CAI-2013-14

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Impoundment for Inactive Surface Coal Cleaning Facility
Fatal Machinery Accident
July 3, 2013

Maple Creek Preparation Plant
Maple Creek Mining Incorporated
New Eagle, Washington County, Pennsylvania
MSHA ID 36-00968

Accident Investigators
Walter R. Young
Coal Mine Safety and Health Inspector

Craig A. Mikulsky
Civil Engineer

Originating Office
Mine Safety and Health Administration
District 2
631 Excel Drive, Suite 100
Mount Pleasant, PA, 15666
Thomas Light, District Manager

Table of Contents

OVERVIEW

On July 3, 2013, at approximately 4:30 PM, a fatal accident occurred at the Maple Creek Preparation Plant's Ginger Hill #1 Pond (1211PA200058-01). Samuel V. Vignoli, an 87-year-old equipment operator with 35 years of equipment operating experience, was operating a Bobcat T300 compact track loader equipped with a front mounted brush hog mower. Vignoli was mowing the impoundment embankment when, for an unknown reason, the Bobcat traveled into the impoundment's waters. The accident occurred at a location approximately 541 feet from the spillway on an area of embankment inclined toward the water at an angle of approximately 27.5 degrees. The victim appeared to be mowing the embankment by operating the machine across the fairly level access road, perpendicular to the impoundment and stopping when the front cat idler reached the top of the embankment grade

GENERAL INFORMATION

Maple Creek Preparation Plant has been in non-producing status since June 24, 2005. There is no mining related activity occurring on the mine property at this time. The Mine Safety and Health Administration continues to conduct routine inspections due to the active status of six impoundments still associated with the mine.

The principal officers for the property at the time of the accident were:

Ronnie D. Dietz.....Vice President
Ronald O. Van Horne.....Director of Safety

Prior to the accident, the Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection on December 4, 2012. The Non-Fatal Days Lost (NFDL) injury incidence rate for the preparation plant in 2013 was 0.00 compared to the National NFDL rate of 0.75.

DESCRIPTION OF THE ACCIDENT

On Wednesday, July 3, 2013, Samuel V. Vignoli reported to the Vignoli Welding Service (V.W.S. Inc.) Shop at 7:30 a.m. Vignoli Welding Service was an independent contractor used by Maple Creek Mining to mow the grass on the impoundment. Samuel D. Vignoli CEO/President of V.W.S. Inc., Samuel V. Vignoli, and Nick Dieteman Equipment Operator worked at the shop until approximately 10:15 a.m. to allow the ground and grass to dry prior to mowing. Samuel V. Vignoli and Dieteman then traveled separately to the Maple Creek Preparation Plant's Ginger Hill #1 Pond to mow the area at the impoundment. During the course of the day, no problems were encountered during the mowing operations or with the compact track loader equipped with 6-foot-wide by 8 foot-long hydraulic mowers attached (Appendix C photograph 4). At 4:00 p.m., Dieteman needed to leave the property to attend to personal business and asked Samuel V.

Vignoli to accompany him. Samuel V Vignoli said that he was going to stay for a while longer to continue mowing. Upon arriving back at the V.W.S. Shop, Dieteman informed Samuel D. Vignoli, that Samuel V. Vignoli had remained at the impoundment to continue mowing. At approximately 4:15 p.m., Samuel D. Vignoli placed several calls to Samuel V. Vignoli's cellular telephone in an attempt to contact him and received no answer. Samuel D. Vignoli then traveled to the Ginger Hill #1 Impoundment to check on Samuel V. Vignoli. When Samuel D. Vignoli arrived at the impoundment, he could not see or hear the mowing machine operating, so he thought that it might be stuck on the downstream side of the impoundment. After searching for approximately 10 to 15 minutes, Samuel D. Vignoli saw the grass on the upstream side of the impoundment had been mowed to the water's edge of the impoundment. After several attempts to assure that the Bobcat was located in the water, Samuel D. Vignoli called 911 for assistance. Rescuers searched the high grassy areas around the impoundment perimeter while awaiting rescue dive teams to arrive on scene. The search continued as rescue divers searched in the water. The body of Samuel V. Vignoli was removed from the water at approximately 12:30 a.m. on July 4, 2013.

