Industrial Hygiene & Safety Engineering in Environmental Management

A New EHS Process

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Industrial Hygiene

- Anticipation, Recognition, Evaluation, and Control of Occupational Health Hazards
- Art and Science
- Employees and Citizens
- Risk Analysis in the workplace and community
<table>
<thead>
<tr>
<th>IH&amp;SE Safety Resource Manual Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Hazardous Materials in UPRR Workplaces</td>
</tr>
<tr>
<td>• Hearing Conservation</td>
</tr>
<tr>
<td>• PPE</td>
</tr>
<tr>
<td>• HazCom (GHS)</td>
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<tr>
<td>• Lead In Construction</td>
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<tr>
<td>• Respiratory Protection</td>
</tr>
<tr>
<td>• OSHA &amp; FRA Inspection Response</td>
</tr>
<tr>
<td>• Radiation – Ionizing &amp; Non-Ionizing</td>
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<tr>
<td>• Pandemic Planning</td>
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<tr>
<td>• RF Telecom Program</td>
</tr>
<tr>
<td>• Fire Protection Policy</td>
</tr>
<tr>
<td>• Tunnel Safety Policy</td>
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<tr>
<td>• LockOut Tagout</td>
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<tr>
<td>• Confined Space</td>
</tr>
<tr>
<td>• Electrical Safety</td>
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<tr>
<td>• Forklift Safety</td>
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<tr>
<td>• Fall Protection</td>
</tr>
<tr>
<td>• Fire Safety</td>
</tr>
<tr>
<td>• Overhead Crane</td>
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<tr>
<td>• Wildfire &amp; Flood Response</td>
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<tr>
<td>• Laser Safety</td>
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<td>• Heat Stress Prevention</td>
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</tbody>
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IH&SE Analytes & Activities

- Diesel Emissions
- Radiation – IEEE Standards
- Welding Fumes
- Frac Sand & Locomotive Sand
- Organics
- Herbicides
- Isocyanates
- Lead in Construction
- Tunnel Egress Systems
- Creosote
- EEBA Design
- Workstation Ergonomics
- Locomotive Seat Design
- Safety Product Approvals

- Mold Program Speciation
- Silica Ballast Unload & Asbestos Evals
- Yard Dust and Organics Evaluations
- Noise - TWA and Octave Band Analysis
- OSHA Employee Training
- IH & Safety Web Site
- Emergency Response Planning
- Litigation Support
- LNG Locomotive R&D
- UP/Community Projects
- Whole Body Vibration
- FMEA Analysis
- Safety Audits
- SDS Reviews
Community Noise Projects

- SSPaul Yard Expansion
- UP Public Relations Support
- Community FRA Noise Education
Brooklyn Yard Intermodal
Community Noise and Yard Safety Project
Brooklyn Yard Intermodal
Original Tonal Alarms
Hostlers & Cranes

- Capacity® hostler, Side view, 6th wheel down
- Capacity® hostler, Rear view, 6th wheel up
- RTG Crane
  - Movement alarm, one each leg, 10' height
  - Startup / proximity alarm
  - Additional startup / proximity alarms on cab
- Current alarm, mounted on inside rear frame, underneath 5th wheel
Brooklyn Yard Intermodal
Broadband vs. Tonal Alarms on Hostlers
(30’, directly behind hostler)

Tonal Alarm

Broadband Alarm

HostlerTonal.mp4

HostlerBroadBand.mp4
Brooklyn Yard Intermodal Broadband Alarm Safety Training

SAFETY:

• Trucker Training

• Push Button Broadband Alarm Sound Box

• Yard Employee Training
Bridge Maintenance

Environmental: Asbestos Coatings

Safety: Fall Protection

Health: Welding on Painted Surfaces
Goal: Develop Easy to Use Occupational Health Risk Mitigation Process Before Soil Disturbance Activities Begin:

- **Inorganics**
  - Lead, asbestos, silica
  - Consider Particle Size & Morphology
  - Develop Soil Action Levels

- **Organics**
  - Volatile and semi-volatile organics
  - Benzene, gasoline, PCB’s, creosote, PNA’s
  - Use Best Practice Process

- **Pathogens**
  - Hanta Virus – existing policy
  - Valley Fever – Soil Spore exposure risk
  - Develop Process for high dust activities
Future Valley Fever Risk Mitigation Process

- The Best Way to Reduce Valley Fever Risk is to Avoid Dust Inhalation – Education
- Exposure Risk in SouthWest
- Difficult to Test spores
- CalOSHA Guidance
- Vet with Health Services, IH&SE, Engineering
- Develop Process for high dust activities
- Consider Cab Filter Design
Conclusion

• IH&SE team new to EMG
• We support EHS Projects
• Small high tech team evaluates and addresses chemical and physical risks systemwide
• Anticipation, Recognition, Evaluation, and Control of Occupational Health Hazards is key
• Contact Your IH & SE Teams for EHS Projects
• Questions?