

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Surface River Coal River Loading Facility

Drowning Accident

February 26, 2012

Calvert City Terminal LLC
SCH Terminal Co., Inc.
Calvert City, Marshall County, Kentucky
ID No. 15-18639

Accident Investigators

Curtis Hardison
Mine Safety and Health Coal Mine Inspector

Archie Coburn
Mine Safety and Health Coal Mine Inspector

Originating Office
Mine Safety and Health Administration
District 10
100 YMCA Drive
Madisonville, KY, 42431-9010
Jim Langley, District Manager

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ACCIDENT SCENE



OVERVIEW

On Sunday, February 26, 2012, at approximately 1:15 a. m., 52-year old Kevin Meyers (victim) was determined to be missing from his work area aboard a docked, empty barge. He apparently fell from the barge into the Tennessee River at the Calvert City Terminal. His body was found an hour and twenty minutes later at the rake (sloped from vertical) of the fixed work barge. Meyers was employed by Southern Coal Handling Company at the Calvert City Terminal.

GENERAL INFORMATION

The Calvert City Terminal is operated by Southern Coal Handling Terminal Company Inc. (SCH), located in Calvert City, Marshall County, Kentucky. There are 50 hourly employees at the site. The daily onsite management of the workforce is provided by Dan Bailey, Terminal Manager. John F. Hunt III is listed as the controller for the Calvert City Terminal. The facility normally blends various coals from different geographical areas of the country onto the river barges for delivery to coal fired utilities along the Ohio River system. The terminal operates three shifts per day, seven days per week. Coal is the only product being handled at this facility.

The company officials are listed below:

Dan BaileyTerminal Manager
Jerry W. Jones Assistant Terminal Manager
Bill Rager Chief Operating Officer of Southern Coal Handling, Inc.

There was not a Safety and Health Inspection (E01) in progress by MSHA at the time of the accident. The last Safety and Health Inspection was completed on February 24, 2012. The national Non-Fatal Days Lost (NFDL) incident rate for 2011 was 1.68 for mines of this type. The NFDL rate was 5.28 for the Calvert City Facility in 2011.

DESCRIPTION OF ACCIDENT

The shift began at 5:00 p.m. on Saturday February 25, 2012. Normal barge loading activities were being performed. At 1:07 a.m. on Sunday February 26, 2012, the headline (where the barge was tied off) came loose on the barge that was being loaded by Matt Kissiar, Loadout Operator. This mishap caused a spill on top of the barge and John Tom Walsh, Deckhand, and Meyers, Deckhand, were directed by Kissiar to shovel the loose coal into the barge. At 1:10 a.m., Kissiar instructed Meyers to get a four-point draft (a draft is the distance from the surface of the water to the lowest point of the barge) on the five empty barges to be loaded that were tied off to the work barge. Kissiar radioed for the Wepfer Marine Tugboat to push the barges tight, so Meyers can step over on empty barges to get draft measurements. David Goins, Tug Boat Operator, and Michael S. Travis, Tug Boat Deckhand on Tug, observed Meyers cross over safely to the first empty barge in the string of barges to be measured. Goins and Travis are employees of Wepfer Marine.

At 1:15 a.m., Kissiar yelled on the radio to Walsh and asks; "Where is Meyers?" Meyers had yet to report any draft readings. Kissiar called Goins to bring the tug boat back into position with the boat lights to look for Meyers. Travis then boarded the fixed work barge to help look for Meyers, along with Kissiar and Walsh. Travis located Meyers' ball cap that he wore beneath his hard hat, floating in water around 1:20 a.m. Kissiar instructed Goins to move the empty barges into the river channel to look for Meyers between empties and the fixed work barge. At 1:34 a.m., Goins notified the Coast Guard to stop river traffic and then called 911 to request a rescue squad.

Meyers' body was located, floating face down, under the rake end of the fixed work barge by the Marshall County Rescue Squad (MCRS) at 2:36 a.m. Meyers was wearing a Flotation Work Vest. The Flotation Work Vest did not have a flotation collar. The Flotation Work Vest will provide flotation; however, this type of vest will not keep an injured or unconscious person's head above the water in the manner that a life vest with a flotation collar would. The MCRS recovered Meyers from the river and transported him to Haddix Ferry Boat Ramp in Calvert City, Kentucky. Meyers was pronounced dead at 3:40 a.m., by Mitchell Lee, Marshall County Coroner.

