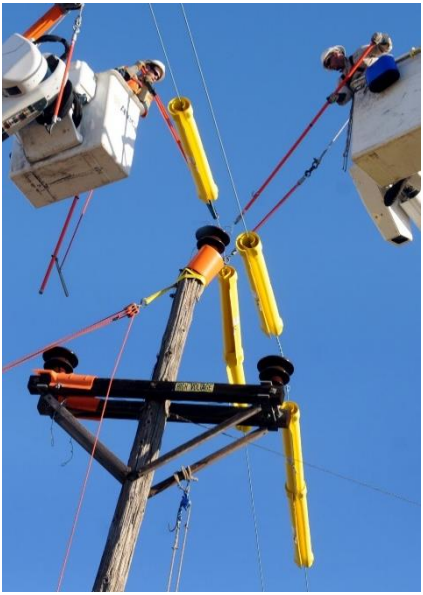


Serious Injury & Fatality Prevention Field Guide

2023/2024 Edition

Table of Contents

Leadership Commitment

“Everyone and Everything is always safe.”

This commitment requires building a SIF prevention strategy that accounts for the realities of our work, including the fact that error is normal. Being human means we will never be able to eliminate accidents. Even our most experienced people will make mistakes.

PG&E’s SIF ***Capacity & Learning Model*** aligns with leading industry partners and no longer sets unrealistic expectations and pressures that all accidents can and must be prevented. Instead, we have redefined safety to be measured by the presence of controls that provide workers the *capacity* to experience failures safely.

This change means we want to plan and execute work as if failure will happen today. It is not a matter of if, but when an accident occurs, we want to ensure all life-threatening, high-energy hazards have adequate controls in place that will provide coworkers the *capacity* to recover safely.

Prevention will always be important, but no one is perfect. No matter how much we try to prevent failure, failure is going to happen. Building *capacity* with the presence of our essential controls is how we can ensure that when an accident occurs, everyone and everything is Safe.

Thank you for putting safety first in all that you do.

Matt Hayes
Vice President, Enterprise Health and Safety
Chief Safety Officer

Purpose

This field guide is a quick reference to help coworkers who perform and touch the work identify the Stuff That Can Kill You (STKY) and essential controls to put in place to meet the demands of the job to build enough capacity to safely recover when an incident occurs.

This guide supplements, but does not replace, existing standards and procedures.

In addition to referencing and using this guide, please apply appropriate local hazard assessment procedures to comprehensively assess each job.

PG&E Keys to Life

These Keys represent our safety commitments that must be followed to help prevent serious injury or loss of life. Essentially, they are PG&E's rules to live by. Always take the time to perform the work correctly, commit to safety daily, and follow the Keys to Life.

1. Conduct pre-job safety briefings prior to performing work activities.
2. Follow safe driving principles and equipment operating procedures.
3. Use personal protective equipment for the task being performed.
4. Follow electrical safety testing and grounding rules.
5. Follow clearance and energy lockout/tagout rules.
6. Follow confined space rules.
7. Follow suspended load rules.
8. Follow safety at heights rules.
9. Follow excavation procedures.
10. Follow hazardous environment procedures.

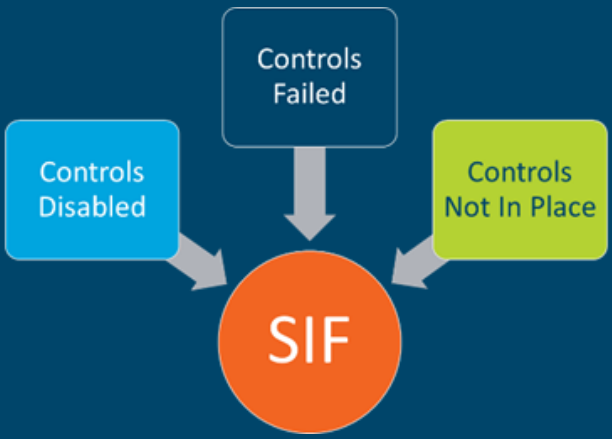
Why do SIFs Occur?

Every workplace serious injury or fatality is the result of STKY hazard essential controls not being in place, failing, or being disabled.

There are multiple things that can cause any one of these three reasons to occur. The material in this guide works to prevent any of these causes from happening.

It is not a matter of **if**, but **when** an accident occurs, our essential controls provide the **capacity** to recover safely.