INVESTIGATION OF THE ACCIDENT

The mine operator was not made aware of an accident occurring on their property until 11:47 p.m. on July 3, 2013, and immediately called the MSHA Hotline at 11:47 p.m. on July 3, 2013. The Contractor, V.W.S. Inc. had access to the site and the mine operator does not have security guards to patrol this remote area of mine property. Russell Riley, MSHA Supervisor, issued a 103(j) order verbally to ensure the safety of all persons and preserve the scene of the accident. The order was modified to a 103(k) order upon the arrival of Accident Investigator at the accident scene.

This investigation was performed with assistance from the mine operator, from V.W.S. Inc. and the Pennsylvania State Police.

MSHA Investigator, Walter Young, documented the accident scene by taking photographs (Appendix B) and making measurements. The affected area was secured from further damage to preserve the scene of the accident. Interviews were conducted with employees of the security company that patrols the less-remote portions of the mine property, Mine Officials, and V.W.S. Inc. personnel.

DISCUSSION

There were no witnesses to the accident and the Bobcat T300 was not recovered from the impoundment for inspection or testing. The Bobcat T300 had been recently obtained by V.W.S. Inc. on a trial basis and any known defects in the operation of the machine were corrected by the manufacturer prior to the machine being used to mow the impoundment. The machine had been used within its design capabilities. The victim was reported to be tramming the Bobcat's front cat idler to the edge of the access road, which was fairly level, keeping the machine perpendicular to the waters of the

impoundment. The machine should have remained stable, since the victim mowed approximately 540 feet along the edge of the impoundment without incident (Appendix C, photographs 1 and 2). There was no abrupt change in the condition or angle of the impoundment embankment at the accident scene. The accident investigators were unable to determine the cause of the accident.

The Bobcat T300 compact track loader is track-mounted on rubber cat pads, which may have had limited traction on the wet embankment. The contractor had mowed this impoundment five times in prior years in the same manner without incident. The Federal Emergency Management Agency's (FEMA) "Technical Manual for Dam Owners" recommends mowing of impoundments twice yearly to aid in inspecting and prevent tree growth. Photograph 3 in Appendix C shows where Dieteman had mowed the downstream side of the impoundment crest with obvious signs of cat pads slipping and spinning. There were no indications of this type of slippage where the victim had been mowing on the upstream side of the impoundment crest (Appendix C, photographs 1 and 2).

TRAINING AND EXPERIENCE

Samuel V. Vignoli had 35 years of total mining experience, 12 years at this mine and 5 years at this activity. All training records reviewed show that. Vignoli was trained prior to the accident.

TOXICOLOGY

Toxicology of the victim's blood was conducted post-mortem. The results of the toxicology report were negative. The Washington County Coroner, Timothy Warco, performed an autopsy on July 4, 2013, and determined the cause of death to be drowning.

ROOT CAUSE ANALYSIS

An analysis was conducted to identify the most basic causes of the accident that were correctable through reasonable management controls. During the analysis, a root cause was identified that, if eliminated, would have either prevented the accident or mitigated its consequences.

Listed below is a root cause identified during the analysis and the corresponding corrective action implemented to prevent a recurrence of this type of accident:

1. *Root Cause:* The mine operator did not have adequate procedures for mowing the bank of the impoundment. The victim was working alone and was not wearing a lifejacket.

   Corrective Action: The mine operator has modified the hazard training outline for contractors working on mine property to include the following safety precautions; No work is to be done near a water hazard alone or without a lifejacket and no work is to be done by contractors without the operator being made aware of the contractor's presence on the property.

