveling in the affected area until such investigation has been completed.

2. A 104(d)(1) citation, number 8261361, was issued to T&B Recycling and Transport for a violation of 30 CFR § 77.1710(g). Safety belts and lines were not worn by one employee who was working on the surface of a coal mine where a danger of falling was present. No fall protection equipment was made available for employees working on the elevated belt conveyor structure located in the box cut area of the mine. Employees were required to work from and travel the conveyor belt structure which is approximately 45 to 50 feet from the floor of the box cut, during the dismantling of the conveyor belt structure. This condition exposed employees to slip and fall hazards that resulted in a fatal accident when a miner fell from a distance of approximately 27 feet. These employees were exposed to the condition of having no fall protection for at least two shifts. Management was aware of the requirement to provide such safety belts and lines. Management has engaged in aggravated conduct constituting more than ordinary negligence. This is an unwarrantable failure to comply with the mandatory standard.

3. A 104 (a) citation, number 8261360, was issued to McCoy Elkhorn Coal Corp for a violation of 30 CFR § 77.1710(g). Safety belts and lines were not worn by one employee who was working on the surface of a coal mine where a danger of falling was present. No fall protection equipment was made available for employees working on the elevated belt conveyor structure located in the box cut area of the mine. Employees were required to work from and travel the conveyor belt structure which is approximately 45 to 50 feet from the floor of the box cut, during the dismantling of the conveyor belt structure. This condition exposed employees to slip and fall hazards that resulted in a fatal accident when a miner fell from a distance of approximately 27 feet. These employees were exposed to the condition of having no fall protection for at least two shifts. Management was aware of the requirement to provide such safety belts and lines. The operator provided no oversight over the contractor performing this work.

Appendix A

List of Persons Participating in the Investigation

MINE SAFETY AND HEALTH ADMINISTRATION

Norman G. Page…………………. District Manager District 6
William M. Sergent……………… Assistant District Manager Enforcement
James W. Poynter……………….. Assistant District Manager Technical
John F. Godsey…………………... Staff Assistant
Gregory D. Ison………………….. Field Office Supervisor
Robert H. Bellamy………………. Impoundment Supervisor
James K. McElroy……………….. Conference Litigation Representative
Berl G. Hurt……………………… Health Specialist
Steaven D. Caudill……………..... Special Investigator
Greg Hall………………………… Surface Coal Mine Safety and Health Inspector
Mike Browning………………….. Training Specialist
Bruce Linville……………………. Training Specialist

Persons Interviewed during Investigation

T&B Recycling and Transport

Dwayne Collins……………… Laborer
John Howard……………….... Laborer
Tom Marsillett……………….. Owner/Operator

