



# KES

REDECS

*Research – Develop – Educate – Certify – Support*

Determining the Rescue Potential in Your Workplace



# Introduction

Safety and rescue are symbiotic. A sustainable safety program at the place of employment is the prerequisite for the application of a quality rescue program. It is the primary goal of KES to assist the employer in developing an applicable rescue strategy that is supplemental to the employer's safety program.

Performing a safe and expedient rescue is one of the most misunderstood concepts in our modern industrial society. Workers simply don't know what they don't know in an unplanned attempt of moving an incapacitated human in a challenging environment. Confined space statistics bear this out. Year after year approximately 60% of confined space fatalities are to would-be rescuers. Specifically, coworkers are attempting rescues with little or no training. They are relying on their hyper-adrenalin state of panic and their ill-fated perception of human strength.

The preferred alternative is to develop a rescue program that is based on employee capabilities, and the environmental factors of the workplace and at the same time, develop a working relationship with the local fire/rescue component. Conversely, over reliance of the fire service to save the day plays into this rescue misunderstanding. The fire service will provide substantial emergency medical support and, at times, technical rescue help. Ultimately, the fire service is extremely reliant on the subject matter expertise within the worksite. When the subject matter experts are trained in worksite specific rescue and concise rescue plan development the outcome is greatly enhanced.

***KES will arm the employer with the tools that will help determine the level of training, equipment, and expertise support needed at your specific workplace.***





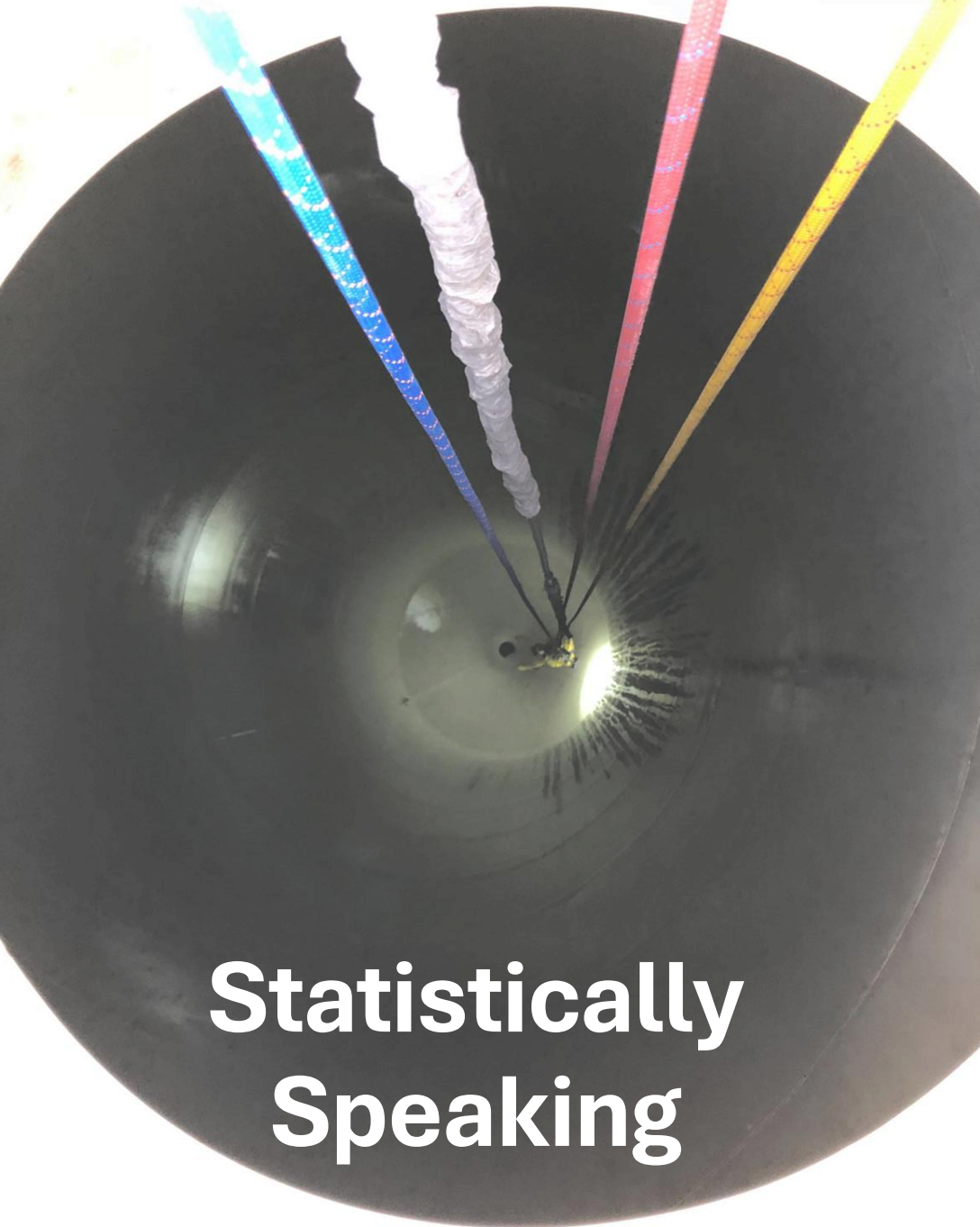
# What is rescue?