3 Reasons Why SIFs Occur



Essential Controls

These are controls at the worksite that directly targets the stuff that can kill or seriously injure you (STKY), and when installed, verified, and used properly, are not vulnerable to human error.

These controls can either eliminate a coworker's exposure to a STKY hazard or provide them the capacity to safely recover when a high-energy accident occurs.

What are **NOT** considered essential controls?

Examples include **rules, situational awareness, spotters, three-way communication, training, and warning signs**.

These safeguards are important and will always be a part of prevention efforts, but they are vulnerable to human error and cannot be what we solely rely on to keep us safe from lethal high-energy hazards.

"I do not intend to encroach MAD, but when I accidentally do, what controls do I need to put in place to ensure I have the capacity to recover safely?"

Essential Control

Targets the stuff that can kill or seriously injure you (STKY)

Eliminates exposure *or* provides the capacity to safely recover when a STKY incident occurs

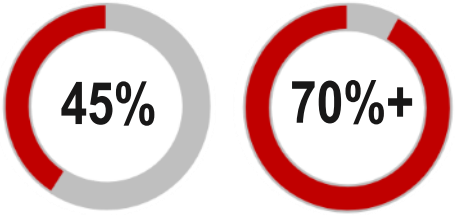
Not vulnerable to human error

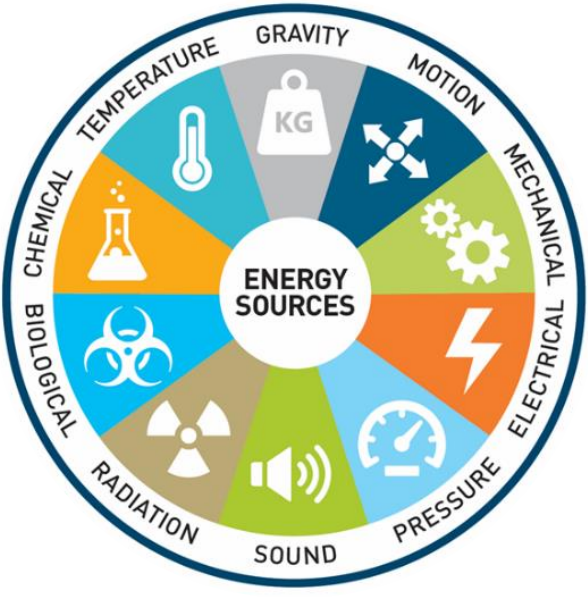
Energy Wheel Hazard Identification

The Energy Wheel is used to aid coworkers in identifying the stuff that can kill you (STKY) and determine what essential controls need to be put in place to ensure when an incident occurs, everyone will have the capacity to recover safely.

"How does this wheel make any difference in what I already do?"

When this energy-based hazard recognition tool is used, hazard identification improves from 45% to more than 70%.



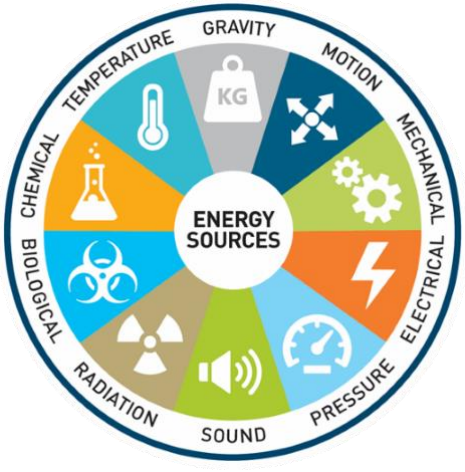


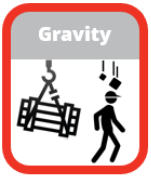
STKY Stuff That Kills You

"What in this task can seriously injure or kill me?"

Stuff That Kills You (STKY)
Energy Icons

These icons illustrate common worksite conditions where hazardous energy can seriously injure or kill someone. Although useful and simple, **these icons are not all-inclusive**. They are intended to provide examples of what some STKY hazards can look like at your worksite that need essential controls to be put in place.





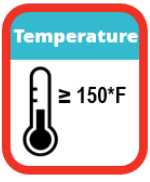
Suspended Load / Dropped Objects

Mobile Equipment/Traffic with Workers on Foot

Heavy Rotating Equipment

Fall from Elevation

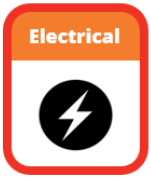
ATV / OUV (occupant)



Surface Temperature

Steam

Explosion / Pressurized Projectiles



Electrical Contact with High Energy Source

Fire with Sustained Fuel Source

Excavation or Trench

Arc Flash

Start When Safe

Conduct pre-job safety briefings prior to work activities

The **Start When Safe** Pre-Job Briefing check provides a consistent method of ensuring work never starts until adequate controls are in place to build the capacity for coworkers to safely recover when an incident occurs. Please complete the below **Start When Safe** check before allowing work to start.