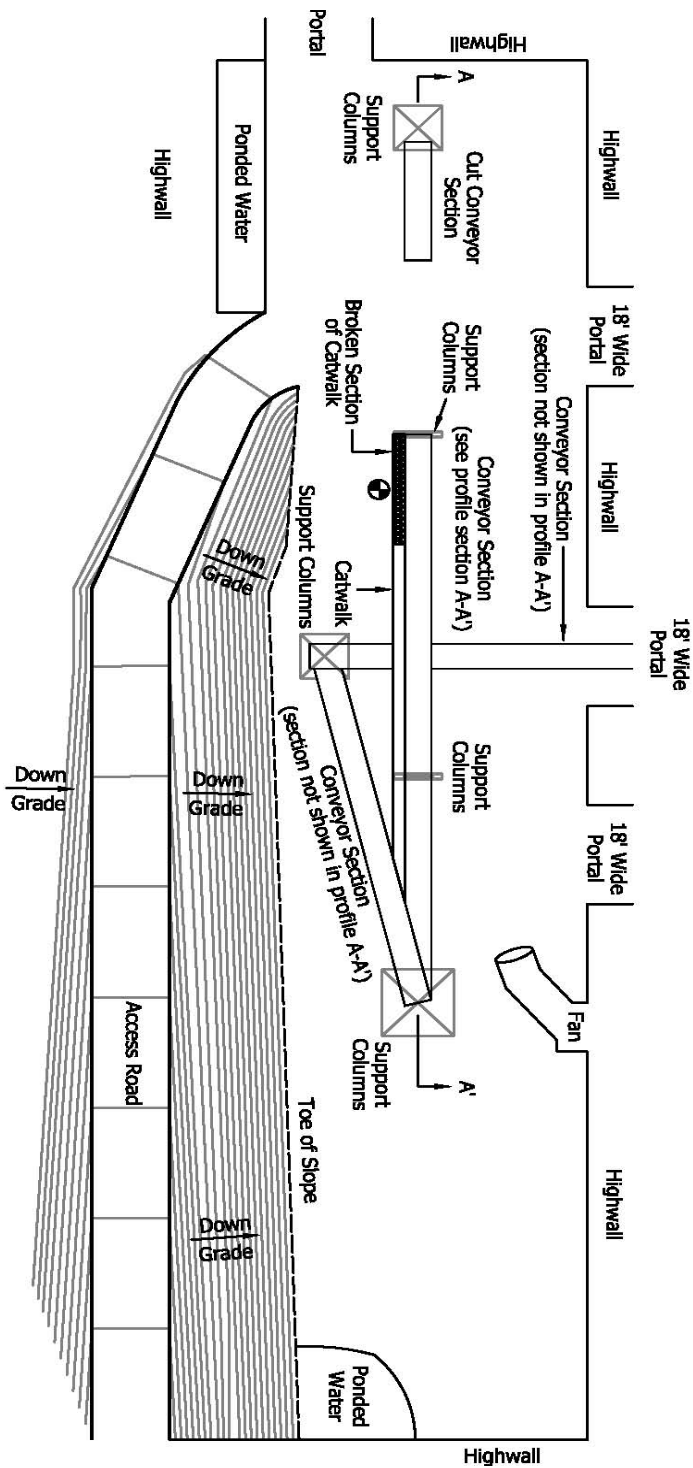
McCoy Elkhorn Coal Corp.

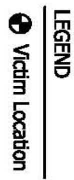
Gary Lockhart…………………. Superintendent/Contract Mine Manager

Appalachian Security

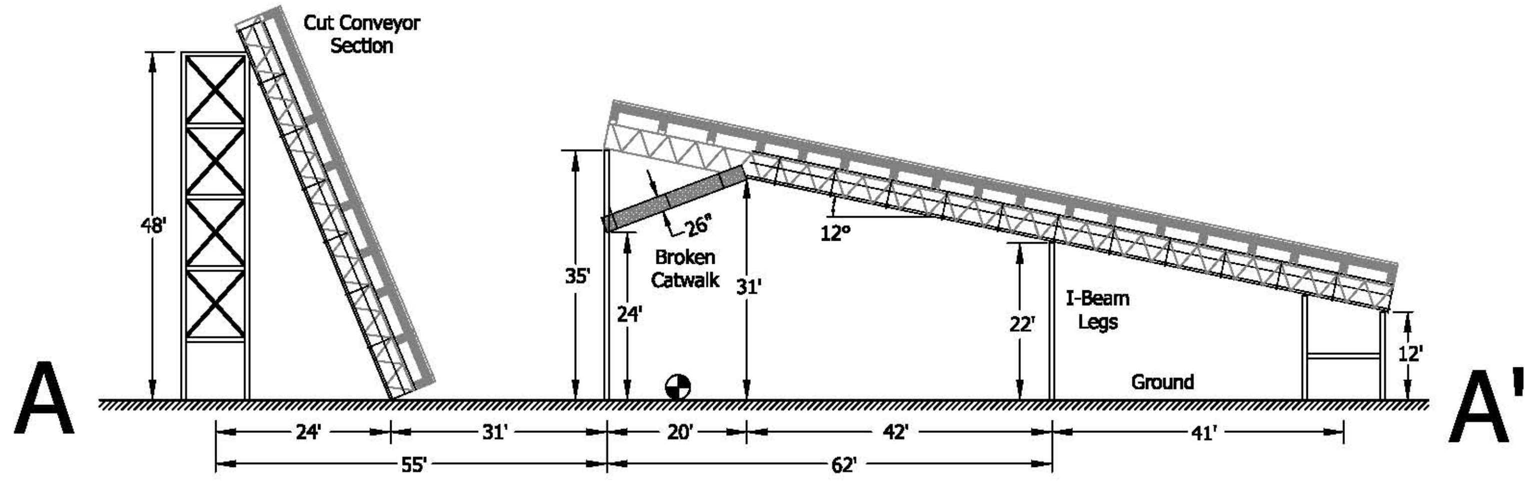
Bobby Cole…………………….. Security Guard
Billy Caudill……………………. Security Guard
Darrell Bolden…………………. Asst. Regional Supervisor Appalachian Security
Ronald Thacker………………… Supervisor Appalachian Security