INVESTIGATION OF THE ACCIDENT

On Sunday, February 26, 2012 at 1:40 a.m., the mine operator notified the Mine Safety and Health Administration of the accident. Alan Frederick, Morganfield Field Office Supervisor, was alerted by the MSHA Call Center operator of the accident. Frederick was told that a person was missing and may have fallen into the river. Frederick issued a 103(j) Order verbally to Jerry Jones, Assistant Terminal Manager, to insure the safety of all persons during the recovery of the victim and accident investigation. Frederick contacted William Barnwell, Staff Assistant and Accident Coordinator. Barnwell contacted Curtis R. Hardison and Archie Coburn, Coal Mine Inspectors and Accident Investigators, who were dispatched to the load out facility to begin the investigation.

Upon arrival at the site, Coburn modified the 103(j) Order to a 103(k) Order. Initial interviews were conducted with the three Calvert City Terminal Employees and two Wepfer Marine Employees that were at the scene of the accident. Pictures and measurements of the scene were taken. Pertinent weather and river conditions were recorded and the on-site portion of the investigation was completed on February 26, 2012.

Formal interviews were held at the District 10 office in Madisonville, Kentucky on February 27, 2012. Persons interviewed were: Dan Bailey, Terminal Manager Southern Coal Handling; Jerry Jones, Assistant Terminal Manager, Southern Coal Handling; Matt Kissiar, Loadout Operator, Southern Coal Handling; John Tom Walsh, Deckhand, Southern Coal Handling; David Goins, Tug Operator, Wepfer Marine; and Michael S. Travis, Deckhand, Wepfer Marine. Interviews were conducted by Barnwell, Coburn and Hardison, with Mary Sue Taylor, Attorney from the Regional Solicitor's Office present via conference call.

DISCUSSION

Although Meyers had been working with Walsh on the barge, the area was not illuminated well. There were no eye witnesses to the accident. Meyers also had a hand held radio, but he did not use the radio. Consequently, some of the events that led to the victim falling into the Tennessee River could not be determined.

Prior to the accident, Meyers was seen carrying a flashlight and a wooden draft pole. This pole is a one-inch squared wooden rod, 16-feet long. The distance from the deck of Barge # 1113 to the water was ten feet and six inches.

The work area on the barges at the time of the accident was relatively dark and cap lamps or other types of lighting were necessary. When the subject of lighting was discussed during the investigation, several miners stated that more area lighting could be added, but it would also have to be positioned in a manner that the light would not shine directly in the worker's eyes when walking back toward the dock.

The work conditions on Barge # 1113 on February 26, 2012 were reported to be: no ice on the barge deck, some wet areas on the barge deck from previous washing, no loose coal or coal fines on the barge deck, and all hatches were closed and secured.

River conditions on February 26, 2012 were: air temperature 30 degrees Fahrenheit, water temperature 48 degrees Fahrenheit, and no fog on river. There was current present on river and the location where the victim was recovered had a depth of eight feet.

Exhibit 1 (found in Appendix B) shows the relatively narrow walkways (24") and several protrusions in the walkway. These include manholes and gunwales. When empty, the barge protrudes from the water approximately 11 feet. The barges are approximately 195 feet long and 35 feet wide. One end of the barge is vertical and the other end has a sloped end, which is called the rake. The rake is designed to help the barge move through the water. The victim was last observed on the rake end of the empty barge, where he was to take the draft reading. It cannot be determined specifically when or how the victim entered the water. According to the Coroner's Report, the victim died from drowning.

Experience and Training

Meyers had 5 years of mining experience, all at this mine site. Meyers had 5 years experience as a Deckhand.

The training records of the victim were reviewed on February 26, 2012. The records indicated that Meyers was provided Newly Employed Experienced Miner Training on April 28, 2007, at Wabash Valley College in Mt. Carmel, Illinois. This allowed him to be certified as a Surface Coal Miner. The twenty-four hour training covered; Hazard Recognition, Statutory Rights of Miners, Self-Rescue and Respiratory Devices, Transport and Communication Systems, Roof/Ground Control and Ventilation, Mine Map, Clean up and Rock Dusting, Mandatory Health and Safety Standards, Health, Electrical Hazards, First Aid, Explosives, Prevention of Accidents, and Hazard Communications. However, the training did not include training in the proper use of safety belts or lines or tie-off procedures, or task training in the task that he was to perform.

The records also indicate that Meyers's most recent Annual Refresher Training was provided on July 22, 2011 at the Calvert City Terminal. No record of task training was provided.