1. The act of controlling a life-threatening event.
2. A rescue program is an insurance policy for any quality safety program.
3. The presence of a rescue program adds to a sustainable safety culture.
4. A quality rescue program is more affordable than the alternative of not having one.



Annually, **130** occupational fatalities involving a confined space.





Statistically  
Speaking

About 2.1 million workers enter permit confined spaces annually.

According to NIOSH approximately **60%** of confined-space fatalities are rescuers.

## NIOSH investigation of confined space fatalities:

- **85%** of the time a SUPERVISOR was present, **29%** of the dead were SUPERVISORS.
- **31%** had WRITTEN Confined Space Entry PROCEDURES, **0%** were followed.
- **15%** had Confined Space TRAINING.
- **60%** of "WOULD-BE" RESCUERS died.
- **95%** were AUTHORIZED by supervision.
- **0%** had a RESCUE PLAN, were TESTED prior to entry, and were VENTILATED.



# Rescue Potential Rating



# OSHA

This chart represents three levels of rescue skills devised by KES:

1. **Rescue Technician** heavily driven by OSHA regs – represented by the green area on this chart – 90% solution.
2. **Rescue Competent Person** – moderate skills level – yellow area on this chart – 9% solution
3. **Rescue Qualified Person** – advanced skills level - red area on this chart – 1% solution

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## **General Industry**

**Rescue Technician (RT)**

**90% of the time this level of  
training will meet most  
workplace rescue needs.**

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# OSHA

## General Industry

Rescue Technician (RT)

90% of the time this level of training will meet most workplace rescue needs.

## Moderate Rescue

Rescue Competent  
Person (RCP)

9% of the time .  
The employer will need to plan for this level of rescue need, either in-house, fire service agreement, contracted rescue service, and/or all three options.

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# OSH A

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High Risk  
Rescue

Rope  
Access

Expert in  
Rigging  
and  
Rescue  
Physics

Rescue  
Qualified  
Person  
(RQP)

1% of the time  
this will  
almost always  
require  
outside expert  
help.

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# Rescue Potential Rating (RPR)

- RT Level: 90% of industrial rescues; team can perform *basic* rescues.
- RCP Level: 9% of industrial rescues; team can perform *moderate* rescues.
- RQP Level: 1% of industrial rescues; team can perform *complex* rescues.

On the following four pages are examples of the rating and point scores KES uses to evaluate any given workplace for the purpose of producing a detailed, site-specific rescue program.