<u>**Appendix B**</u>





CONVEYOR BELT STRUCTURE PROFILE (A - A')



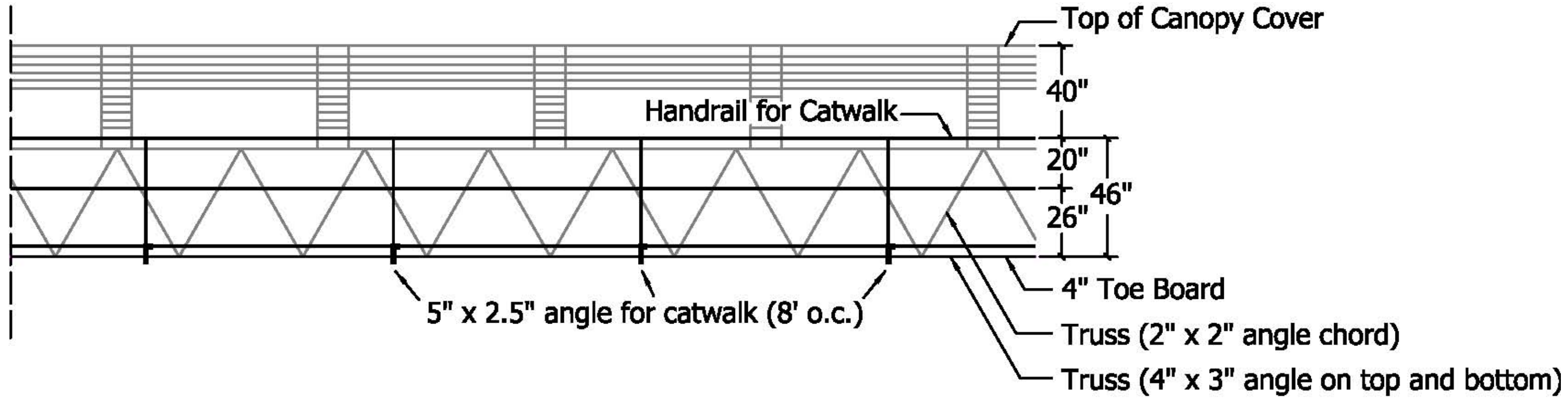
LEGEND

Victim Location

ACCIDENT INVESTIGATION DRAWING
Company: McCoy Elkhorn Coal Corp.
Mine Name: KC#1 Mine ID: 15-18747
Date: 4/26/2012

- Not to Scale -

CONVEYOR BELT STRUCTURE ENLARGEMENT



ACCIDENT INVESTIGATION DRAWING
Company: McCoy Elkhorn Coal Corp.
Mine Name: KC#1 Mine ID: 15-18747
Date: 4/26/2012

- Not to Scale -

Appendix C

Victim Information

Accident Investigation Data - Victim Information
Event Number: 4 2 0 2 2 9 2

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

Victim Information: 1

1. Name of Injured/Ill Employee: Delmer Miller
2. Sex: M
3. Victim's Age: 61
4. Degree of Injury: 01 Fatal
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death: a. Date: 04/25/2012 b. Time: 9:50
6. Date and Time Started: a. Date: 04/25/2012 b. Time: 8:00
7. Regular Job Title: 021 Cutter/Welder
8. Work Activity when Injured: 093 Welding/cutting-inc electric/acetylene
9. Was this work activity part of regular job? Yes | X | No | |

