

SAFETY ALERT NOTIFICATION	Safety Alert #	SA – 2017 - 1
	IMS #	74657
Energized Frame on Portable Welder	OPERATION:	Henderson Mine
	INCIDENT DATE:	1/17/2017
	TIME:	12:00 PM
	TYPE:	Near Miss
Issued By: Andrew Siersma	Contact For Additional Details: David Brence	

This is NOT an investigation report. It is a NOTIFICATION of a Significant Incident that has taken place at a Freeport-McMoRan location. The information below is a preliminary assessment and not a formal investigation.

INCIDENT DESCRIPTION

A mine maintenance employee was using a portable welder, shut it down and de-energized it to take a break. When he went to use it again after the break, he noticed he could not strike an arc and the indicator light was dim. He then shut it down and de-energized it, unplugged it and tagged it out of service. A work order was submitted to the electrical department to troubleshoot the welder.

Ten days later, two electricians were tasked to troubleshoot the welder. They first plugged the welder into the socket at the disconnect, energized the disconnect, and turned the portable welder on with the welder's power switch. Their AC detector showed that the frame of the welder was energized. They then checked the welder, frame to ground with a voltage meter which showed that the frame was energized to 277 VAC to ground. The electricians then de-energized it using the disconnect and unplugged it.

Inspecting with the plug shell removed, the electricians found the strain relief was no longer tightened to the outer jacket of the cable. Two phase conductors and the ground were completely out of the plug termination but one remained connected. The ground wire was contacting one of the phase conductors which had caused the frame to be energized.

GLOBAL SIGNIFICANT RISKS(if applicable)

Specific Electrical Policies	Choose an item.
Choose an item.	Choose an item.

OTHER SIGNIFICANT RISK (specific to site or task not categorized as global)

Electrical Energy

PROBABLE DIRECT CAUSES

Defective tools or equipment – welder frame was energized due to damaged plug
Inadequate assessment of risk - Employee was not able to visibly determine if cord was damaged during routine safety inspection of equipment because of the plug design (Basic cause)

IMMEDIATE CORRECTIVE ACTION(S)

Disconnect from power supply, Remove from service, tag out and investigate to determine causal factors

REQUIRED ACTIONS(S)

Electricians to inspect all multi plug type electrical connections before use or operating.
Institute effective preventative maintenance action requiring inspection of plug components.
Perform a risk assessment on multi piece plug applications and develop controls to address the risks identified.







This is NOT an investigation report. It is a NOTIFICATION of a Significant Incident that has taken place at a Freeport-McMoRan operation and is being communicated to enhance safety awareness should a similar situation exist. The information above is a preliminary assessment of the event and is not a formal investigation.