CONCLUSION

The fatality occurred when the equipment the victim was operating entered the impoundment, causing him to drown. The equipment operator did not maintain control of the equipment. The victim was working alone and without a personal flotation device. The cause for the victim losing control could not be determined. There were no eye witnesses to the accident and the machine involved in the accident was not recovered.

Approved By:

Thomas E Light

Thomas E. Light
District Manager

03/20/2014

Date

ENFORCEMENT ACTIONS

1. A 103 (k) Order, No. 7027626, was issued to Maple Creek Mining Incorporated, to ensure the safety of all persons on the property and secure the scene of the accident.

Appendix A- Persons Participating in the Investigation

Maple Creek Mining Incorporated

Ronald Van Horne.....Director of Safety
Gary Broadbent.....Assistant General Counsel and Media Director
Pat Brady.....Manager of Safety and Regulatory Affairs

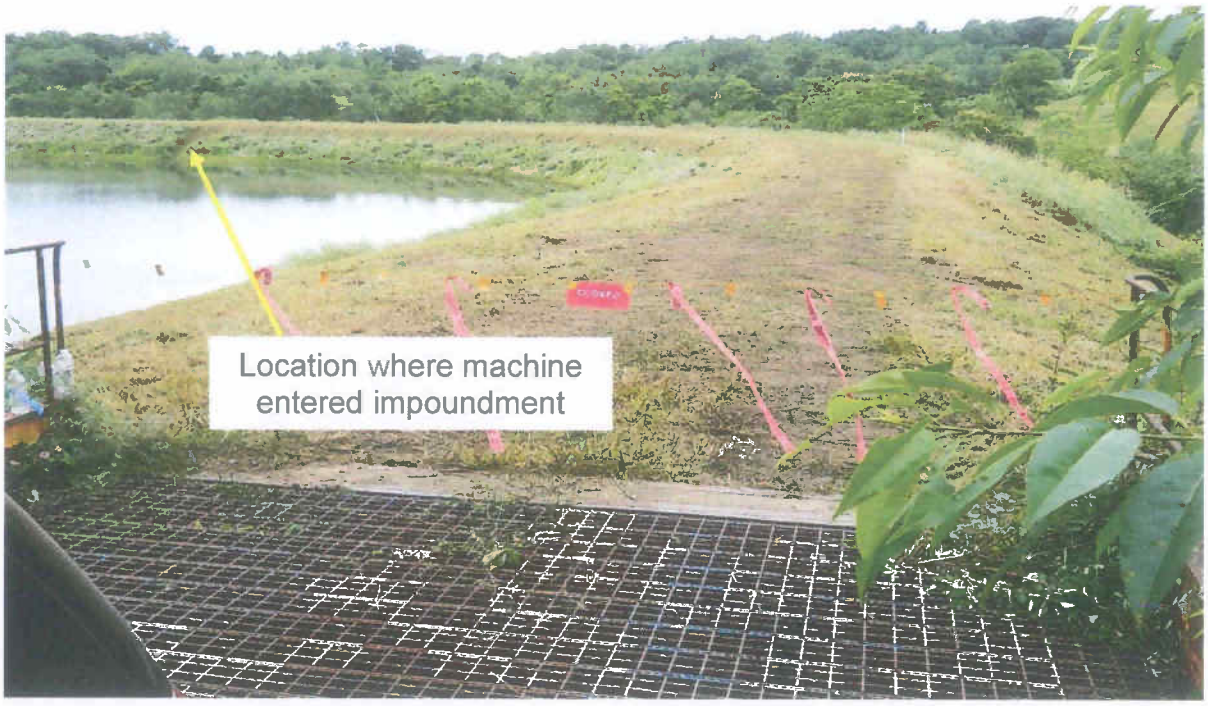
Vignoli Welding Service Inc.