10. Experience

	Years	Weeks	Days
a. This Work Activity:	20	0	0
b. Regular Job Title:	20	0	0
c: This Mine:	0	0	3
d. Total Mining:	0	0	3

11. What Directly Inflicted Injury or Illness? 016 Catwalk
12. Nature of Injury or Illness: 370 Blunt force trama
13. Training Deficiencies: Hazard: | X | New/Newly-Employed Experienced Miner: | | Annual: | | Task: | |
14. Company of Employment: (If different from production operator) T & B Recycling and Transport — Independent Contractor ID: (if applicable) A242
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)

Victim Information:

1. Name of Injured/Ill Employee:
2. Sex
3. Victim's Age
4. Degree of Injury:
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:
6. Date and Time Started:
7. Regular Job Title:
8. Work Activity when Injured:
9. Was this work activity part of regular job? Yes | | No | |

10. Experience:

	Years	Weeks	Days
a. This Work Activity:			
b. Regular Job Title:			
c: This Mine:			
d. Total Mining:			

11. What Directly Inflicted Injury or Illness?
12. Nature of Injury or Illness:
13. Training Deficiencies: Hazard: | | New/Newly-Employed Experienced Miner: | | Annual: | | Task: | |
14. Company of Employment: (If different from production operator) — Independent Contractor ID: (if applicable)
15. On-site Emergency Medical Treatment: Not Applicable: | | First-Aid: | | CPR: | | EMT: | | Medical Professional: | | None: | |
16. Part 50 Document Control Number: (form 7000-1)
17. Union Affiliation of Victim:

Victim Information:

1. Name of Injured/Ill Employee:
2. Sex
3. Victim's Age
4. Degree of Injury:
5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:
6. Date and Time Started:
7. Regular Job Title:
8. Work Activity when Injured:
9. Was this work activity part of regular job? Yes | | No | |

10. Experience:

	Years	Weeks	Days
a. This Work Activity:			
b. Regular Job Title:			
c: This Mine:			
d. Total Mining:			

11. What Directly Inflicted Injury or Illness?
12. Nature of Injury or Illness:
13. Training Deficiencies: Hazard: | | New/Newly-Employed Experienced Miner: | | Annual: | | Task: | |
14. Company of Employment: (If different from production operator) — Independent Contractor ID: (if applicable)
15. On-site Emergency Medical Treatment: Not Applicable: | | First-Aid: | | CPR: | | EMT: | | Medical Professional: | | None: | |
16. Part 50 Document Control Number: (form 7000-1)
17. Union Affiliation of Victim:

MSHA Form 7000-50b, Mar 2008 — Printed 05/30/2012 10:22:41 AM

Appendix D

MSHA's Accident Prevention Program Innovative Products

100% Tie-Off Fall Protection System

Printer Friendly Version
Disclaimer

100% tie-off systems that incorporate self retracting lanyards (SRL) with innovative mounting brackets attached to the harness back D-ring are now available. These systems may be an alternative for conventional double lanyard systems often referred to as "double leg", "twin tail", or "Y-lanyards" for 100% tie-off.

Remember these lanyards were designed to allow you to stay protected (100% tie-off) while you move from one location to another (Examples may be transitioning from a man lift to a roof top, climbing vertically or from vertical structural steel to a horizontal structural steel lifeline.). In an alternating or "leap-frog" fashion the user attaches one SRL to an anchorage point, moves to a new location, attaches the second SRL, then disconnects the first SRL and moves again. An advantage of using double SRLs versus conventional double legged shock absorbing lanyards is maintaining a shorter fall distance and eliminating the need for different fall protection equipment to address changes in fall clearance.

For information on manufacturers that are known to MSHA to have such products available, contact MSHA's Applied Engineering Division at 304-547-2303 or e-mail zzMSHA-InnovativeProducts@dol.gov.