

March 2015 Contractors Success Meeting

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Agenda



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- Opening
Cliff Mull
- Environmental
Cynthia Christenson
- Audit tools
Rick Haswell
- Work shop
Cliff Mull

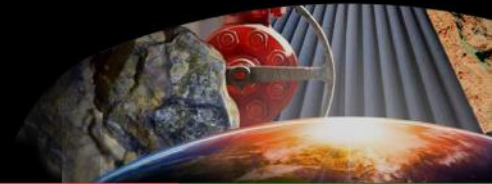
What do you see?



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PFE



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POTENTIAL FATAL EVENT ADVISORY

This Advisory is a NOTIFICATION of an event/condition, or potential which may have resulted in a fatality at a Freeport-McMoRan location. The information below is intended to be utilized for proactive preventative purposes.

OPERATION:	Morenci Concentrator	IMS ID:	
ISSUED BY:	Stephen Crosby	Pers onnel related:	
INCIDENT DATE:	2-2-2015	Equipment-related:	xx
TIME:	09:26 am	Property/Process-related:	
CONTACT INFORMATION FOR ADDITIONAL DETAILS:	Steve_Crosby@fmi.com 928-965-4392	Health-related:	
		Other:	
BRIEF DESCRIPTION/DETAILS OF ADVISORY:	<p>An experienced maintenance employee was conducting visual inspections on running equipment when he noticed a center trougher idler that was not turning on a 24" conveyor. In an attempt to correct the problem, the employee used a pair of channel lock pliers to tap on the frozen idler while the equipment was still in operation. On the third attempt to correct the issue, the idler began to rotate and subsequently pulled both the pliers and his hand between the conveyor belt and the rotating idler. The employee was able to pull the emergency cord, stopping the conveyor and initiate a May Day over the radio. Coworkers responded to the scene and were able to free the employee's hand. The employee was fortunate and only suffered bruising to the right hand.</p>		

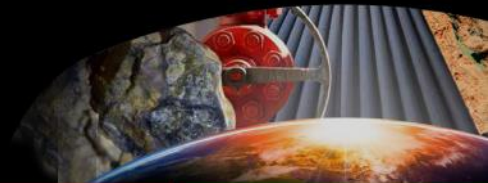
Review Live Testing and Trouble shooting...Is it really?

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Oil-Filled Electrical Equipment / PCB Management Training Morenci 2015



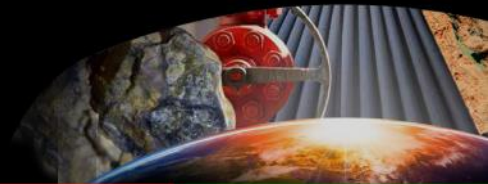
What are PCBs?



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- PCB - acronym for polychlorinated biphenyl
- PCBs
 - Are very stable (one of the most stable organic compounds known) and decompose very slowly once they are released into the environment
 - Exhibit low water solubility, low vapor pressure, low flammability, high heat capacity, low electrical conductivity, and have a favorable dielectric constant for use in electrical equipment
 - Were mostly manufactured between 1929 and 1977
 - Are toxic and persistent
 - Are one of the most widely studied environmental contaminants

Where Are PCBs Found?



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➤ In oil-filled electrical equipment such as:

- Transformers
- Capacitors (both small and large)
- Light Ballasts
- Oil-Filled Circuit Breakers (OCBs)
- Magnets
- Potential Transformers
- Circuit Transformers
- Voltage Regulators
- Manual or Automatic Circuit Reclosures
- Busing Potential Devices
- Feeder Regulators
- Bushings

➤ In non-liquid forms such as:

- Compound/Tar Filled Equipment

Morenci's Oil-Filled EE/PCB Management Program

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- Overall program is described in the Morenci Oil-Filled Electrical Equipment / PCB Management Plan

