INSPECTIONS, OBSERVATIONS AND AUDITS

According to the American National Standards Institute (ANSI), these terms have specific definitions to help clarify roles in workplace safety management. Inspections, observations, and audits should be documented and verified. The primary goal is identifying and correcting issues before they cause injuries, illnesses, or property or environmental damage.

Each activity is critical in maintaining and improving workplace safety, ensuring compliance with government and best-practice standards, and fostering a culture of continuous improvement for workplace health and safety and environmental protection.

SAFETY INSPECTION *(Inspections are Qualitative)*

A formal, systematic workplace examination to identify hazards, unsafe conditions, and regulatory non-compliance. Inspections are scheduled/periodic or intermittent. Inspection areas could be specific to one or multiple work areas or general, which include areas where random work is performed. Most inspections are performed before work starts and while work is being performed.

Safety inspection findings should be reported to both management and coworkers with results and corrective actions taken.

Examines conditions, equipment, and practices to identify and document potential hazards, unsafe conditions, or non-compliance with safety regulations and standards. Inspections are typically conducted regularly and systematically, using checklists or specific criteria to ensure thoroughness.

- ❑ Focuses on physical conditions, equipment & work environment
- ❑ Identifies hazards, faulty equipment, and non-compliant aspects
- ❑ Conducted by safety dept, supervisors, or designated personnel
- ❑ Uses standardized checklists or protocols to ensure consistency

SAFETY OBSERVATION

often referred to as BBS CARDS (BEHAVIORAL-BASED SAFETY)

An informal process focused on assessing and improving safety-related behaviors and practices in the workplace. It involves watching & assessing behaviors, practices, & conditions to identify potential safety hazards and unsafe acts.

- ❑ Primarily focuses on individual behaviors and interactions
- ❑ Identifies unsafe acts, conditions, or practices
- ❑ Conducted by supervisors, safety officers, or peers
- ❑ Observers should intervene and stop the work when necessary
- ❑ Observers should provide immediate feedback & reinforce safe behaviors to encourage safe working behaviors

SAFETY AUDIT *(Audits are Quantitative with a number score or grade)*

Company or 3rd-party trained auditors typically conduct a comprehensive review of an organization's safety systems and practices to evaluate compliance and effectiveness. These are performed on a periodic basis. A safety audit aims to assess the effectiveness of a company's safety programs and management systems, ensuring compliance with regulatory requirements and internal policies.

No department should audit itself. That's why company or 3rd party trained auditors are used. Sometimes, personnel from another department or location may be trained to audit other groups or locations, but never its own group.

A systematic, independent, and documented process for obtaining evidence and evaluating it objectively to determine the extent to which safety criteria are being met.

- ❑ Focuses on policies, procedures, and management systems
- ❑ Evaluates the overall safety culture & practices of an organization
- ❑ Often performed by external parties or trained internal auditors for non-bias results
- ❑ Involves reviewing documentation, interviewing employees, and observing workplace practices

LEADING AND LAGGING INDICATORS

According to OSHA leading and lagging indicators are two types of metrics used to measure safety performance in the workplace:

COMPARISON

Using both leading and lagging indicators together provides a comprehensive view of workplace safety and helps organizations proactively manage risks while also understanding their past performance.

Leading Indicators are most preferred since they focus on future prevention and are proactive, aiming to prevent incidents through continuous monitoring and improvement. Leading indicators better help identify and prevent and control risks that can cause injuries, illnesses or property damage.

Lagging Indicators are less preferred since they reflect past performance and are reactive, providing a record of what has already happened and helping to measure the consequences of safety issues.

LEADING INDICATORS

Proactive, preventive measures that predict and influence future safety performance. They are activities or behaviors that can help identify potential risks before incidents occur.

Leading Indicators include safety training sessions conducted, safety audits completed, near-miss reports submitted, and employee safety observations. Leading indicators help provide insights into safety program effectiveness and encourage continuous improvement by identifying and addressing potential hazards before they result in an incident.

LAGGING INDICATORS

Are reactive measures that reflect past safety performance based on recorded incidents and accidents. They measure outcomes that have already occurred.

Lagging Indicators include the Number of injuries or illnesses reported, lost workdays, workers' compensation claims, and accident rates. Lagging Indicators evaluate the effectiveness of safety programs after incidents have occurred, helping organizations understand the impact of previous safety efforts.

Definitions that help clarify the different types of events & outcomes that OSHA monitors & regulates to improve workplace safety.