## Rescue Potential Rating (RPR)

Conditions	Instructor/Training Level	Points
<b>Non IDLH horizontal confined space</b> - Presents little or no configuration challenges and no high angle potential.	<b>Team Leader</b> <b>Annual training</b>	<b>1</b>
<b>Vertical potential less than 12' in depth.</b>	<b>Team Leader</b> <b>Train 2x per yr.</b>	<b>2</b>
<b>Vertical potential greater the 12' but less than 32'</b>	<b>Team Leader</b> <b>Train 4x per yr.</b>	<b>3</b>
<b>Configuration Issues</b> Overhead space less than 36"	<b>Team Leader</b> <b>Train 4x per yr.</b>	<b>4</b>
<b>Configuration Issues</b> Opening less than 24";converging/inward sloping walls	<b>Team L eader</b> <b>Train 4x per yr.</b>	<b>5</b>
<b>Configuration Issues</b> 36" or smaller pipe entry with one 90° bend	<b>Instructor (CSR)</b> <b>Train 6x per yr.</b>	<b>6</b>
<b>Configuration Issues</b> 36" or smaller pipe entry with multiple 90° bends	<b>Lead (CSR)</b> <b>Monthly</b>	<b>7</b>
<b>Engulfment potential</b>	<b>Lead (CSR)</b> <b>Monthly</b>	<b>8</b>





Conditions	Instructor/Training Level	Points
<b>IDLH potential</b> Lead instructor with SCBA & SABA	Lead (CSR) Monthly	9
<b>Vertical potential</b> Greater than 32', but less than 64'	Lead (Rope) Monthly	10
<b>Vertical potential</b> Greater than 64'	Lead (Rope) Monthly	11
<b>Vertical potential</b> Vertical mobility/horizontal/rope access and positioning	Lead (Rope Access) 2x Per Month	12
<b>Strip mining operations</b>	Specialized 2x Per Month	13
<b>Mining operations</b> Underground also includes underground construction	Specialized 2x Per Month	14
<b>Structural steel/tower rescue</b>	Rope Access(Tower) 2x Per Month	15
<b>Explosive environment with heavy fire loads.</b>	Specialized (Fire) 2x Per Month	16
<b>Open water evacuation</b>	Specialized Water, Train Weekly	17
<b>Transmission tower live-line rope access</b>	Specialized Advanced Rope Access + Live-line, Train Weekly	18
<b>Terrorist attack and natural disasters</b> This level and the next level is extremely rare and could require an instructor team.	Specialized Weekly Training	19
<b>Advance rescue support</b> (including wilderness rescue) More than one hour outside of the available /local resources.	Specialized Weekly Training	20







# Rescue Trends in OSHA

OSHA is replacing existing  
29 CFR 1910.156,  
Fire Brigades standard

To be changed to:  
Emergency Response





# Who Would be Covered by Emergency Response?

All professional,  
volunteer, and  
combination fire  
departments

Primary function of the  
organization.

All general  
industry/workplace  
emergency  
response teams

Collateral duty to regular  
job duties.



## Exceptions to the new EM rule:

- HAZWOPER - 29 CFR 1910.120 (Proposal includes update for PPE to be consistent with NFPA 1990)
- Permit-Required Confined Spaces in General Industry – 29 CFR 1910.146

It also does not apply to employees performing disaster site clean-up or recovery activities (i.e., After the emergency nature of the incident has ended)

***However, in addition to the above-mentioned rules, the new rule does add substantial requirements to all Workplace Emergency Response Teams (WERT).***

## Regulatory Approach of the New Rule that is now Heavily Influenced by NFPA

- 36 NFPA standards addressing technical rescue and firefighting are referenced in the new rule.
- 22 of these NFPA standards are Incorporated by Reference (IBR). All non-mandatory consensus standards that are IBR by OSHA becomes mandatory federal regulations.







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