☑ **Task Experience & Knowledge** - Do I have the experience, qualification, and competency necessary to identify the stuff that kills you (STKY) in the task about to be performed?

☑ **Identify the Stuff That Kills You (STKY)**- What stuff on this worksite can seriously injure or kill me? (use Energy Wheel for Hazard Identification) Can I remove any of them?

☑ **Put Essential Controls in Place** – What essential controls do I need to put in place before I start work that directly targets all STKY hazards to ensure *WHEN* an incident occurs, I and others will have the capacity to safely recover?

☑ **Questioning Attitude** – Ask yourself, are these controls enough? Did I test/verify their presence and integrity? Are you confident that they will meet the demands of your work site conditions?

Start When Safe

- [x] Task Experience & Knowledge

- [x] Identify all STKY Hazards and Remove when possible.

- [x] Put Essential Controls in place to build capacity for safe recovery.

- [x] Questioning Attitude: Are these controls enough? Have they been tested and verified to be in place?

Stop Work Authority

All PG&E Employees have the right, obligation, authority, and responsibility to stop any unsafe work without repercussion.

"What prompts a Stop Work?"

A Stop Work should automatically occur when:

1. An Essential Control is observed to be disabled, out of place, or in threat of failing
2. A new STKY hazard has been identified
3. There is a change in the crew's staffing that affects the level of experience and qualifications.

"When is it Safe to Resume Work?"

After work has been stopped, ensure the **Start When Safe** check is completed before allowing work to resume.

Stop Work

- [x] If essential controls are observed to be missing, or in threat of failing – ***STOP WORK.***

- [x] If a new STKY hazard is identified – ***STOP WORK.***

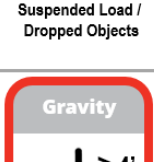
- [x] Change in crew staffing – ***STOP WORK.***

Examples of Essential Controls

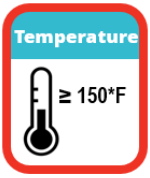
The following is a list of essential controls that can be used to directly target STKY hazards to build capacity for safe recovery. Although useful and simple, **these lists of examples are not all-inclusive** and are not intended to be used as an all-encompassing checklist.

There are more not included that trade experts use. These are intended to provide examples to show what they look like at the worksite.

Examples of Mechanical STKY High-Energy	Examples of Essential Controls
 Heavy Rotating Equipment	- Physical barrier - Machine guards - 2-hand switches - Automatic shut-off - Machines with sensing devices/auto-shutoff - Hair net - Safe Hand "hands-free" push, pull, grab tool - Tear-away finger gloves - Lock-out tag-out - Area curtains - Eye protection

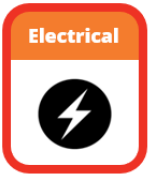
Examples of Gravity STKY High-Energy	Examples of Essential Controls
 Suspended Load / Dropped Objects	- Rated rigging equipment and attachment points - Load limiting devices - Hoist break - Tool tethers - Drop nets - Crawl speed on the hoist - Boom angle sensors/limiters - Double rigging/redundancy - Tag line retriever/Safe hand tool - Drop Zone Physical Barriers/Exclusion Zone
Fall from Elevation	- Fall arrest system - Self-retracting lifeline - Work positioning device/restraint - Guard rails - Covers over holes/trench plates - Drop Zone Physical Barriers/Exclusion Zone

Examples of Sound STKY High-Energy	Examples of Essential Controls
 Decibel levels where permanent hearing loss can occur	- Hearing protection - Sound insulation - Rubber vibration damping

Examples of Temperature STKY High-Energy	Examples of Essential Controls
 Surface Temperature	- Physical Barriers - Lock-out tag-out - Surface insulation - De-energization w/zero voltage test - Tool that forces safe distance/MAD - Heat-resistant clothing/thermal suits/Kevlar sleeves - Active cooling system
 Steam	- Physical Barriers - Lock-out tag-out - Tool that forces safe distance/MAD - Heat-resistant clothing/thermal suits/Kevlar sleeves - Pressure release valve - Flash-rated suit, glasses, face shield - Fire-resistant (FR) clothing - Remote racking devices - Flash protection boundary with hard physical barriers - Hot line sticks
 Fire with Sustained Fuel Source	- Lock-out tag-out - Surface insulation - Heat-resistant clothing/thermal suits/Kevlar sleeves - Fire protection system - Remote fuel shut off - Fire extinguisher/suppression - Gas detection monitoring - Sprinkler system - Self-contained breathing apparatus - Steam suits - Fire-resistant (FR) clothing

