



HEALTH, SAFETY,
& ENVIRONMENTAL



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Barrier-Based Risk Management & Safe-To-Start

Many workplace incidents do not occur because of a single mistake. They happen when multiple layers of protection fail at the same time. These layers of protection are called **barriers**. Most people think of barriers as barricades or exclusion zones, barriers also include procedures, communication, training, inspections, and safe work behaviors.

Types of Barriers

Physical Barriers:

Guardrails
Machine Guards
Fall Protection
Barricades
PPE

Procedural Barriers:

JSEAs & Safe to Start
Permit-to-Work
LOTO
Safe Work Practices
Equipment Inspections

Behavioral Barriers:

Following Procedures
Using Start Work Authority
Using Stop Work Authority
Proper Communication
Hazard Recognition

Management Barriers:

Training
Supervision
Planning
Maintenance Programs
Adequate Resources

Before every task, we must identify the hazards, verify our barriers, and ensure those barriers are adequate for the work being performed. If barriers are missing, damaged, bypassed, or ineffective, the risk changes from hazardous to dangerous.

Common Signs of Barrier Failure:

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|------------------------------------|---|
| ⚠ Damaged or defective equipment | ⚠ Workers unsure of their role |
| ⚠ Missing inspections | ⚠ Scope changes not discussed |
| ⚠ Incomplete JSEA or permit review | ⚠ Production pressure influencing decisions |
| ⚠ Guard removed or bypassed | ⚠ "We've always done it this way" |

These are warning signs that barriers may no longer be effective. Stop, reassess, and make corrections before starting or continuing work.

Safe To Start

Before work begins, gather your crew, have the conversation and verify your critical barriers.

Ask these three questions:

- When this job fails, what will hurt or kill me?
- What controls are protecting us?
- Are those controls enough?

These questions are designed to create conversation, not just yes/no answers. Have each crew member identify one critical barrier they will personally verify before work begins.

Key Takeaway

- A permit does not make the work safe.
- A JSEA does not make the work safe.
- A procedure does not make the work safe.

One barrier may reduce risk, but multiple barriers working together provide the protection needed to prevent a serious incident. Effective barriers must be identified, verified, and maintained throughout the job. Every employee has a responsibility to speak up when a barrier is missing, damaged, bypassed, or ineffective.

Proper use of the **GIS LIFE Processes** can help to create a **FAIL-SAFE** Work Environment



SAFETY ALERT