ROOT CAUSE ANALYSIS

An analysis was conducted to identify the most basic causes of the accident that were correctable through reasonable management controls.

Root Cause: Mine management failed to provide tie off equipment and task train the employees in safe use of a tie-off system that would cover the existing method of staging barges and be able to prevent an individual from falling between shifting barges.

Corrective Actions: All employees were provided with safety belts or lines for use when working on or staging barges. All miners were trained in the use of the safety belts or lines and a copy of the training for the deckhands was provided to MSHA.

Root Cause: Mine management failed to provide adequate illumination in the walkway areas where the staging of barges occurs.

Corrective Actions: Two new light tower assemblies have been installed on the dock for additional lighting in the areas along the walkway and where the staging of barges occurs.

Other Safety Measures Implemented by Mine Management:

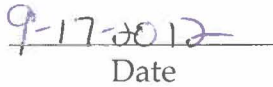
1. The mine operator has established a written policy to ensure that when the deckhands are staging barges that no employees will be allowed to work alone on the barges. A copy of the policy was provided to MSHA (See Appendix D).
2. Changed the type Life Vest worn by the dock personnel from standard foam work vest used in the industry to an automatic inflatable work vest, Mustang Survival Brand.
3. Life Vest will have a flashing strobe light attached to the rear of the vest.
4. Each loading dock employee was furnished a new type hard hat, equipped with a cordless light to minimize the use of hand held lights.
5. Loading dock employees will be equipped with portable two-way radios that are submersible and will be contained in radio pouches connected to the life vest.
6. 3 Mustang Water Rescue Kits will be located at strategic points on the dock. These include (4) Rescue Batons, Throw Bag w/50 ft. Floating Rope, Watertight Storage Case w/Pressure Relief Valve.
7. Installed water level rescue points.

CONCLUSION

The victim was working alone and likely tripped or slipped, falling from the barge into the water. Mine management failed to provide safety belts or lines to prevent the deckhand from falling into the water and train the employees in safe use of a tie-off system that would cover the existing method of staging barges. The mine operator's failure to provide illumination along the walkway was a contributing factor to the accident.

Approved By:


Jim Langley
District Manager


Date

ENFORCEMENT ACTIONS

103(J) Order, No. 7657693, – A fatal accident occurred at this operation on February 26, 2012, when a miner fell into the Tennessee River while attempting to take light draft measurements on the barge's parameter. This order is issued to assure the safety of all persons at this operation. All activity is prohibited at the mine site except for rescue and recovery operations of the affected miner.

Modified 103(j) Order, No. 7657693 to 103(k) Order, No. 7657693-01, - This mine has experienced a fatal accident at the barge loading area of the coal load out terminal. The 103 J Order is being modified to a 103 K Order to ensure the safety of all persons at this operations. It prohibits all activity until MSHA has determined that it is safe to resume normal mining operations in the area. The mine operator shall obtain prior approval from an authorized representative for all actions to restore operations to the affected area.

A 104(a) Citation was issued for a violation of 30 CFR § 48.27(a). The mine operator failed to provide adequate task training for employees regarding the use of safety belts or lines where there is a danger of falling. The mine operator's failure to provide adequate training in the use of safety belts or lines contributed to a fatality involving a deckhand on February 26, 2012.

A 104(a) Citation was issued for a violation of 30 CFR § 77.1710(g). Safety belts or lines were not provided to protect miners from falling into the water while performing work on barges. The mine operator's failure to provide safety belts or lines contributed to a fatality involving a deckhand on February 26, 2012.

A 104(a) Citation was issued for a violation of 30 CFR § 77.207. Illumination was not adequate to provide a safe walkway in work areas along the perimeter of the barges that were being measured for draft. The barges being measured were away from the main lighting system that was focused on the area where coal was being loaded into barges. The lack of walkway illumination contributed to a fatality involving a deckhand on February 26, 2012.

APPENDIX A

Persons Participating in the Investigation

Management Personnel from Southern Coal Handling Terminal Co., Inc.

