



Item #2

# Electrical Safety Audit Update

POLA Electrical Mechanical Division-April 2015



# Port Electrical Mechanic History

- In 2007 the classification of *Crane Container Mechanic* transitioned into "*Port Electrical Mechanic*" or PEM. This allowed a Journey level Mechanic to perform both electrical and mechanical work throughout the Port. POLA and the IBEW worked closely on the class specifications, transition and extensive training.

# Qualifying Classifications

- Employees in the following classes (with experience) qualified to take the PEM exam:
  - Crane Mechanic (IBEW)
  - Electrician (IBEW)
  - Welder (SEIU)
  - Machinist (SEIU)
  - Electrical Craft Helper (IBEW)
  - Mechanical Craft Helper (SEIU)

# Jurisdictional & Safety Issues

- IBEW electricians raised concerns about electrical jurisdiction and safety by non-electricians.
- Some complaints were anonymous and sent to the Board of Harbor Commissioners.
- Third party URS/Martin Technical & Zoubek were brought in to conduct a safety audit in the PEM Division in 2012.

# Audit Methodology & Conclusions

- Audit conducted July & August of 2012.
- Audit report released in January of 2013.
- Audit implementation plan released June of 2013.
- Audit was performed to investigate if complaints and concerns by POLA workers regarding electrical safety were substantiated.
- Scope of audit covered 19 major areas.
- An overall score of 5.26 was given which relates to an average rating (out of a possible 10).



# Safety Audit findings

- *“C&M Management shows genuine concern for the safety of all workers and generally provides a reasonable effort to comply with safety requirements; However gaps are present within Division 147 (PEM) related to safety communication, safety training, and knowledge on electrical safety requirements. ”*

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## A total of 140 safety recommendations suggested

46% are complete

- 65 items completed to date.
- 75 items pending completion
- Requires funding or other POLA Division responsibility

# Completion Highlights

- Electrical Engineer hired to act as the Technical expert. Works directly for C&M and has extensive Port experience.
- Electrical Supervisor hired for the Electric Shop, has extensive electrical background including training experience with the IBEW.
- A third PEM Supervisor was approved in the budget. Emergency appointment made.
- A 24 hour, 7 day shift coverage was established and 815 ships AMPed in the last 12 months.



# Electrical Safety Committee

- An Electrical Safety Committee was established as recommended by safety audit
  - Members include
    - IBEW local 11
    - POLA Chief Electrical Engineer
    - Journey level Port Electrical Mechanics (2)
    - POLA Risk Management Representative
    - Supervisors from the following shops
      - HVAC
      - Building Operating Engineer
      - Port Electrical Mechanical Division
      - Port Electrical Division

# Funding

- Fiscal Year 2014-15
  - \$50,000 to establish contract with Square D to test and provide switchgear maintenance.
- Fiscal Year 2015-16 (proposed) \$415,000
  - \$240,000 for Infrared Inspections, circuit breaker testing, Relay testing, transformer oil analysis and GFCI testing.
  - \$175,000 for job hazard and arc flash analysis
- Upcoming Fiscal Years-projected annual funding of \$400,000 (\$4 million in 10 years)

# Yang Ming Ship Amp Plug Explosion (Feb 2015)

- A ship amp cable exploded at Yang Ming Berth 121 on February 9<sup>th</sup>, 2015.
- C&M Electrical Engineer, George Basha, investigated the incident and concluded the cause of the incident was termination failure inside the plug.
- All POLA equipment functioned as designed and no injury to any personnel occurred and fault was contained within AMP Vault.

## Ship AMP Plug cable damage



Forward cable plug housing completely damaged and burnt off



For reference-red plug on the right is undamaged.

# Questions?