

SAFETY ALERT NOTIFICATION	Safety Alert #	SA – 2016 - 7
	IMS #	72360
Track Dozer identified booster in push material	OPERATION:	Morenci
	INCIDENT DATE:	10/20/2016
	TIME:	Approx 10:00 am
	TYPE:	Near Miss
Issued By: Trish Roberson – Superintendent of Mine Operations Fragmentation	Contact For Additional Details: 928-865-7442	

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

On the morning of 10/20/16, a track dozer was pushing material down to construct a ramp. When the operator looked behind him to start backing up, he saw a 1 lb booster that still had an I-Kon and Excel detonator inside. The employee immediately contacted his supervisor and the blasting crew and the area was evacuated of personnel and equipment. Morenci Blasting secured the booster and detonators.

The booster and detonators did not show any signs of damage or deformation. The I-Kon detonator was connected to a blast logger and the detonator ID was obtained. A 'Fuse Head Error' (rendering the detonator unable to fire) was identified by the blast logger as well. The I-Kon detonator was removed from the booster and was secured in the field magazine for analysis. The remaining recovered products were successfully destroyed later that same day.

A review of the shot files and CAES maps for the area did not show any prior issues. All files from the loggers and blast boxes were reviewed with Southwest Energy (SWE) Technical Services Department, FMI Corporate Blasting and Morenci Blasting, finding no issues related with the drilling, timing design or logging processes. All records of the shot show that the recovered I-Kon detonator was successfully logged, tested and received a fire command from a shot on 9/28/2016.

GLOBAL SIGNIFICANT RISKS(if applicable)

Blasting

Mobile Equipment Operation

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

N/A

PROBABLE DIRECT CAUSES

The I-Kon detonator returned a 'Fuse Head Error' after being rehooked to the logger. A 'Fuse Head Error' is a product issue in which the Fuse Head detaches from the circuit board. Discussion was held with SWE and was advised to save the I-Kon detonator if possible for return to the manufacturer. Both detonators were safely and easily removed from the booster as the booster was not deformed or damaged. The I-Kon detonator was returned to Orica for analysis.

The final determination from Orica was that the detonator failed to fire due to a broken/intermittent bridge wire on the fuse head that may have dislodged or broke during the initiation of the blast. This is a very rare manufacturing defect due to the rigid controls that Orica uses in their process. This particular detonator was traced back to the original manufacturing lot and production records were checked. There were no noted issues in the production records.

Investigation Report from Orica available upon request

IMMEDIATE CORRECTIVE ACTION(S)

1. Blasting coordinated with Operation to clear all equipment from the area to outside of the 500' clearing radius and all personnel to outside the 1500' clearing radius.
2. Morenci D&B worked with SWE and Orica to determine the cause of this I-Kon failure by safely returning the detonator to the manufacturer for analysis.

REQUIRED ACTIONS(S)

1. Emphasize the importance of vigilance when working in broken material. All tests and checks showed that the I-Kon successfully fired and Morenci D&B had no indications of an issue. Personnel should always be aware of their surroundings and watching when working in broken material.
2. Report any I-Kon issues to Orica and return detonator, if safely possible, for analysis and further improvement.



Booster found in work area



Recovered Booster with i-Kon Detonator and Non-Electric Detonator removed

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.