

Cable Strike Awareness & Elimination

Mosaic Potash - Esterhazy K1 Mine



PBU Cable Strike Team

Cable Strike Team was formed October 2016

- The cable strike team reviewed the existing policies and procedures and determined that they are effective and rectified any gaps that had been identified. Progress was shown when they actively focused on preventing cable strikes with their teams.
- The Mine Manager and the Mine Superintendents at each site are responsible to ensure that their teams are aware of, understand and are following existing procedures. They are also responsible to ensure that any future incidents are investigated, and the findings shared with other sites.



Dangerous Occurrences

K -1 Mine:

2016 - 8 Cable strikes

2017 - 7 Cable strikes



2017 K-1 Mine Cable Strikes

- **January 11, 2017** - Corrective Action: OHC investigated. Administration Control – reviewed SOP with Crews.
- **January 16, 2017** - Corrective Action: OHC investigated. Tool box discussion with each of the crews - cable placement and awareness.
- **March 24, 2017** –Corrective Action: OHC investigated.
- **April 3, 2017** - Corrective Action: OHC investigated. Discussion on situational awareness.
- **April 19, 2017** - Corrective Action: OHC investigated.
- **May 3, 2017** – Corrective Action: OHC investigated.
- **May 2017 - K1 Mine Management had a refocus on cable strikes and set a new course of action.**
- **September 22, 2017** –The 4160 cable had been misplaced along a belt and the belt was rubbing the jacket of the cable until it wore thru the jacket.

2017 K-1 Mine Cable Strikes

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2017 K-1 Mine Cable Strikes

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2017 K-1 Mine Cable Strikes

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2017 Vision

In May 2017, K1 Mine Management had a refocus

- Refocused cable strikes with all crews and departments
- Introduction of AON spot checks (Internal incident reporting)
- Identifying risks with immediate corrective actions
- Continued OHC investigations and involvement
- Disciplinary investigations on all cable strikes
- Focused toolbox talks

2017 Vision

- Scheduled safety meetings with management attendance
- Generate discussions by:
 - Reporting Near Misses
 - FLHAs (Field level hazard assessment)
 - Reviewing quality of STOP (safety observations)
- “Learning Lessons” to and from other departments

2017 Vision

- Corrective Actions: Eliminated with Engineering Controls
- MOC (Management of Change)
- PSI (Potentially Serious Incidents)
- Risk Reduction

Implementations to Reduce Cable Strikes

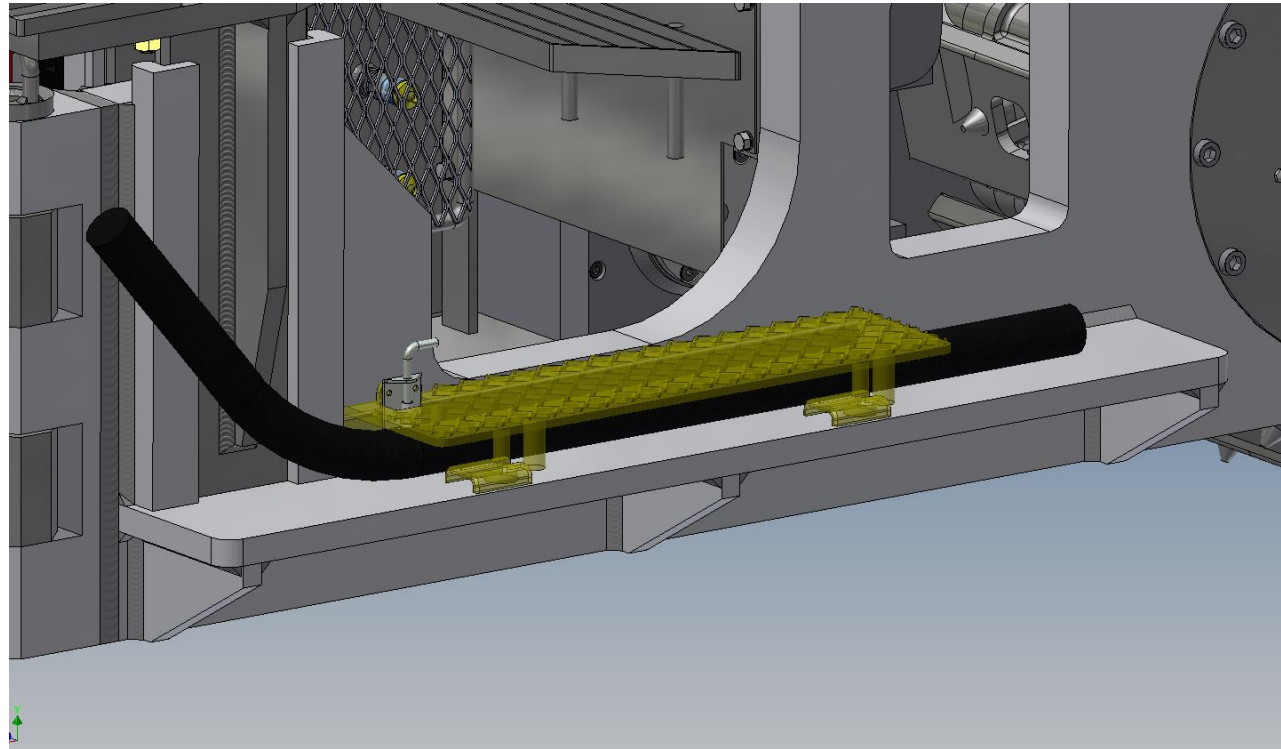
- Reviewed progress & awareness at Spring & Fall Town Halls & Safety Stand Ups
- Front line supervisor spot check goals
- F.L.H.A.s
- Hazard recognition
- Stop observations
- SOPs created:
 - Two rotor cable whip tie off
 - Two rotor cable tie off behind miner
 - Cable tray extensions on side pass bridges
 - Four rotor standard tie off on side pass bridges
- Continuous improvement implementations:
 - Two rotor cable step
 - Two rotor cable skid redesign
- All DOs are reviewed at toolbox meetings