Examples of Pressure STKY High-Energy	Examples of Essential Controls
 Explosion / Pressurized Projectiles	- Physical barrier / Blast shield - Lock-out tag-out - Explosive ordinance disposal (EOD) suit - Rupture discs - Relief valve - Whip restraint - Inerting to exclude O2 - Pressure indicators with auto shutoff - Fuel source separation - Motor control center (MCC) panel enclosure - Coupler lock - Explosion suppression system
 Excavation or Trench	- Hard physical barrier - Covers over holes/trenches - Sloping and benching - Trench box - Excavation support system

Examples of Biological STKY High-Energy	Examples of Essential Controls
 Life-Threatening Animal & Insect Attack, Sewage	- Snake Gaiter Leg Guards - Dog Bite Stick - Respirator

Examples of Electrical STKY High-Energy	Examples of Essential Controls
 **Electrical Contact with High Energy Source**	- Cover up - Lock-out tag-out - Tool that forces MAD safe distance - De-energization w/zero voltage test - Grounding - Insulating barriers - Insulating nonconductive PPE gloves, sleeves, shoes, etc. - Electrical hazard / dielectric footwear - Ground fault circuit interrupters - Hot line sticks - Remote racking devices - Equipotential zones - Insulated and/or voltage-rated equipment and tools - Physical Barriers/Exclusion Zone
 **Arc Flash**	- Lock-out tag-out - Tool that forces MAD safe distance - Motor control center (MCC) panel enclosure - De-energization w/zero voltage test - Insulating PPE gloves, sleeves, shoes, etc. - Flash-rated suit, glasses, face shield - Fire-resistant (FR) clothing - Remote racking devices - Flash protection boundary with hard physical barriers - Hot line sticks

Examples of Motion STKY High-Energy	Examples of Essential Controls
 Mobile Equipment/Traffic with Workers on Foot	- Walkway/worker on foot physical barriers exclusion zone - Traffic control zone with physical barriers - Mobile equipment ignition lock-out Tag-out
 ATV / OUV (occupant)	- Rollover protection system - Seat belt - DOT Helmet - Speed governor key

Examples of Chemical & Radiation STKY High-Energy	Examples of Essential Controls
 High Dose of Toxic Chemical or Radiation	- Lock-out tag-out - Local ventilation - Respirator - Radiation shielding - Chemical suit and gloves

Human Performance Tools

Human Performance Tools

While we will never be able to eliminate accidents from occurring, and we rely on our essential controls to build capacity to safely recover when an accident occurs, these human performance tools help reduce human errors. When used effectively, these tools can also help ensure essential controls remain in place and do not break down.

Questioning Attitude

A questioning attitude promotes a preference for facts over assumptions and opinions and encourages thought about safety before action is taken. It is a fundamental part of our **Start When Safe** Pre-Job Briefing Check and prompts gathering verifiable facts to ensure we put enough **essential controls** in place to build **capacity** to safely recover when an accident occurs.

Apply a questioning attitude:

- During the **Start When Safe** Pre-Job Briefing Check
- When experiencing uncertainty, confusion, or doubt
- When hearing words or phrases such as: “I assume”, “probably”, “I think”, “maybe”, “should be”, “not sure”, “might”, or “we’ve always...”

Tailboards and Pre-Job Brief

A tailboard or pre-job brief is a meeting of coworkers, crew leads, and possibly supervisors conducted before performing a job to discuss the tasks hazards and related safety precautions. This is where our **Start When Safe** check is conducted.

Participants clarify the task’s objectives, roles and responsibilities, and resources—what to accomplish. Knowing clearly what you are trying to do improves error recognition. Similarly, precautions, limitations, hazards, critical steps, controls, contingencies, and relevant operating experience are addressed.

Conduct a tailboard:

- Before starting work
- Once per day, if the activity exceeds one day in duration.
- After extended delays in an activity.
- Before resuming work after a Stop Work was prompted

Situational Awareness

Situational Awareness is the accuracy of a person's current knowledge and understanding of the task conditions and their hazards compared to actual task conditions and hazards at a given time. A person's knowledge and understanding (of task conditions and hazards inform their decisions and actions.

