FAI-6972786-1

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

# REPORT OF INVESTIGATION

Surface
(Phosphate Rock)

Fatal Machinery Accident
March 1, 2024

Swift Creek Mine
White Springs Ag Chems Inc dba Nutrien
White Springs, Hamilton County, Florida
ID No. 08-00798

Accident Investigators

Shawn Rees
Supervisory Mine Safety and Health Inspector

John Howerton
Mine Safety and Health Inspector

Originating Office
Mine Safety and Health Administration
Birmingham District
1030 London Drive, Suite 400
Birmingham, AL 35211
Brian Thompson, District Manager

TABLE OF CONTENTS

## OVERVIEW

On March 1, 2024, at 9:45 a.m., Johnny Daniels, a 61 year-old truck driver lead with over 16 years of mining experience, died after being struck with a slurry pipe.

The accident occurred because the mine operator did not ensure the slurry pipe was blocked against hazardous motion.

## GENERAL INFORMATION

White Springs Ag Chems Inc dba Nutrien owns and operates the Swift Creek Mine. This is an open pit surface phosphate rock mine located in White Springs, Hamilton County, Florida. This mine employs 247 miners and operates two 12-hour shifts seven days per week. The mine uses draglines to extract the phosphate and then pumps the phosphate ore as a slurry to an associated mill.

The principal management official at Swift Creek Mine at the time of the accident was:

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| Jeffery Joyce | General Manager |

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on May 1, 2023. The 2023 non-fatal days lost incident rate for Swift Creek Mine was 1.34, compared to the national average of 0.97 for mines of this type.

## DESCRIPTION OF THE ACCIDENT

On March 1, 2024, at 7:00 a.m., Daniels, and his work crew, comprised of Iesha Lee and Cheyenne Anderson, Wrenchers, reported to the staging area and attended a toolbox meeting.

According to interviews, Daniels and his work crew received daily work assignments from Chris Payton, Area Supervisor, then gathered work supplies, and traveled to the #5-line at the #8 lift area to begin the process of breaking down the slurry pipeline for a new pump station installation (see Appendix A).

At approximately 9:15 a.m., Daniels and his work crew arrived at the work area and performed lockout tagout procedures, removed power from the pump station and closed the slurry pipe's valves.

According to interviews, Daniels, Lee, and Anderson begin removing the slurry pipe's flange cap screws with an air impact wrench and open-end wrench. According to witness statements, the working height of the slurry pipe at the flange location was approximately three feet above the ground. Daniels asked Billy Moran, Front-End Loader Operator, to help the work crew by lifting the slurry line with a front-end loader. Moran stationed the front-end loader that was equipped with a grapple attachment approximately 10-12 feet from the flange to lift the pipe. Daniels and his work crew had all but one of the cap screws removed when they began to have trouble removing the last cap screw (see Appendix B). The last cap screw's threads were seized to the threads of the cap screw's nut preventing the cap screw from being removed. At this time, Daniels told Moran to reposition the front-end loader further away to assist in removing the last cap screw. Investigators determined this was done to apply added pressure to the cap screw in order to shear it. Moran repositioned the front-end loader approximately 76 feet further from the flange. At Daniels' direction, Moran lifted the slurry line approximately 8-10 feet in the air, which was not in accordance with Swift Creek Mine's standard operating procedure (SOP).

Once Moran raised the slurry pipe, Daniels began to use the air impact wrench while Anderson applied the open-end wrench to the cap screw's nut to continue the removal of the last cap screw. While Daniels and Anderson were attempting to remove the cap screw nut, the work crew heard a loud pop when the cap screw sheared off. The end of the slurry pipe rapidly swung upward and struck Daniels. According to Moran's statement, when he heard the pop, he immediately lowered the front-end loader's forks inadvertently laying the slurry pipe on Daniels' chest.

Lee and Anderson yelled at Moran to get the slurry pipe off of Daniels. Moran then lifted the slurry pipe and pushed it away from Daniels' location.

Brian Lanier, Area Supervisor, was approximately 300 feet away from the accident site. He heard screaming and saw Lee and Anderson waving their arms out in the haulage roadway and he immediately traveled to their location. Upon arrival he saw Daniels on the ground and called on his company radio for help and instructed Lee to call 911. Lanier and Trace Johnson, Equipment Operator, for McCoy Land Services, immediately began resuscitation efforts. At approximately 9:55 a.m. the mine activated the mine emergency response team who traveled to the accident scene and took over the resuscitation efforts along with Hamilton County

Emergency Medical Services. Daniels was transported by ambulance to Lake City Medical Center located in Lake City, Florida where he was pronounced deceased at 11:41 a.m. by Dr. Carlos Quintero.

## INVESTIGATION OF THE ACCIDENT

On March 1, at 10:25 a.m., Brad Davis, Interim Safety and Health Manager, called the Department of Labor National Contact Center (DOLNCC). The DOLNCC contacted Jeffery Phillips, Supervisory Mine Safety and Health Inspector. Phillips dispatched Scottie Sizemore Supervisory Mine Safety and Health Inspector, and David Rosenau, Mine Safety and Health Inspector, to the mine.