Continuous Improvement Implementations

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- Two rotor cable step



Cable Strike Reporting

AON Reports

2016

Includes property damage, near misses, & employee injury incidents

- There were **244 AON** reports at K1 Mine in 2016. Of this number, there were **35** incidents pertaining to cable incidents

2017

Includes property damage, near misses, & employee injury incidents. **Introduced spot checking.**

- Of the **396 AON** reports at K1 Mine, there were **222** spot checks and **103** were “cable” spot checks in 2017.

STOP Observation Reports - 2017

Of the **900** STOP Observation Reports submitted, **120** pertained to potential cable strikes.

























K1 Mine Manager Cable Strike VM Board

2017
Cable Strikes

	J	F	M	A	M	J	J	A	S	O	N	D
DO	2	0	1	2	1	0	0	0	1	0	0	0
Near Miss	4	1	3	2	2	3	0	0	1	0	3	1
Spot Check	0	0	2	0	6	2	9	10	9	17	7	7
Engineering Controls					1							
					miner step cable rail							


2018
Cable Strikes

	J	F	M	A	M	J	J	A	S	O	N	D
DO	1											
Near Miss	5											
Spot Check	10											
Engineering Controls	-											

2017-Cable Strikes:			
Reported to Mines Branch as Dangerous Occurrence			
Crew			
Jan.			Jan 10 - Chatterbox & Limestone under 10' - 600' 50' on track - 100' from track Jan 16 - Chatterbox & Limestone under 10' - 600' 50' on track - 100' from track
Feb.			
March			Mar 20 - 100' 50' on track - 100' from track
April			Apr 4 - 100' 50' on track - 100' from track Apr 10 - Cable Push - 100' from track
May			May 5 - 100' 50' on track
June			
July			
Aug.			
Sept.			1107 - 100' 50' on track - 100' from track
Oct.			
Nov.			
Dec.			

2018 Cable Strikes Reported to Mines Branch

Crew

Jan.		A-0124/18	Shuttle car cable purchased @ 150
Feb.			
March			
April			
May			
June			
July			
Aug.			
Sept.			
Oct.			
Nov.			
Dec.			

K1 Mine Superintendents Cable Strike VM Board



Successes

- Employees have become more empowered to take corrective measures and reduce the risk to themselves and their co-workers



K1 UG Hazard Elimination Parking Contest

K1 Underground Hazard Elimination December 2016 Premium Parking Winners:



**Darius Bombback, Kelly Slusarchuk,
& Tyson Leis**

**Thanks for making our workplace
safer!**

01008 Car and Loader Setup for BT Cutting

The miner cable was on the floor directly behind the miner. When miner would begin cutting, the cable would have been covered in muck and in the position to be struck by the loader.

Slack was pulled up and cable hung.



K1 Underground Hazard Elimination March Premium Parking Winner



Chad Schultz

**Thanks for making our
workplace safer!**

Potential 4160 Cable Strike

An existing 4160 cable was at the entrance of 1002's room.

The hung cable was out of sight when proceeding through the door (due to the strip door flaps) and would potentially come in contact with the vehicle if one entered through the door too far to the left. The cable was de-energized and secured to the back an additional 8 feet to eliminate this hazard.



Lessons Learned

When the focus was put on education and awareness, and the supervisors and crews were held accountable to the existing policies and procedures, the frequency of the incidents was reduced dramatically.

The challenge continues to be getting the cable strikes to zero and keep the spotlight on it to prevent complacency from creeping back in.

Closing

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