Samuel D. Vignoli.....CEO/President
Nick Dieteman.....Equipment Operator

Mine Safety and Health Administration

Walter R. Young.....Ventilation Specialist/Accident Investigator
Craig Mikulsky.....Civil Engineer/Accident Investigator

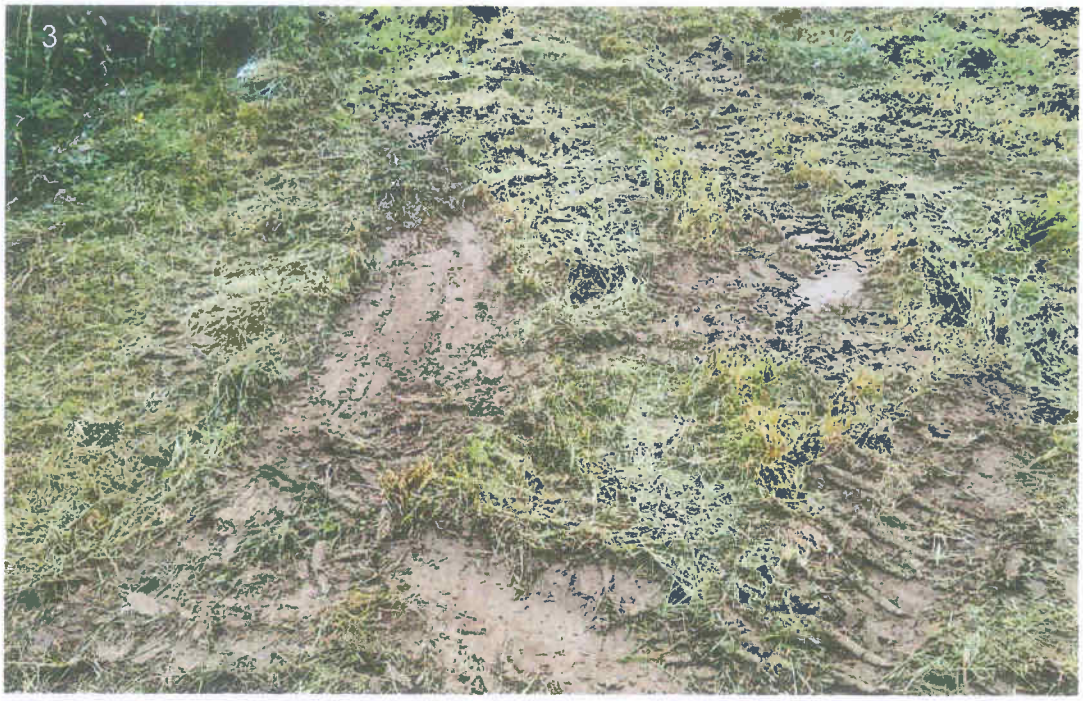
Appendix B - Accident Site Photographs



Appendix C
Photographs

1

2



Photograph of a track-mounted T180 Bobcat with front mower attached. This is similar to the T300 Bobcat involved in the fatality.

4

Appendix D
Victim Information

Accident Investigation Data - Victim Information
Event Number: 6 2 2 3 9 0 4

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:
Samuel V. Vignoli	M	87	01 Fatal

5. Date(MM/DD/YY) and Time(24 Hr.) Of Death:	6. Date and Time Started:
a. Date: 07/04/2013 b.Time: 0:06	a. Date: 07/03/2013 b.Time: 11:15

7. Regular Job Title:	8. Work Activity when Injured:	9. Was this work activity part of regular job?
025 Skid Steer Operator	098 Mowing grass on impoundment embankment	Yes X No

10. Experience	Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days
a. This Work Activity:	5	0	0	b. Regular Job Title:	12	0	0	c: This Mine:	5	0	0	d. Total Mining:	35	0	0

11. What Directly Inflicted Injury or Illness?	12. Nature of Injury or Illness:
126 Water	110 Drowning

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

14. Company of Employment: (If different from production operator)
Vignoli Welding Service
Independent Contractor ID: (If applicable) 8GD

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

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

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