At 4:35 p.m., Sizemore issued an order under the provisions of Section 103(k) of the Mine Act to ensure the safety of the miners and the preservation of evidence. Jarvis Westery, Assistant District Manager, contacted Shawn Rees, Supervisory Mine Safety and Health Inspector, and assigned him as the lead accident investigator. Westery also contacted John Howerton, Mine Safety and Health Inspector, and assigned him to the accident investigation team.

On March 1, at 7:00 p.m., Rees and Howerton arrived at the mine site to continue the investigation. MSHA's accident investigation team conducted an examination of the accident scene, obtained written statements from miners and mine management, and reviewed conditions and work practices relevant to the accident. See Appendix C for a list of persons who participated in the investigation.

## DISCUSSION

### Location of the Accident

The accident occurred along the mine's 5-line at the #8 lift area. At the time of the accident, miners were working to remove a section of the slurry pipeline to install a new pump station.

### Equipment Involved

The cap screws used to couple the slurry pipe's flanges were one inch in diameter, five inches in length, and classified as Grade 5 by manufacturer by Nucor Fastener. The specified tensile load limit for this type of cap screw is 72,700 pounds.

Technical Support's examination revealed the cap screw involved in the accident was exposed to loads that exceeded the yield strength of the steel which resulted in a tensile failure (see Appendix D).

America Steel Pipe manufactures the slurry pipe involved in the accident. The slurry pipe measures 20-inch in diameter and has a wall thickness of 0.500-inch.

The front-end loader involved in the accident was a Caterpillar 980K equipped with a grapple attachment. Investigators examined the front-end loader along with the front-end loader's grapple attachment and found no deficiencies.

Weather
The weather at the time of the accident was 58 degrees Fahrenheit with fair skies. Investigators determined that the weather did not contribute to the accident.

Standard Operation Procedure for Moving the Slurry Line
Swift Creek Mine has a SOP for the moving of slurry line. Their SOP begins by instructing the work crew, consisting of the wrenchers and lead man, to have the heavy equipment operator lift the slurry pipe one to two feet in the air and no more than three feet. After lifting the pipe, the work crew will insert blocking under the flange. According to interviews, at the time of the accident, the front-end loader lifted the pipe over eight feet in the air without placing blocking material under the flange. Interview statements also revealed that the SOP to lift the pipe over three feet was a common practice to break cap screws that were difficult to remove instead of using a torch.

Examinations
The last recorded workplace examination for slurry pipe removal occurred on February 28, 2024, two days before the accident. Daniels recorded this examination and noted no hazardous conditions. Investigators determined the failure to conduct a workplace examination the day before, and the day of the accident, did not contribute to the accident.

Training and Experience
Daniels had over 16 years of mining experience all at the Swift Creek Mine. Records indicated Daniels received all training in accordance with MSHA Part 46 training regulations. Daniels along with Lee and Anderson were task trained on the SOP for the moving the slurry line. However, Daniels' direction to Moran to lift the slurry line 76 feet away from the flange to a height of 8-10 feet was not in accordance with the SOP.

## ROOT CAUSE ANALYSIS

The accident investigation team conducted an analysis to identify the underlying causes of the accident. The team identified the following root cause, and the mine operator implemented the corresponding corrective action to prevent a recurrence.

Root Cause: The mine operator did not ensure the slurry pipe was blocked against hazardous motion.

Corrective Action: The mine operator developed and implemented written procedures for pipe installation and removal and workplace examinations, regarding proper examinations for hazardous conditions, when to conduct them, what to look for, and actions to take when examiners identify hazards. The mine operator trained all designated miners in the new procedures.

## CONCLUSION

On March 1, 2024, at 9:45 a.m., Johnny Daniels, a 61 year-old truck driver lead with over 16 years of mining experience, died after being struck with a 20-inch diameter steel slurry pipe.

The accident occurred because the mine operator did not ensure the 20-inch pipe was blocked against hazardous motion.

Approved By:

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Brian Thompson — Date
District Manager