Dan Bailey Terminal Manager
Jerry W. Jones Assistant Terminal Manager
Bill Rager Chief Operating Officer SCH

Miners from the Calvert City Terminal

Matt Kissiar Loadout Operator
John Tom Walsh Deckhand

Employees from the Wepfer Marine

David L. Goins Tug Operator
Michael S. Travis Deckhand

Mine Safety and Health Administration

Curtis R. Hardison Coal Mine Safety and Health Inspector
Archie Coburn Coal Mine Safety and Health Inspector
William Barnwell Coal Mine Safety and Health Staff Assistant

Appendix B



Exhibit 1

Calvert City Terminal LLC

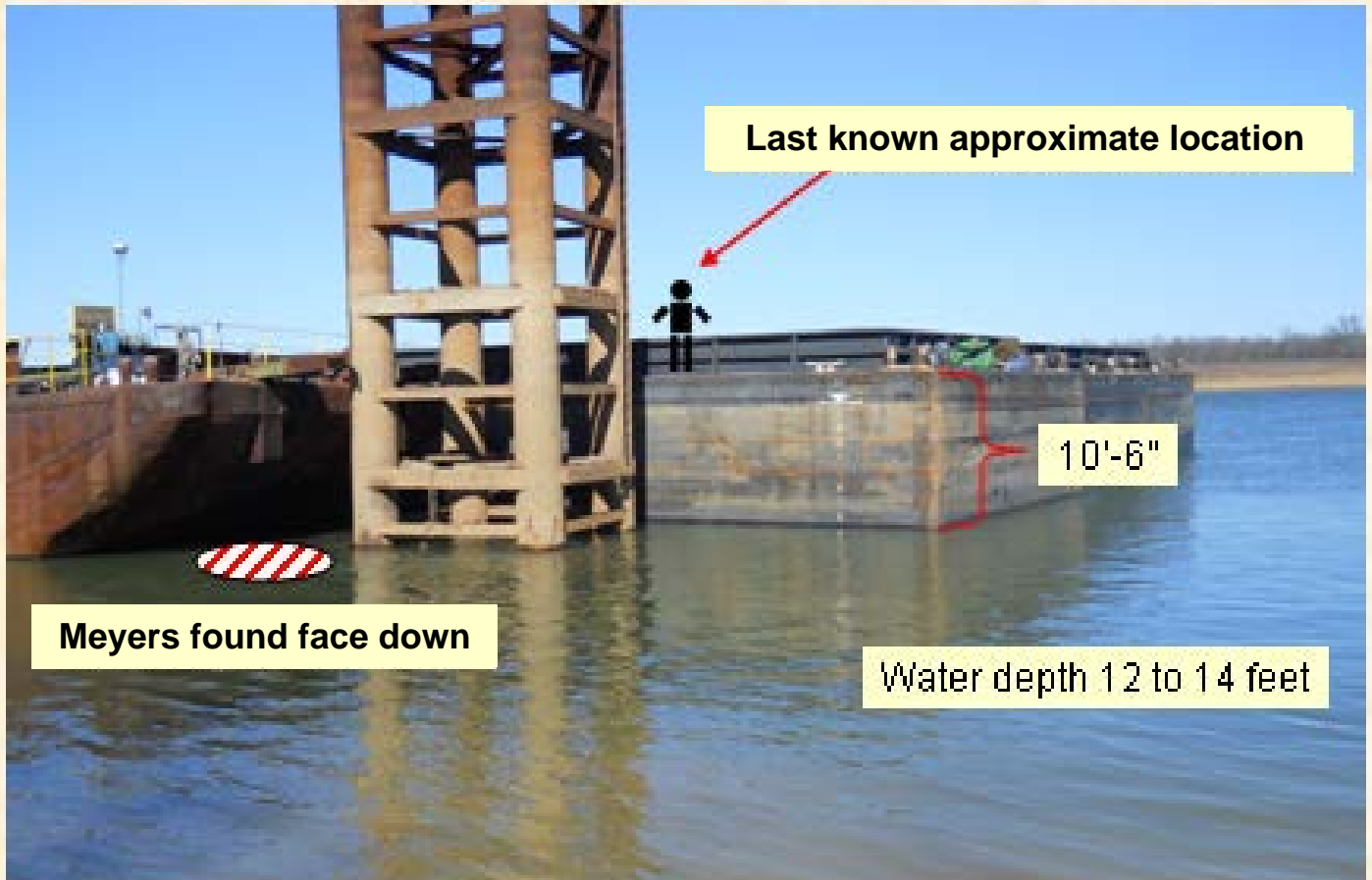



Exhibit 2

APPENDIX C
MSHA Form 7000-50(b)

