

2015-11-18

WMEA Fort Worth, TX Group 2

8 People 5 Miners & 3 Vendors

Group Leader

Monte Wilke Westmoreland Coal; Western Energy Co.... Colstrip. Montana, USA

Chris Christopher

Rob Boksteyn

Ross Lenzen

Bruce Salter

Murray Duncan

Lambert Skubal

Don Patterson

Trapper Mine

Flanders of Canada

Freedom Mine, North American Coal,

AEP Dalet Hills Lignite Co.

NEXANS Amer Cable

Luminant (Three Oaks)

DCS

Colorado

Edmonton, AB

North Dakota

Mansfield, LA

Stettler, AB Canada

Elgin. TX

Tyler, TX

The Topics will tend to be mixed....

SAFETY ITEMS:

Damage in Cable; Need to open jackets to see damage even if it didn't trip out....

Shield Damage: A dozer grouser pulled the shield apart, didn't fault the cable yet...

Murray Duncan Amercable

Training new electricians: revolving door- New Hires

Chris Christopher

Convert from Pothead and Couplers to Junction (Rabbit) boxes... 8kV & 25 kV... pin sizes different so the two cannot be mixed up.

Ross Lenzen

Parallel Path Issue: Have to be careful not to have too much cable in system....? Lambert is going to give me an email with the calculation...

Lambert Skubal

NEW INNOVATIONS & TECHNOLOGY:

Arc Flash Hazard

Lambert – Use SKM software

Don Patterson... DCS may offer engineering assistance with the calculations, drawings, training and general compliance. (Jerry Endres)

495 Crowd Tachometer: OEM cost \$ 59k twice per year... Avtron equivalent \$ 1.7 k over 1-1/2 yrs no failure

Ross Lenzen

4 four AC Draglines now running (well, 3 are in production, the fourth is running but not hard production).

Pros: Simpler rotating vs. DC

Cons: With 150 draglines built with DC equipment, DC spares, may be available...
Not necessarily so with AC Drives

Observation/ Opiniion: DC will be around for a long time still...

Don Patterson DCS...

PROBLEMS & SOLUTIONS:

ROSS LENZEN **Problem:** Pilot wire in junction boxes that opens first with tension on the cable. MSHA requirement that has not been required in (District 9) in the past.

Problem: Substation fence grounding and bonding, including the 3 strands of Barbed Wire. Ross used #2 awg bare copper: weave through the fabric.

Problem: Generator Grounding

Ross Lenzen mentions Mike Holt video that describes the NEC perspective on generator grounding. Conflicts with Chad Simpson & Peter Saint recommendations and enforcement.

Monte Wilke **Problem:** The voltage rating of the grounding conductor from a substation to the ground field (ground well) must be at least the phase to phase voltage rating of the secondary transformer. (Not the phase to ground rating...)

Must measure the ground conductor continuity annually and a record kept. 25 ohms is a maximum according to

Measure the ground well resistance annually. Fall-of potential is a must unless there are many grounding connections on the distribution to allow the use of a clamp-on instrument.

A publication that Chad Simpson, MSHA electrical Inspector Gillette, Wyoming, refers to for enforcement is:

Mine Power Systems

By Lloyd A. Morley

Information Circular 9258

U.S. Department of the Interior

Bureau of Mines

Most of the references in this publication are 1950's

This publication is in the MSHA digital library....

FUTURE MEETING TOPICS;

Bonding & Grounding

Green vs. Bare??? Discussion with MSHA Inspector...

Mine Site MSHA Inspections... Enforcement???

Fall-of-Potential measuring ground wells

FUTURE MEETING SITES:

Any Place that has “The Cheesecake Factory” Close-by... WOW