The use of the **Energy Wheel** during your **Start When Safe** check to identify task hazards is a vital tool to help ensure you are aware of all the STKY hazards present in your work environment.

Questioning Attitude and **Stop Work** prompts are designed to help maintain situational awareness through frequent questions, teamwork, and timely updates about current job conditions.

Self-Checking (STAR)

STAR (Stop, Think, Act, Review) is a self-checking tool that helps you focus attention on the appropriate component, think about the intended actions, understand the expected outcome before action, and verify the results after the action. This tool must be used by an individual with sound technical knowledge and task experience.

Stop - Pause and focus on the task to be performed. Eliminate distractions.

Think - Verify that the action is appropriate. Understand the expected result(s) of the action. Consider a contingency if an unexpected result occurs. If uncertain, use the questioning-attitude tool.

Act - Perform the task.

Review - Verify that the anticipated result was obtained. Perform the contingency if the expected result does not occur. Notify your supervisor as needed.

Two-Minute Rule

When the job scope has changed, take at least two minutes to reassess the hazards. The key objective is to improve your **Situational Awareness** of any new STKY hazards that may be present and verify that the crew's technical knowledge and task experience are still adequately matched to the task being performed.

Three-Way Communication

Three-Way Communication promotes a reliable transfer of information and understanding, ensuring that the intended action is taken. Three-Way Communication depends on repetition to ensure an accurate response.

Stated

Acknowledged & Restated

Confirmed

Use Three-Way when:

- Communicating system status
- Changing the configuration of system equipment
- Unintended operation of equipment could result in serious injury or loss of life
- Verbal communications direct operation of equipment

Stop When Unsure

When confronted with uncertainty, stop and get help from someone who understands how to proceed with the work safely. This will help to reduce the chance of error and serious injury.

Use **Stop Work** to pause work, **Start When Safe** check to implement a **Questioning Attitude** to gather and verify facts to remove uncertainty before resuming work.

Procedure Use and Adherence

Understanding the overall purpose and strategy of approved procedures promotes a safe, reliable outcome. Adhering to approved procedures clarifies questions in the execution of various tasks and duties**.**

Following the procedure without question does not guarantee safety because procedures sometimes contain hidden flaws. With this in mind, follow procedures while being mindful of the impact actions could have before taking the actions.

Maintain your **questioning attitude** and **situational awareness** by using the **Start When Safe** check and **stop work** prompts to ensure that when a flaw in a procedure exits, **essential controls** will be in place to provide the **capacity** to recover safely.

Phonetic Alphabet

The use of the phonetic alphabet avoids the confusion of similar sounding words. Use **Three Way Communication** and **Stop When Unsure** to help the effectiveness of this tool.

Phonetic Alphabet		
Alpha	**J**uliet	**S**ierra
Bravo	**K**ilo	**T**ango
Charlie	**L**ima	**U**niform
Delta	**M**ike	**V**ictor
Echo	**N**ovember	**W**hiskey
Foxtrot	**O**scar	**X**-ray
Golf	**P**apa	**Y**ankee
Hotel	**Q**uebec	**Z**ulu
India	**R**omeo	

Use the phonetic alphabet when:

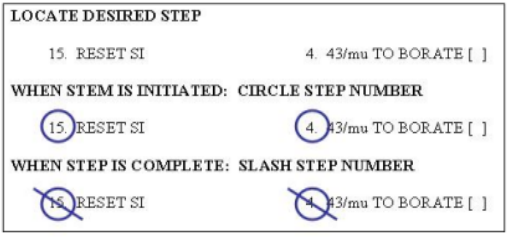
- Identifying or operating system equipment to help ensure operating the correct equipment
- When the sender or receiver might misunderstand, such as high noise areas, poor reception during radio or telephone communications
- For components, procedures, document titles, and when communicating alphanumeric information

Placekeeping

Placekeeping involves physically marking steps in a procedure or other guiding document that have been completed. Managing a procedure, especially a detailed technical procedure with frequent branching or multiple decision points, can place the facility, equipment, or process in jeopardy if the user inadvertently omits a step or performs a series of steps in an incorrect sequence. When a user is interrupted or delayed, an effective method will help the user return to the last step performed.