ENFORCEMENT ACTIONS

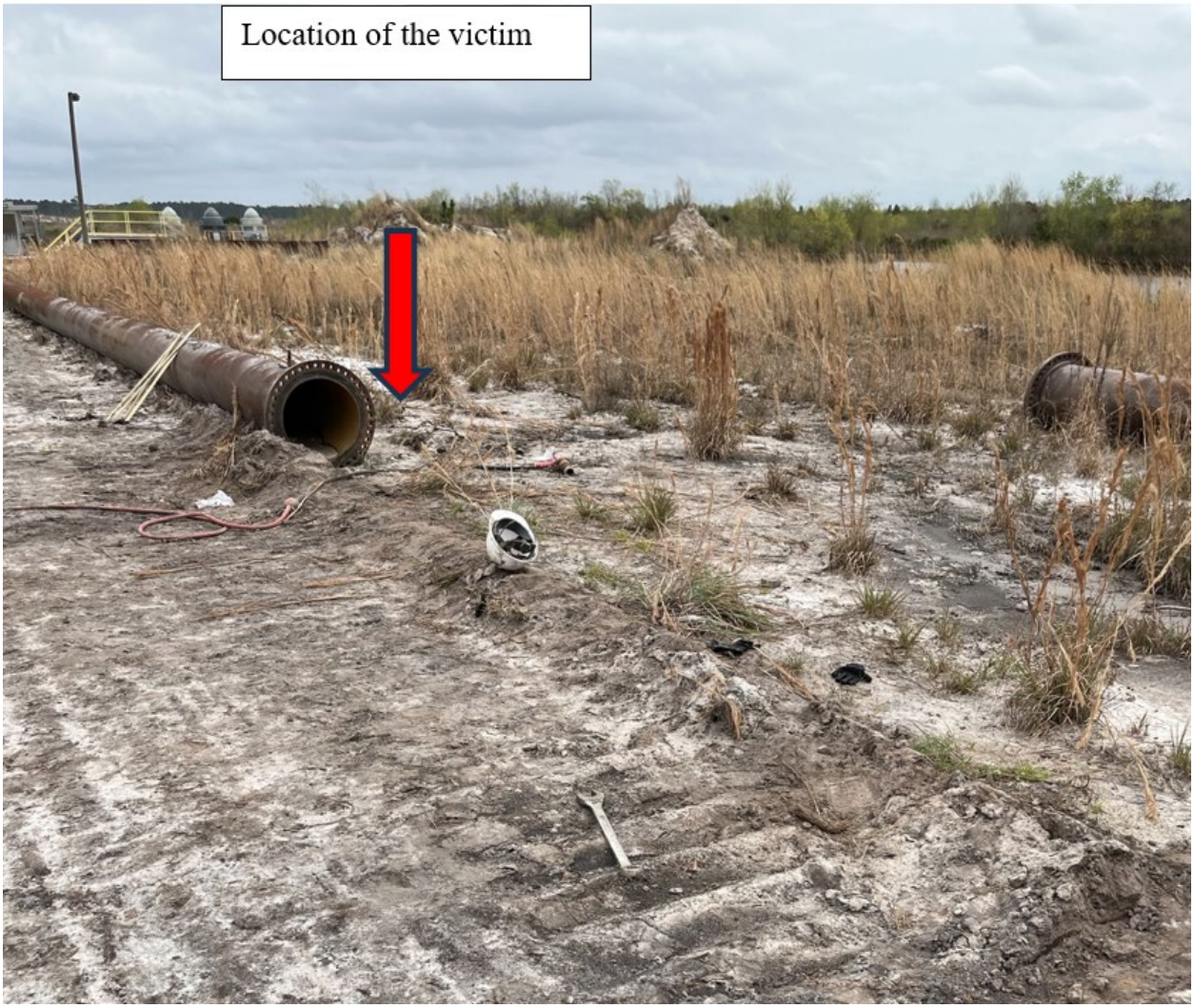
1. A 103(k) order was issued to White Springs Ag Chems Inc dba Nutrien on March 1, 2024.

   A fatal accident occurred on March 1, 2024, at 9:45 a.m. This order is being issued under the authority of the Federal Mine Safety and Health Act of 1977, under Section 103(k) to insure the safety of all persons at the mine and requires the operator to obtain the approval of an authorized representative of MSHA of any plan to recover any person in the mine or to recover the mine or affected area. This order prohibits any activity in the affected area. The operator is reminded of the obligation to preserve all evidence that would aid in investigating the cause or causes of the accident in accordance with 30 CFR 50.12.

2. A 104(a) citation was issued to White Springs Ag Chems Inc dba Nutrien for violation of 30 CFR 56.14105.

   A fatal accident occurred at this operation on March 1, 2024, when a 20-inch steel slurry pipe struck a miner. The miner was removing the last top cap screw from the slurry pipe's flange when the cap screw sheared off causing the 20-inch steel pipe to break loose and strike him. The mine operator did not block the pipe against hazardous motion.

APPENDIX A – Accident Site



APPENDIX B – Last Cap Screw Location

APPENDIX C – Persons Participating in the Investigation

White Springs Ag Chems Inc dba Nutrien

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|---|---|
| Jeffery Joyce | General Manager |
| Aaron Donohue | Mine Manager |
| Brad Davis | Interim Safety and Health Manager |
| Chris Payton | Area Supervisor |
| Brian Lanier | Area Supervisor |
| Iesha Lee | Wrencher |
| Cheyenne Anderson | Wrencher |
| Billy Moran | Front-End Loader Operator |

International Chemical Workers Union

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|---|---|
| Donald Register | Union President |

McCoy Land Services

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| Trace Johnson | Equipment Operator |

Mine Safety and Health Administration

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| Brian Thompson | District Manager |
| Jarvis Westery | Assistant District Manager |
| Thomas Chatham | Staff Assistant |
| Shawn Rees | Supervisory Mine Safety and Health Inspector |
| Scottie Sizemore | Supervisory Mine Safety and Health Inspector |
| David Rosenau | Mine Safety and Health Inspector |
| John Howerton | Mine Safety and Health Inspector |
| Russell Stackpole II | Mechanical Engineer, Technical Support |

APPENDIX D – Cap Screws