INJURY

Physical harm or damage to a person resulting from an accident or exposure in the workplace. Injuries can range from minor cuts and bruises to more severe cases like fractures or amputations.

ILLNESS

An abnormal condition or disorder caused or aggravated by exposure to environmental factors associated with employment. This can include acute and chronic conditions such as respiratory disorders, skin diseases, or poisoning.

INCIDENT

An unplanned event that does not result in injury, illness, or damage but has the potential to do so.
Incidents can include near-misses or accidents.

ACCIDENT

An unplanned event that results in injury, illness, or property damage. It is a specific type of incident that has adverse outcomes.

NEAR-MISS

An unplanned event that did not result in injury, illness, or damage but had the potential to do so. Near-misses are considered incidents without harmful outcomes.

WORKERS' COMPENSATION & EMR

EMR affects company insurance premiums and reflects its safety record compared to the industry average. Key EMR factors Include:

CLAIMS FREQUENCY

More claims increase the EMR, indicating potential safety issues

CLAIMS SEVERITY

Severe, costly claims, such as those with significant medical expenses or long-term disabilities, can raise the EMR significantly

TYPE OF INJURIES

Serious or high-risk injuries, like permanent disabilities, lead to higher EMR due to greater perceived risk

PAYROLL AND JOB CLASSIFICATIONS

Jobs with higher risks and a larger payroll base affect the EMR more, as they carry higher insurance base rates

COMPANY SIZE

Larger companies may have more stable EMRs since the impact of individual claims is less pronounced relative to overall payroll

CLAIMS MANAGEMENT

Efficient claims handling and timely reporting can control costs and improve the EMR

RETURN-TO-WORK PROGRAMS

Effective programs that bring injured employees back to work quickly can reduce claim costs and lower the EMR

SAFETY PROGRAMS AND CULTURE

Strong safety practices and training reduce the likelihood and severity of injuries, leading to a lower EMR.

PREMIUMS PER CRAFT AND JOB DUTIES

Rates will differ depending on the worker's craft or duties. Administrative positions cost the lease in premiums and Construction positions working at elevated heights and in excavations and confined spaces often cost the most in premiums

3 YEARS CLAIM HISTORY HELPS DETERMINE THE EMR

The EMR is calculated based on a 3-year period of claims history, excluding the most recent year, so past claims impact future rates for several years. Called your 3-year loss runs like car insurance.

EMR = 1.0 FOR AVERAGE SAFETY-RELATED COMPANIES

Most new companies for the first 3-years are considered average safety-rated companies with an EMR = 1.0. This rate can go up for increased claims and losses, but does not go down.

GOOD EMRs

Companies with a great safety record and either few or no workers' comp claims will have EMRs lower than 1.0. Some low EMRs can be as low as .85, .75, or even 5.0.

BAD EMRs

For companies with a poor safety rating, significant claims, and losses, the EMR will go above 1.0 and can go to 1.1, 1.25, 1.50, etc. High EMRs can be between 2.0 and 3.0.

EXAMPLES OF ACTUAL PREMIUMS PAID DEPENDING ON EMR FOR THE SAME COVERAGE

If a company has 100 employees and its annual payroll is estimated to be $5,000,000, workers' compensation insurance may be around $1,000,000 annually, which is called the base rate.

The base rate will be multiplied by the company's EMR to determine the estimated worker's comp cost for that year.
The final total will be calculated after a payroll audit has been conducted. Depending on the total payroll, including hourly, salaries, and overtime, the company will either receive a bill or a rebate, depending on whether it overpaid or underpaid for the year.

Base rate	EMR	Actual Premium Paid	
$1,000,000	1.0	$1,000,000	Average
$1,000,000	1.15	$1,150,000	Bad
$1,000,000	2.25	$2,250,000	Really Bad
$1,000,000	.88	$ 880,000	Good
$1,000,000	.50	$ 500,000	Really Good

CALCULATING TRIR & DART

Total number of injuries and illnesses

[ ] Total Recordables

X 200,000 ÷

hours worked by all employees

[ ] Total Personnel Hours (aka Payroll Hours)

= Total recordable Incident rate

[ ] TRIR

How many weeks does a full time employee work a year?

50

X How many hours a week does a full time employee work?

40

= How many hours does a full time employee work a year?

2000

Number of entries in Column H + Column I

[ ] Total Cases for DART

X 200,000 ÷

Number of hours worked by all employees

[ ] Total Personnel Hours (aka Payroll Hours)

= Total DART rate

[ ]

What is the average number of company employees as per OSHA?

