

2023 Fall Conference

Robert S. (Rory) Johnston, PE, GE, BCEE

Case History: Site Safety is the Highest Priority

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Managing Principal-Langan

Introduction-Some Questions.....

- Your firm's safety program?
- Your Total Recordable Incident Rate (TRIR)-looking in the rear view mirror?
- More environmental than geotechnical?
- Health and Safety Plans/Evaluations for all field work?
- Definition of field work?
- Does it deal with changing site conditions?
- Documentation of observations, near misses, tailgates Job Safety Analyses (JSAs)
- Is it auditable? How often do you hold audits?
- Is it generative?
- Is it supported top down? And bottom up?
- What is the goal/metrics? Tied to compensation? Safety culture?

ENR Article July 9, 2021

Drill Rig Accident Kills Engineering Manager, Injures Operator in Philadelphia

Drill rig accident during unloading at a Philadelphia pedestrian bridge project July 6 killed Langan site inspector Kirankumar Mistry, 56. Philadelphia officials and engineering firm Langan have confirmed that a company project manager and geotechnical engineer died July 6 in a nighttime drill rig accident while he was on site to inspect foundation work for a pedestrian bridge project.

In a July 9 statement, Langan CEO David T. Gockel identified the dead man as Kirankumar Mistry, a 56-year-old senior engineer and 23-year firm veteran. Mistry, of Marlton, NJ, was crushed and the drilling rig operator injured when the rig owned by Cook Drilling Corp., Trevose, Pa., fell over as it was unloading material from a tractor-trailer at 8:30 PM, city fire department officials said. Efforts to extricate Mistry and the operator took 15 minutes. He later died at Penn Presbyterian Medical Center

The drill rig operator was unloading pipe for the casing when the catastrophe occurred.







FIELD EMPLOYEES AND THE LINE OF FIRE

The Paradox



- To excel in geotechnical observation=Proximity!
 - Construction equipment
 - Uneven ground
 - Falling objects
 - Energized equipment/lines
- What is the Line of Fire?
- How to identify?
- How to stay out of it?
- Teamwork & Observations

Line of Fire Awareness/Training

- Training to Avoid Being Injured by:
 - Moving objects
 - Releasing energy
 - Working underneath a lifted load
 - Working next to unstable materials
 - Working next to objects under tension
 - Placing hands in moving/rotating equipment
- Avoidance By:
 - Last Minute Risk Assessment (LMRA)
 - Positioning away from moving objects, vehicles, pressure releases, and dropped objects
 - Provide and obey barriers and exclusion zones
- **BUT TRAINING IS NOT ENOUGH.....**

What is the Line of Fire?

Construction Industry

The line of fire is being in harm's way. Line of fire injuries occur when the path of a moving object and an individual's body intersect.



Caught-in/Between

Examples include:

- Moving gears
- Moving equipment and fixed object
- Shifting material



Dropped Loads/Objects

Examples include:

- Dropped loads
- Dropped tools
- Falling objects



Struck-by

Examples include:

- Release of energy
- Moving equipment
- Rolling objects

Don't Put Yourself in Harm's Way!

www.safetytalkideas.com



“relating to or capable of production or reproduction”

GENERATIVE SAFETY CULTURE

Langan's Health & Safety Vision Statement 2021



President / CEO – David T. Gockel

Langan is committed to fostering a generative health and safety (H&S) culture that cares for and benefits our employees, clients, contractors, families, and communities. We strive to be industry leaders in the advancement of incident and injury prevention – Langan's goal is to be SAFE (Stay Accident Free Everyday!).

Executive Committee Health & Safety Commitment 2021

Langan's Executive Committee is dedicated to providing a healthy and safe work environment to Langan employees. This dedication is demonstrated through the Executive Committee's leadership and commitment to develop and improve the Firm's Health and Safety Program and culture.

We convey our commitment to creating a healthy and safe work environment through our corporate health and safety message: **Langan's goal is to be SAFE (Stay Accident Free Everyday!)**



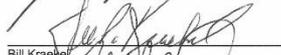
Langan's Executive Committee Members Endorsement:



David Gockel



Rudy Frizzi



Bill Kraebel



Steve Ueland



Alan Poeppel



Richard Burrow



George Leventis



Ron Fuerst



Greg Eiko



Rory Johnston



Lori Simpson



Ryan Linthicum



BEHAVIOR BASED SAFETY PROGRAM & LAST MINUTE RISK ASSESSMENTS (LMRA)



TAKE 5! *Follow these 5 STEPS...*



S – Stop, what has changed?

T – Think about the task

E – Evaluate potential hazards

P – Plan safe approach

S – Start task / Stop & regroup

STOP WORK AUTHORITY



Stop Work Authority

Stop any work or behavior you deem unsafe to yourself or your coworkers.



*You will **never** be penalized for stopping unsafe work or speaking up about hazards and injuries.*

Stop Work Authority

- Unsafe Condition Observed
- Stop Work/Langan Service
- Resolve Unsafe Condition
- Notify Senior Associate/Stockholder
- Restart Work/Langan Service





ROOT CAUSE INVESTIGATIONS/LESSONS LEARNED

Procedures - Underground Utility Clearance Policy

1. One-Call System Mark-Out
2. Private Utility Mark-Out (*)
 - Private Properties
 - Areas not covered by One-Call
3. Site Utility Plan Review
4. Site Visit (Inspection)
 - Prior to or day of fieldwork
5. Soft Digging(*)
 - First 5 feet of depth



Underground Utility Clearance Policy

- Training Completed
- Compliance Date: September 1st
- Feedback/Comments
 - Positive Feedback
 - Comments/Suggestions Provided
 - Review/Revise (4th Quarter)





WHERE ARE OUR FIELD EMPLOYEES?

Tracking Dashboard - Safe Work Certificate (SWC) Program

- Track SWC Progress
- Searchable by:
 - ✓ Project Number
 - ✓ Project Manager
 - ✓ Shareholder
 - ✓ Principal In Charge
 - ✓ Client
- SWC Status/Updates
- Field/Employee Locations (Map)
- Sign-In / Sign-Out Tracking



Implementation - Safe Work Certificate

- Three Phase Implementation
 - Office Location (Geographical)
- Implementation Timeline (Tentative)
 - Start: October 2023
 - Complete: December 2023
- Phase Implementation Schedule
 - Office Notification (Email)
 - Training (LMS)
 - SWC Brown Bag (Q&A)





GOAL ZERO!

<p>Work with a valid work permit when required</p> 	<p>Conduct gas tests when required</p> 	<p>Verify isolation before work begins and use the specified life protecting equipment</p> 	<p>Obtain authorisation before entering a confined space</p> 	<p>Obtain authorisation before overriding or disabling safety critical equipment</p> 	<p>Protect yourself against a fall when working at height</p> 
<p>Do not walk under a suspended load</p> 	<p>Do not smoke outside designated smoking areas</p> 	<p>No alcohol or drugs while working or driving</p> 	<p>While driving, do not use your phone and do not exceed speed limits</p> 	<p>Wear your seat belt</p> 	<p>Follow prescribed journey management plan</p> 

LANGAN'S GOAL IS TO BE SAFE!



Stay Accident Free Everyday!