UNITED STATES DEPARTMENT OF LABOR MINE SAFETY AND HEALTH ADMINISTRATION

REPORT OF INVESTIGATION

Underground (Coal Bituminous)

Fatal Fall of Roof or Back Accident September 25, 2024

Oak Grove Mine Crimson Oak Grove Resources LLC Adger, Jefferson County, Alabama ID No. 01-00851

Accident Investigator

Thomas O'Donnell Mine Safety and Health Inspector

John Yarko Mine Safety and Health Roof Control Specialist

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

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OVERVIEW

On September 25, 2024, at 12:03 a.m., Jose Lara, a 52-year-old continuous mining machine operator with over 16 years of mining experience, died when a portion of the mine roof fell on him. The accident occurred after Lara traveled inby the last row of roof support to extend the tubing slider after a 33-foot cut had been taken.

The accident occurred because the mine operator did not ensure all miners worked or traveled under a supported roof.

GENERAL INFORMATION

Crimson Oak Grove Resources LLC owns and operates the Oak Grove Mine. The mine is an underground coal mine located in Adger, Jefferson County, Alabama. The mine operates seven mechanized mining units (MMU), including a longwall system. The mine operates three production shifts, seven days a week, using a longwall system and continuous mining machines. The mine employs 500 miners. The extracted coal is transported to belt conveyors and out of the mine with a slope belt. Once the coal is transported out of the mine, it is processed through a preparation plant before delivery to various customers.

The principal management officials at the Oak Grove Mine at the time of the accident were:

Jesse Avery Jonathon Weekly Joshua Robinette General Manager Superintendent Safety Manager

The Mine Safety and Health Administration (MSHA) completed the last regular safety and health inspection at this mine on June 27, 2024. The 2023 non-fatal days lost incident rate for Oak Grove Mine was 7.66, compared to the national average of 3.26 for mines of this type.

DESCRIPTION OF THE ACCIDENT

On September 25, 2024, at approximately 3:30 p.m., the 7 South Continuous Miner Section Crew (crew) entered the mine and traveled to the 7 South Section. According to interviews, the crew arrived at the section at approximately 4:15 p.m. The 7 South Section is a four-entry section consisting of two MMUs, one on the left side and one on the right. The accident occurred on the right side. According to interviews, the crew consisted of Lara; Julio Nunez, Roof Bolter; Sammy Mays, Roof Bolter; David Angwin, Faceman; Cornelius Williams, Shuttle Car Operator; Demon Bell, Shuttle Car Operator; Leslie Gould, Electrician; Shawn Abel, Electrician Trainee; and Michael Gunn, Section Foreman. Mays had to leave the mine before the end of the shift and Chad Buentello, General Inside Laborer, replaced him as a roof bolter on the right side of the section at approximately 9:30 p.m.

The 7 South Section is ventilated by bringing intake air to the face in the second and third entries and returning the air in the first and fourth entries. Auxiliary fans and tubing are used to provide additional exhaust ventilation at the face with one auxiliary fan tubed to each of the four faces. According to interviews, when the right-side crew got to the section the No. 3 working place was cut out; the No. 4 working place was ready to be mined, and the No. 4 fan was moved up. The miners were told to bolt and service the No. 3 working place and move the No. 3 fan up. The shift progressed normally. The No. 3 working place was bolted and serviced, and the No. 3 fan was moved up to crosscut No. 12 in the No. 4 working place. Then a 33-foot cut was made in the No. 3 working place, and the continuous mining machine (CMM) graded the bottom outby the face until approximately 11:56 p.m. based on proximity detection information.

Lara and Nunez traveled inby the last row of roof supports to work on extending a ventilation tubing slider section that was stuck in the contracted position. The miners took channel locks and pulled the inner tubing until it was freed. Nunez recalled Lara went to the CMM and retrieved a friction strap used to hang the tubing. Lara last appeared on the proximity detection system of his CMM at 12:03 a.m. Nunez said he turned his back to Lara and heard a noise. When Nunez turned around, Lara was pinned to the floor by a rock. The rock was later measured by investigators to be approximately ten feet long by four feet wide and a thickness of 14 inches.

According to interviews, Nunez tried to move the rock off of Lara but could not. Nunez then used his cap lamp to signal Williams, who was waiting in his shuttle car outby the CMM. Williams responded and both men again tried to move the rock but could not. Williams then

radioed Gunn and said, "Everybody come up here, Julio has a rock on him, and we need a ride and an ambulance." Then Buentello, Bell, and Angwin arrived, and the five miners slid the rock off of Lara.

Gould arrived and repositioned Lara to evaluate his vitals and began cardiopulmonary resuscitation (CPR). An automatic external defibrillator (AED) was placed on Lara, which recommended chest compressions, so Gould resumed CPR. At 12:09 a.m., William Franklin, CMM Operator, arrived on the section and assisted Gould.

While continuing CPR, miners transported Lara to the surface where paramedics from Concord Fire District took over the care of Lara. Paramedics contacted Dr. David Fuller at the Medical West Emergency Room and were advised to stop CPR. Lara was pronounced dead at 12:57 a.m.

INVESTIGATION OF THE ACCIDENT

On September 25, 2024, at 12:24 a.m., Robinett called the Department of Labor National Contact Center (DOLNCC) to report the accident. At 12:35 a.m., the DOLNCC contacted Richard Braem, Ventilation Supervisor. Thomas O'Donnell, Mine Safety and Health Inspector, and John Yarko, Mine Safety and Health Roof Control Specialist, were assigned to conduct the investigation.