- Morenci maintains a comprehensive oil-filled electrical equipment inventory
 - Includes supporting analytical documentation for the equipment
 - It is critical that the inventory is maintained in order to comply with Freeport-McMoRan Inc. Corporate expectations

Primary Responsibilities For Contractors

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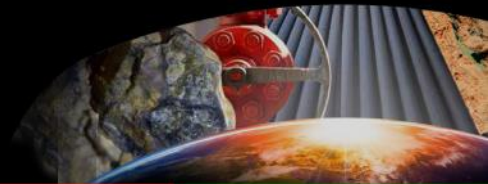
- When the following occurs Contractors must submit a completed Electrical Equipment Data Form to the Morenci Environmental Department:
 - New oil-filled electrical equipment is purchased and brought to the site;
 - Previously used oil-filled electrical equipment is transferred to the site;
or
 - A piece of oil-filled electrical equipment is moved from one location to a new location (even if one of these locations is storage)
- Ensure that any new, previously used or transferred piece of oil-filled electrical equipment has an established and verified PCB concentration of equal to or less than 2 ppm PCBs
- Morenci will not accept transferred or purchased oil-filled electrical equipment that was at any time reclassified from a PCB concentration of greater than or equal to 50 ppm

Primary Responsibilities For Contractors (cont'd)

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- Coordinate with the Environmental Department if it has been determined that an oil-filled piece of electrical equipment is going to be recycled, soled, scrapped, disposed or sent off site for repair
- Only equipment with a verified PCB concentration of less than 2 ppm will be permitted to be sent off-site for repair without coordinating with the Environmental Department prior to transport
 - Equipment with concentrations of greater than or equal to 2 ppm must be coordinated with the Environmental Department to ensure draining and proper management of oils
- Bring all oil-filled electrical equipment that is deemed for recycle, sale, scrap, or disposal to the Environmental Yard
- Only store oil-filled electrical equipment in areas previously designated for that purpose by Morenci Electrical or Environmental personnel

Oil-Filled EE Management



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- PCB concentration of all transformers must be established through analytical testing.
 - The Environmental Department can assist with obtaining oil samples
- For newly purchased, transferred or re-built pieces of oil-filled electrical equipment, documentation from the manufacturer regarding an analysis for PCB concentration of the oil used is an acceptable form of analytical information
- PCB concentration/classification of large capacitors and fluorescent light ballasts shall be established by manufacture markings or labels (e.g. manufacture stamp states “NO PCBs”)
- All oil-filled electrical equipment must be marked with some form of identification
 - The preferred form of identification is the serial number located on the manufacture name plate
 - If, however, the name plate is damaged or missing, the equipment must be labeled with a unique identification number

Oil-Filled EE Management



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- Upon removing a electrical equipment or light fixtures from service, all fluorescent light ballasts and/or capacitors designated for disposal must be immediately removed from the fixture and evaluated for PCBs
- All ballasts and capacitors designated for disposal must be taken to the Environmental Yard
- Some apparent dry electrical equipment may contain small amounts of fluid or potting material which may contain PCBs therefore, all dry electrical devices should be taken to the Environmental Yard for evaluation and not placed directly into scrap metal storage containers
- The Environmental Department shall be notified if any leaking equipment is identified (*leak* or *leaking* means any instance in which a transformer has any dielectric fluid on any portion of its external surface)

Oil-Filled EE Management



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- Removing/Replacing Oil - When it is necessary to remove and replace or add oil to a transformer the following must occur:
 - Verify that the PCB concentration of the oil in the transformer has been established
 - The oil may be removed and placed in DOT approved containers then transferred to the Environmental Yard for determination of ultimate disposition
 - Under no circumstances shall oil that has been removed from a piece of oil-filled electrical equipment be placed in any dedicated used oil containers and all ultimate disposition of dielectric fluid will be determined by the Environmental Department – NO EXCEPTIONS!
 - The replacement oil or new oil that is to be added to the transformer must have a verified PCB concentration of less than 2 ppm

Spills and Contact

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- Refer to Morenci's incident reporting protocols in the event that oil is leaking or has been spilled from electrical equipment.
- General description of responsibilities:
 - The Environmental Department must be immediately notified through the spill hotline (928) 865-7745 (SPIL); and
 - The Environmental Department with support from the functional area responsible for the equipment will work together to address the spill.

