PEEPO Quick Reference

Incident Investigation Analysis Framework

P — PEOPLE

Physical State
- Fatigue / sleep
- Illness / injury
- Impairment
- Physical capability

Mental State
- Stress / pressure
- Distraction
- Complacency
- Rushing

Knowledge
- Training adequacy
- Experience level
- Hazard awareness

E — ENVIRONMENT

Physical
- Weather conditions
- Lighting adequacy
- Noise levels
- Temperature
- Ventilation

Workspace
- Housekeeping
- Layout / access
- Ground conditions
- Congestion

Temporal
- Time of day
- Shift patterns
- Remote location

E — EQUIPMENT

Design
- Suitability for task
- Ergonomics
- Human factors
- Fail-safe design

Condition
- Maintenance status
- Wear / deterioration
- Known defects
- Pre-use checks

Safety Features
- Guards in place
- Interlocks working
- E-stops accessible
- PPE adequate

P — PROCEDURES

Availability
- Procedure exists
- Accessible to workers
- Appropriate format

Quality
- Accurate / correct
- Complete
- Clear / understandable
- Up to date

Compliance
- Workers aware of it
- Trained on it
- Actually followed
- Practical to follow
- Enforced

O — ORGANIZATION

Systems
- Risk assessment
- Change management
- Permit systems
- Contractor mgmt

Resources
- Staffing levels
- Budget allocation
- Time / schedules

Culture
- Safety priority
- Reporting culture
- Leadership commitment
- Competing pressures

Key Questions to Ask

When you find "human error"...

Ask: Why was that error possible? What system allowed it? Don't stop at blame.

When procedures weren't followed...

Ask: Was it practical? Was there time? Was there pressure to shortcut?

For every P-E-E-P factor...

Ask: What organizational decision created this condition?

Before closing investigation...

Ask: If we fix this, will it actually prevent recurrence?

PEEPO Quick Reference

Organizational Factors & Corrective Actions

Organizational Factor Categories

Hardware
Equipment procurement, maintenance programs, capital investment decisions

Training
Program effectiveness, competency verification, refresher schedules

Management Systems
Risk assessment, change management, permit systems, audits

Communication
Information flow, shift handovers, safety alerts, feedback mechanisms

Incompatible Goals
Production vs safety, schedule pressure, cost cutting conflicts

Culture
Leadership commitment, psychological safety, reporting, just culture

Risk Management
Hazard identification, control effectiveness, monitoring

Maintenance Mgmt
Scheduling, preventive vs reactive, spare parts, deferrals

Contractor Mgmt
Selection, induction, supervision, integration

Hierarchy of Controls

1. **Elimination**
   Remove the hazard entirely
2. **Substitution**
   Replace with less hazardous
3. **Engineering Controls**
   Guards, barriers, interlocks
4. **Administrative Controls**
   Procedures, training, signage
5. **PPE**
   Personal protective equipment

Always start at the top. Higher controls are more effective because they don't rely on human behavior.

Common Mistakes to Avoid

❌ Stopping at "human error"
It's a symptom, not a root cause

❌ "Retrain all workers"
Usually doesn't fix the real problem

❌ Confirmation bias
Seek disconfirming evidence

❌ Adding warning signs
Signs don't stop incidents

❌ Not reaching Organization
That's where root causes live

❌ "Be more careful"
Not actionable or measurable

✓ Good Root Cause Test
"If we fix this, will it prevent similar incidents?" and "Is this something we can actually change?"