Placekeeping in continuous use procedures:

- Placekeeping for procedures with placekeepers or no signoff steps:
    - When step is initiated, circle step number or placekeeper
    - When the step is complete, slash through the circle



- Placekeeping Procedures with signoff steps:
    - When step is initiated, circle step number
    - When step is complete, time, date and initial as appropriate and slash through the circle
- Procedure steps that are N/A:
    - When step is initiated, circle step number or placekeeper
    - If step is determined to be N/A, either check N/A box or hand write "N/A" at end of step
    - When this is complete, slash through the circle.

Placekeeping in periodic use procedures:

- Preview the document steps and circle the step numbers to be performed prior to referring to the document again
- Perform the circled steps

Reporting Procedures

Discomfort or Injury

As soon as you experience a work-related discomfort or injury, call the 24/7 Nurse Care Line at **1-888-449-7787** and notify your supervisor. **You do not need to notify your supervisor** before calling the Nurse Care Line. The Nurse Care Line app is an alternate reporting option with greater automation.

In life-threatening or emergency situations, you should call 911 and seek emergency care immediately. You or your supervisor can call the 24/7 Nurse Report Line during these emergency events.

Serious Injury and Fatality

To report an employee fatality, serious injury, or illness; or any contact or inquiry by a regulatory investigation or inspection (Cal/OSHA, Fed-OSHA, CPUC, NTSB, DOT, etc.), call **415-973-8700** and select **option 1**. This 24/7 option is intended for emergencies or urgent safety issues that need to be addressed immediately.

Motor Vehicle Incident (MVI)

In the case of an MVI:

- **Always call law enforcement** to respond and/or if an injury has occurred, call **911** for emergency medical response
- Move vehicles safely to the side of the road unless personal injury has occurred or towing is required
- Set up warnings to avoid further accidents
- Do not make any admission of liability nor give a written signed statement
- When safe to do so, report the MVI using the MVIR Mobile App available for download on company phones from the Apps@Work store ***or*** from the PG&E intranet Safety homepage, click on "Report an MVI" on the upper right-hand side.
- Notify your supervisor and **PG&E Legal Department** while still at the scene, if possible.

Near Hits

By sharing incidents and hazardous situations beyond our own work groups, yards, and offices, we can learn from one another and improve the work we perform.

Share a Near Hit:

- Online via CAP
- By phone **(855) 268-6682**
- Via CAP mobile app & select Near Hit
- Union through your shop stewards, business representative or business manager

Ethics and Compliance Helpline

The Compliance and Ethics Helpline provides a way for you to ask compliance and ethics questions or communicate concerns about possible violations of our code of conduct, accounting issues, company policies or procedures, or the law.

To report an ethical or conduct concern, contact the Ethics & Compliance Helpline at **1-888-231-2310** or **EthicsPoint.com**. Representatives are standing by 24 hours a day, 7 days a week. When you call the Helpline, you will have the option to identify yourself or remain anonymous.

Employee Assistance Program (EAP)

PG&E's Employee Assistance Program (EAP) provides confidential counseling, support, referrals, and more to employees and their family members. EAP counselors are highly qualified and specialize in areas such as workplace and family issues.

Call the EAP at **1-888-445-4436,** online at **achievesolutions.net/pge, mypgebenefits.com > Emotional Health > EAP**, or contact your local on-site EAP counselor. Representatives are standing by 24 hours a day, 7 days a week.

Suspicious Activity Reporting

Suspicious Activity Reporting (SAR) is a critical component of providing a safe and reliable energy delivery system. Employee reporting may prevent criminal acts or even workplace violence incidents impacting PG&E facilities, employees, and customers. It's critical that "if you see something, say something." This concept reinforces everyone's commitment to increasing safety and security in the workplace.

If, at any time, you see suspicious activity or feel you or your colleagues are in personal danger, get to a safe place and call **911** immediately. Then, call Corporate Security at **1-800-691-0410**—any time of day or night.

Corrective Action Program

The Corrective Action Program (CAP) supports PG&E's speak-up culture and is focused on continuous improvement to provide safe, reliable, and affordable service.

With CAP, you can report equipment and safety issues, ineffective or inefficient work processes and procedures, and provide suggestions on how to do something better. Issues are evaluated for risk and assigned to department leaders for action. To report any work issue, call **1-855-85-GO-CAP**. Type "**CAP**" in your intranet search bar to learn more.

SIF Prevention Connections

Plan • Perform • Recover

Name	Phone
Emergency Contact Name / Relationship	Emergency Contact Phone