Please contact

Cynthia Christenson

928-965-1030

cynthia_Christenson@fmi.com

for information regarding electrical equipment on site and electrical equipment data forms!

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Audit tools Work Smart Not Hard

Richard Haswell- Southwest Energy

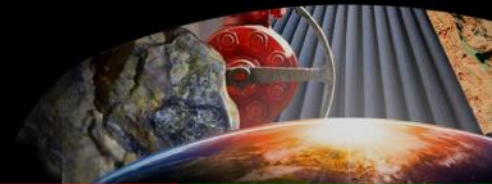


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Workplace, vehicle and equipment Audits



MSHA INSPECTION



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EVENT CITATION SUMMARY			
3/4/2015	S&S	Non S&S	Total Citations
FMMO	25	69	94
FMMO Contractor Total	4	9	13
MORENCI TOTAL	29	78	107
PTC SAFFORD	0	1	1
TOTAL CITATIONS FOR EVENT #6619015			108

MSHA Quote. Are we conducting exam with the proper end result in mind or are we setting the expectation that it is simply a compliance thing.

Work place examinations could have prevented over half of these. There needs to be much more supervisor involvement and follow up.

Work place exam process



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- Use the flip charts to design a work place exam process.
- Use the flip charts to design an equipment inspection process.

The process



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- 1. Understand what needs to be looked at/for
- 2. Design the work place exam
- 3 Train employees on what to look for
- 4. Have employees show you they know what to look for
- 5. Instruct them to call in any defects/hazards that need immediate correction
- 6. Supervisors are reviewing the exam/inspection
- 7. Repair orders are put in place/ hazards are corrected or the correct people are notified
- 8 FOLLOW UP ON CORRECTIONS (ACTION)
- 9. Monitor employees conducting them and coach/praise
- 10. Update as necessary

Workplace Exams



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- Who did the exam?
- How are you qualified?
- What was your most recent item that had to be corrected?
- Is there anything that you or your company could not correct?
 - What was done about it?
- When was the last time your Supervisor came and reviewed your exam or assisted you with your exam?

Ground Control



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- Have you been trained to inspect high walls?
- Who trained you?
- What is the minimum distance from a high wall to the work area?
- What do cracks at the crest of a bench indicate?
- What is the height required for a berm?
- Can you work between equipment and a high wall?
- What does the “Slope Stability” Division Do?

- CRG.

Workplace Examinations.



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- What is the emergency number for help?
- How do you use a radio to summon help?
- Where is the nearest emergency gathering point or escort point?
- Is this area a restricted access area?
- How did you gain permission to enter?
- Do you have the necessary permits and equipment to be here?
- Are you sure everything is correctly locked out?
- Have you been trained to enter and or lock out?

Equipment Inspection



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- Do you have task training to operate this equipment?
- How often do you inspect your equipment?
- Who trained you to inspect it?
- Who reviews your inspection reports?
- Have you ever had a piece of equipment you deemed unusable?
- What was done?
- What items would take the equipment out of service?
- How do you check the brakes?
- Are you checking the berms on all roads travelled?

Vehicle Inspection



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- Have you been trained to operate this vehicle?
- How do you check the seat belt on your truck/van?
- When do you need to have a working buggy whip?
- At FMMI is a backup alarm optional?
- When do you need to use wheel chocks?
- Is a cracked windshield an indication that the equipment is unusable?
- What does a GREEN Pit License indicate?
- When was the last time you had to take a vehicle out of service?
- When does your Supervisor review your report?

Audits



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- We will be asking for this information on audits.
- If this is found to be unacceptable we will stop until it is corrected.