100

DART means:
Days Away
Restricted or Transferred

(Restricted aka Light Duty)

Incident rate formula

100 Average Employees
2000 Employee Worked Annually

200,000 Incident Rate Plug In

Root Cause Analysis (RCA)

LEVEL 1 - DIRECT CAUSE – EXAMPLES

How did the employee get injured or become ill?

❑ Cuts, strains, burns, poisonings, falls, electrocutions, etc.

LEVEL 2 – INDIRECT CAUSE – EXAMPLES

What was the employee(s) doing wrong at the time?
What at-risk behavior was the employee performing?

❑ Unsafe/At-Risk acts performed by the workers
❑ Using equipment or tools with missing guards or are broken
❑ Using equipment or tools that have not been inspected
❑ Workers running, horseplaying, or ignoring rules
❑ Working in areas with slip, trip, or fall hazards
❑ Elevated work without guardrails or personal fall arrest
❑ Working on electrical that is energized or without LOTO

LEVEL 3 – ROOT CAUSE – EXAMPLES

The underlying issue is normally a management deficiency

❑ Outdated or no policies, procedures, processes, permits, etc.
❑ Inadequate or no training programs or requirements to attend
❑ No accountability, discipline, interventions, retraining, etc.
❑ Lack of inspections, audits, observations, or investigations

WHY IS A ROOT CAUSE ANALYSIS (RCA) SO IMPORTANT?

A root cause analysis allows an employer to discover the underlying or systemic deficiency rather than the generalized or immediate causes of an incident. Correcting only an immediate cause may eliminate a symptom of a problem, but not the problem itself.

Example 1

Level 1 Punched in the face and broken nose
Level 2 Workers were horseplaying
Level 3 No policy or training against horseplay

Example 2

Level 1 Cut off a finger
Level 2 Worker was using a saw with a broken or missing guard or improper hand placement
Level 3 No inspection or equipment removal procedure or lack of training

Example 3

Level 1 Electrocution while working on an electrical panel
Level 2 Worker(s) did not use LOTO
Level 3 Lack of training or supervision or no policy or procedure

ACCIDENT AND INCIDENT INVESTIGATIONS

- ❑ 85-95% of all Accidents and Incidents are Behavioral-Based
- ❑ Accidents, incidents, and near misses must be investigated to determine their direct, indirect, and root causes
- ❑ Root causes must be corrected to prevent similar events
- ❑ Investigations may identify from 10 to 27 contributing factors that must also be addressed and corrected, although they may not been a cause of the accident, incident or near-miss being investigated
- ❑ Safety should consult and help facilitate the investigation
- ❑ Frontline supervisors should perform the investigation or if it involves 2 or more groups by the next-level supervisor
- ❑ Investigations are fact-finding missions and shouldn't be bias
- ❑ Investigations identify problems and shouldn't seek blame
- ❑ Personnel should be trained/retrained and not punished since most root causes are management level deficiencies
- ❑ Asking open-ended questions in essential similar to 5 Whys and Sequence of Events. Avoid closed-ended questions like answering yes or no when possible.
- ❑ Interview 1 witness at a time, where the conversation is private, and in a cooperative environment such as an open space, vehicle, or even when the event occurred.
- ❑ The best place for interviews is where the event occurred
- ❑ An investigation is completed when your report is submitted

5 WHYS METHOD AND SEQUENCE OF EVENTS

A simple yet effective tool used in accident investigations to identify the root cause of an incident by asking "Why?" multiple times until the underlying cause is revealed.

Example Scenario: A Worker Slipped on a Wet Floor

Q1. Why did the worker slip on the floor?
A1. Because the floor was wet.

Q2. Why was the floor wet?
A2. Because water was spilled and not cleaned up.

Q3. Why was the water spill not cleaned up?
A3. Because there were no signs or procedures in place to address
spills immediately.

Q4. Why were there no signs or spill-cleaning procedures?
A4. Because the safety protocols did not include specific guidelines for spill management.

Q5. Why was there no spill procedure?
A5. Because there was no comprehensive review or update of safety procedures to include such scenarios.

Conclusion:
By repeatedly asking "Why?",
The investigation reveals that the root cause is the lack of a safety procedure that includes spill management. The organization can then address this root cause by updating the safety policies and procedures and training employees to prevent similar incidents in the future.