PR001 20-Nov-12		Preliminary Report of Accident			U.S. Department of Labor Mine Safety and Health Administration		
1. Accident Type: Fatal Injury		2. Accident Classification Slip or Fall of Person		3. Date/Time of Accident 02/26/2012 01:15 AM		4. Date/Time of Death 02/26/2012 01:15 AM	5. Fatal Case No 2
6. Mine Information :							
a) Mining Company Name SCH Terminal Co., Inc.			b) Mine Name Calvert City Terminal LLC		c) Parent of Mining Company John F. Hunt III		
7. Mine Location :		a) City Calvert City	b) County Marshall	c) State KY	8. Mine ID Number: 15-18639		9. Union: YES
10. Primary Mineral Mined: BITUMINOUS		11. Number of Mine Employees:		a) Total 50	b) Underground	c) Open Pit/Quarry	d) Mill/Prep Plant
12. Contractor Name: Wepher Marine				13. Union NO		14. Contractor ID Number:	
15. Contractor Address:							
a) City Calvert City		b) County Marshall		c) State KY		d) Zip Code 42029	
16. Number of Contractor Employees:							
a) Total 3		b) Underground		c) Open Pit/Quarry		d) Mill/Prep Plant	
17. Number of Persons in Mine at Time of Accident:				18. Number of Persons Unaccounted For:			
a) Mine Employees: 10		b) Contractor Employees: 2		a) Mine Employees:		b) Contractor Employees:	
19) Location of Accident							
<input type="checkbox"/> 01-Underground		<input type="checkbox"/> 03-Open Pit		<input type="checkbox"/> 07-Advance Mining		<input type="checkbox"/> 30-Mill/Prep Plant	
<input type="checkbox"/> 02-Surface at Underground		<input type="checkbox"/> 06-Dredge Mining		<input type="checkbox"/> 08-Retreat Mining		<input checked="" type="checkbox"/> Other (specify) River Barge Load	
21. Nonfatal Injuries:		22. Fatal Injuries:		1		20. Mining Height: Feet Inches	
23. Victim Information :							
a) Name Kevin Meyers				b) Age 52			
c) Regular Job Title: Deckhand				d) Activity at Time of Accident: Deckhand			
<input checked="" type="checkbox"/> Mine Employee							
24. Experience :							
Years Weeks Days		Years Weeks Days		Years Weeks Days		Years Weeks Days	
a) Total: 4 48 0		b) at the mine: 4 48 0		c) at activity (23d) 4 48 0		d) with Contractor 0 0 0	
25. Autopsy Performed: If Yes, Location YES Louisville, KY						26. Mine Telephone No.: (270) 395-0210	
27. Description of Accident (include equipment involved, the exact location in the mine, and status of rescue and recovery operations): On Sunday, February 26, 2012, at 1:15 a.m., a 52 year old Deckhand was determined missing. He had been assigned the task of measuring the draft of a set of empty barges that were to be loaded. The surface miner had to cross from the permanent floating work-barge to the first empty barge. Witnesses observed him on the empty barge walking up-river on the barge. He apparently fell from the barge into the Tennessee River. Co-workers saw his cap in the water and immediately called for the Marshall County Rescue Squad. The body was found beneath the rake of the bow of the fixed barge at approximately 2:30 a.m. The miner was wearing an approved flotation device.							
The information provided in this notice is based on preliminary data ONLY and does not represent final determinations regarding the nature of the incident or conclusions regarding the cause of the accident.							
28. Equipment Manufacturer:						29. Model:	
30. District: C1000 Madisonville			32. Field Office: Morganfield KY			33. Event Number: 4486911	
34. Accident Investigator: Curtis R. Hardison				35. MSHA Person Notified: Alan D. Frederick		Date Time 02/26/2012 03:40 A	
36. Type of Report: Initial			37. Name of Preparer and Date Prepared William Barnwell			Date 02/28/2012	
38. Reason For Amendment:							

APPENDIX C

Written Policy from Calvert City Terminal

BARGE LOADOUT POLICY,

02.29.2012

- 1) Anyone working as a deckhand will wear a Mustang work / life vest at all times.
- 2) All personnel working at barge loadout, on or near water will wear an approved life vest.
- 3) All personnel will have an MSHA approved strobe light attached to their vest, and will be turned on from dusk to dawn.
- 4) There will be a minimum of two (2) people at all times present when work is performed or drafting barges that extend past the upstream work barge.
- 5) If work is performed on a barge parallel to our work barge, it may be done by one (1) person.
- 6) MSHA approved cap lights will be used from dusk to dawn.