At 3:00 a.m., O'Donnell and Yarko arrived onsite at the No. 9 Vent Portal. At 3:05 a.m., Yarko issued an order under the provisions of Section 103(k) of the Mine Act to ensure the safety of the miners and preservation of evidence. O'Donnell and Yarko conducted witness interviews. MSHA accident investigators, along with the Alabama Department of Labor Mining Division, Mine Safety and Inspection accident team, examined, mapped, and took photos of the accident scene. MSHA accident investigators reviewed the mining conditions and work practices relevant to the accident. See Appendix A for a list of persons who participated in the investigation.

DISCUSSION

Location of the Accident

The accident occurred in the 7 South Section, No. 3 entry, inby crosscut No. 12, approximately five feet inby the last row of roof support. See the map in Appendix B.

Geology

The main mine roof at Oak Grove Mine consists of shale, sandy shale, and the Mary Lee coal seam. The mine roof where the accident occurred consists of interbedded sandstone, shale, and limestone up to the New Castle coal seam. The working areas and air courses throughout the mine consist of layers of the same materials listed above in various thicknesses. Investigators found a horseback roof anomaly in the unbolted area of the accident location. This geological feature is known to cause an unstable roof condition unless supported.

Roof Control Plan and Roof Support

The immediate mine roof is supported with 48-inch and 96-inch fully grouted rebar roof bolts installed with a minimum six-inch by six-inch bearing plate as primary roof support. These primary roof bolts are installed in a maximum pattern of five feet from the rib line, five feet bolt to bolt, and 5-feet row to row, along with 120-inch resin-anchored cable bolts that are 0.6-inch diameter, in intersections and wide areas of the entries and crosscuts.

Method of Mining

The 7 South Section uses a remote-controlled CMM equipped with a blower, auxiliary fans, and tubing to provide face ventilating when mining. The cutting sequence always began on the tubing side. The CMM was used to extend the three-section tubing slider and maintain the end of the slider no greater than ten feet from the area of deepest penetration of the cut. A cable hanger would be attached to the end of the last section of the slider and the bits on the head of the CMM would be used to catch the hanger and extend the slider.

Ventilation Tubing Slider

During the on-site investigation, the end of the three-piece, fiberglass tubing was found, with the end of the tubing slider, six inches under the rock that fell on the victim. Once the accident scene was made safe with additional roof supports, the end of the tubing was inspected by reaching under the rock with both hands on either side of the unseen portion of the tubing. There was some damage on either side of the tubing (i.e., fraying of the fiberglass) due to compression from the weight of the rock. Additionally, the nylon strap used to extend the tubing with the CMM could not be seen or felt at the end of the tubing.

Witness statements described how, before the accident, the tubing slider was stuck and had to be pulled out using channel locks instead of the strap. Information from interviews described methods to extend the tubing without the strap. The CMM operator would get the tubing high enough so the CMM could get under the slider and lift the stages with the CMM and extend the slider.

Investigators believe Lara was preparing the tubing slider so it could be extended with the use of the CMM. Preparation of the ventilation tubing slider is usually performed before the CMM operator begins a cut. Then, during the cut, the CMM operator continually maintains the tubing slider to within ten feet of the area of deepest penetration. Instead, Lara prepared the tubing slider after the 33-foot cut was mined. Investigators determined the end of the tubing slider was approximately 28 feet outby the face and five feet inby supported roof.

ROOT CAUSE ANALYSIS

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

<u>Root Cause</u>: The mine operator did not ensure all miners worked or traveled under a supported roof.

<u>Corrective Action</u>: The mine operator developed and implemented a revision to the approved roof control plan. This revision includes more visible warning devices and physical barriers to all approaches leading to unsupported areas. All miners have been trained on the revision, which includes an emphasis that miners are not to travel under unsupported roof.

CONCLUSION

On September 25, 2024, at 12:03 a.m., Jose Lara, a 52-year-old continuous mining machine operator with over 16 years of mining experience, died when a portion of the mine roof fell on him. The accident occurred after Lara traveled inby the last row of roof support to extend the tubing slider after a 33-foot cut had been taken.

The accident occurred because the mine operator did not ensure all miners worked or traveled under a supported roof.

Approved By:	
Brian Thompson	Date
District Manager	

ENFORCEMENT ACTIONS

1. A 103(k) order was issued to Crimson Oak Grove Resources LLC.

A fatal accident occurred on September 25, 2024, at 12:03 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 ensure 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 Crimson Oak Grove Resources LLC for a violation of 30 CFR 75.202(b).

A fatal accident occurred on September 25, 2024, when a miner traveled under an area of unsupported mine roof in the mined-out No. 3 working place. The miner was preparing the ventilation tubing slider to be extended on the right side of the entry and stepped out under unsupported roof. A section of unsupported mine roof approximately ten feet, by four feet, by 14 inches thick, struck the miner.

APPENDIX A – Persons Participating in the Investigation

Crimson Oak Grove Resources LLC

Superintendent Jonathon Weekly Joshua Robinette Safety Manager David Turner **Assistant Shift Foreman** Michael Gunn Section Foreman Rodney Fischer Safety Supervisor Julio Nunez Roof Bolter Demon Bell Shuttle Car Operator Cornelius Williams Shuttle Car Operator David Angwin Faceman Leslie Gould Electrician Chad Buentello General Inside Labor William Franklin **CMM** Operator Shawn Abel Electrician Trainee

United Mine Workers of America

John EarnestDistrict RepresentativeBlake LaytonLocal PresidentGary VincentLocal Vice PresidentEddie PinegarSafety Committee

Alabama Department of Labor Mining Division

Jonathan ConnellanEmergency ManagerThomas RayMine InspectorChris BrittonMine Inspector

Mine Safety and Health Administration

Thomas O'Donnell

John Yarko

Mine Safety and Health Inspector

Mine Safety and Health Roof Control Specialist

APPENDIX B – 7 South Section Map

