

Executive Summary

Utility Sector SIF Research Study Project



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A

Participating Organizations

Seven US-based organizations representing the electric, gas, and water utility sectors actively participated in three on-site meetings and off-site data collection activities. In addition, four other utility organizations provided data to the research study. Due to the proprietary nature of the data, we are unable to provide specific names on this report. If further information is required, please contact Andrew Goodman at DEKRA.

The research study was led by DEKRA Organizational Safety and Reliability

- Don Martin, SVP
- Alison Black, Director of Research

B

Objectives

Launched in November 2016 and completed in December 2017, the study project was designed to:

- Promote advocacy of SIF prevention in the Utility sector, with emphasis on Life-Saving Rule Processes, Pre-Task Risk Assessments, Calibrated and Accurate Perception of Risk, Near-Miss Reporting, Contractor Management Processes, and Over-the-Road Motor Vehicles
- Build definitions and decision logic for SIF exposure potential determination, to be used by all participating organizations
- Identify SIF Precursors
- Establish culture diagnostic indicators relative to SIF outcomes
- Analysis of variables and relationship to SIF exposure and prevention
- Identify relevant leading/lagging indicators and benchmarks
- Publish aggregate results and findings from the study



Headline Results

1.

The SIF exposure for the Utilities sector is 32%, higher than the all-industry average of 25%.

- a. Based on a sample of a total of 1,060 recordable incidents.
- b. Individual organization SIF rates were weighted to account for varying sample sizes by each organization.
- c. SIF exposures across all 11 organizations ranged from a low of 12% to a high of 46%.

2.

60% of all Utility Sector SIF exposures can be attributed to two exposure categories:

- a. Over the Road Motor Vehicle exposure
- b. Pinched/Caught Between/In the Line of Fire/Struck by Objects in the Vertical or Horizontal Plane

3.

The data from our Critical Controls Survey indicates that the protections for Motor Vehicles and Line of Fire/Pinch Points are the lowest scoring.

4.

Critical Controls for the top six SIF exposure situations were developed and vetted by the study group participants. This information is available for use in Field Verification of Critical SIF Controls Checklists.

5.

Preliminary research has detected significant relationships between several cultural factors and SIF exposure. Specifically, there is evidence that sites with higher OCDI scores in Management Credibility, Perceived Organizational Support, Organizational Value for Safety, Procedural Justice, and Leader-Member Exchange have lower SIF rates (n = 32 sites)

6.

Looking at incidents through the lens of SIF Exposure Potential changes how we approach risk management. SIF metrics are necessary to monitor progress on controlling SIF exposure and for sustaining permanent change. Three SIF metrics were developed and recommended for SIF benchmarking within the Utility sector.

- a. OSHA Recordable SIF Rate (this is standard)
- b. SIF Exposure Near-Miss Rate (this is groundbreaking)
- c. Total SIF Exposure Rate (this is groundbreaking)

D

Headline Recommendations

- 1.**
Build additional checklists to complement the six developed by the team.
- 2.**
Develop internal systems to support the use of checklists, collect field data, analyze results to improve controls. Share within the research group and DEKRA.
- 3.**
Use the SIF-specific questions when conducting organizational culture diagnostics. This will help further validate the detected relationships between specific cultural factors and SIF Exposure.
- 4.**
Develop internal systems to collect the SIF metric data as defined by the group. Include in local dashboards and use for Utility industry SIF benchmarking.
- 5.**
Initiate improvements to low-rated critical controls, in particular for those SIF exposures related to Motor Vehicles and Line of Fire/Pinch Points.
- 6.**
Prepare for the next meeting with these actions:
 - a. Provide progress report on implementation of recommendations in this report and accompanying slide deck.
 - b. Provide update on the three SIF metrics.

E

Summary

Each organization, and the Utility sector, has a unique opportunity to be at the forefront of two significant steps in the improvement of SIF Prevention.

- 1.**
Field Verification of Critical SIF Controls.
DEKRA, through its experience with approximately 100 SIF clients, has established that conducting regular field verification checks of critical SIF controls is essential for interrupting SIF Precursors and protecting employees from fatal exposures. Yet, many organizations struggle with implementing this field verification processes. The Utilities Sector SIF Study Group has agreed that significant improvement in this control strategy is warranted. Critical SIF controls have been vetted for the top six SIF exposure situations. Processes must be put in place to conduct documented field verifications and data analysis. SIF Protection checklists for the remaining five SIF exposure situations need to be developed as well.
- 2.**
SIF Near-Miss Metric.
A metric of this nature will provide leadership with visibility to SIF exposure situations that are easily overlooked or unrecognized. The SIF Precursors in near-misses are weak or latent signals that must be surfaced to get ahead of the SIF Prevention curve. Successful use of this metric requires leaders to nurture a healthy, reprisal-free climate that supports the reporting and investigation of SIF near-misses. Supported by organizational leadership, SIF Near-Miss can become a game-changing metric.

The latest BLS data on workplace fatalities shows a flat, non-improving trend over the last eight years. The Utilities sector is uniquely positioned to correct this problem and can lead the way for other industry sectors to follow.

It has been DEKRA's pleasure to work with the dedicated safety leaders representing these highly committed organizations. We look forward to coordinating the next steps of our engagement and tracking the results of this body of work.

Please feel free to contact us with any comments or questions. Respectfully submitted,

Don Martin

Alison Black

