



Safety Observation Program and Pre Task Planning Guideline



Table of Contents

| | |
|---|-----------|
| Program Overview | 3 |
| Roles and Responsibilities | 4 |
| Observer Training | 7 |
| Contractor Training | 8 |
| Communications | 9 |
| Recognition | 10 |
| Pre Task Planning | 11 |
| Category Definitions | 12 |
| Card Design Guidelines | 14 |
| Observation Calculations and field application | 16 |
| Card System example, not inclusive | 17 |



Program Overview

PURPOSE

The Safety Observation Program can proactively prevent incidents and injuries through the monitoring, trending, and management of safe vs. unsafe behaviors. The effective communication of safe and unsafe behavior trends to the contractors and project management is critical to a successful program.

SCOPE

This program is intended to be used as a guide to all construction projects. Each site may vary on their data collection system and how and what information is used and presented

PROCEDURE

A trained, controlled group of observers will make observations of employees at work out on the site. The observations will note the date and time, location, company, and number of employees observed. Each observation will be designated safe or unsafe, and if unsafe, further information and categorization of the unsafe act. Also, observers are trained to constructively correct unsafe behaviors and provide positive feedback on safe behaviors.

On a weekly basis, the observations are input into a tracking database from which the behavioral trends of the workforce are determined. The results of the week's observations are communicated both to the project as a whole and on individual basis to the contractor companies. Focus areas from the previous week's data are identified and emphasized to the workforce.



Roles and Responsibilities

Program Owner

Development/Implementation

- Facilitation of the initial discussion regarding the initial buy-in from project management.
NOTE: The maturity of the program and the length of time on site must be a consideration during the initial tactical development of the program (consider One full quarter of implementation when the project site hits critical mass.
- Ensures inclusion in contract language for trades
- Provides identification of initial observation team members and assists with the development of a roadmap which progresses to the long term staffing of the program.
- Develops and provides contractor management/safety training on program
- Develop project specific observation cards or data collection system
- Teams with experienced SOP owner for pass down / lessons learned
- Partners with the management team to develop an overall management strategy for the program. A roadmap should be developed addressing the observers, training, indicator management etc.

Training/Coaching

- Provide initial training for observation team members
- Identifies opportunities in regards to observations and documentation (cards)
- Assists with addressing these opportunities in regards to coaching, training, 1:1 walks in the field and/or removal from the program if necessary.
- Is available for questions from observers & contractors
- Implements focus groups as needed
- Ensures observers are participating in the program at the agreed performance level to ensure that the data quantity meets or exceeds sample quantity needs to be valid.

Tracking/Trending

- Evaluates proposed craft force levels to determine which level of tracking each company and the feedback delivery mechanism for each.
 - Community Feedback (Companies are rolled into the miscellaneous categories)
 - < 2 months on site
 - < 10 personnel
 - Individual Feedback
 - All others
- Reviews observation cards/data prior to rollup and investigate questionable cards
- Identifies and communicates focus areas for the following week
- Trains, or arranges training for, the administrative personnel in regards to utilizing the recording system and input of data.



Utilization

- Present data/focus areas to contractors and project staff during Contractor Ops, Construction Ops, Mass Safety Meetings, staff meetings, Superintendent meetings, and/or special review meetings
- Weekly email including workbook and focus areas to project staff and observer team
- Weekly email emphasizing focus areas to observer team

Observers

Development/Implementation

- Completes the required number of observations in a timely manner
- Observes crews in varied locations on the worksite
- Coaches and corrects unsafe behaviors every time
- Provides positive feedback to crews working safely
- Ensures that observations are varied across companies and areas of the site

Training/Coaching

- Attends all training classes provided by EHS/Program Owner
- Participates in targeted field walks
- Attends focus groups as needed
- Contacts program owner with questions as needed
- Partners with other observers to ensure that experience and knowledge is shared. Note: Technical observers are expected to perform field walks with personnel that are new in the program.
- Coaches other observers when needed

Tracking/Trending

- Maintains awareness of currently job challenges such that these can be integrated into the daily observations.
- Reviews data on a weekly basis to ensure integrity is maintained and identify focus areas that are needed.

Utilization

- Integrates opportunities into their observation based on trend analysis
- Performs (or facilitates) recognition where it is deserved.

Administrative Assistance

Development/Implementation

- Ensures program owner or designee has reviewed the cards/data collection output prior to rollup
- Compiles cards/ data collection system into workbook
- Produces and distributes weekly statistics foils for presentation
- Ensures card supply is adequate if required by your system

Training/Coaching

- Participates in the observer training to understand how the data is being collected.



- Participates in additional training required to ensure that the data is entered appropriately.
- May participate in training of new administrative personnel.

Tracking/Trending

- NA

Utilization

- NA

Contractor Management

Develop/Implementation

- Assists with the development of the strategic roadmap to ensure that the time spent collecting the data is being utilized such that it is of value to the team.

Training/Coaching

- Participates in the observer training to understand how the data is being collected.
- Attends training or 1:1 with program owner to understand program
- Provides coaching to personnel performing observations as needed.

Tracking/Trending

- Assists with the identification of trends
- Assists with developing corrective actions to address the trends.

Utilization

- Ensures that the program remains visible to the personnel within the management groups.
- Distributes the data to the necessary personnel within the company
- Informs employees of program and purpose
- Reviews observation cards with safety representative as needed.
- Reports questionable cards/data to program owner
- Corrects behaviors in the field reported on cards/data
- Communicates weekly focus areas to employees



Observer Training

Minimum Requirements for Knowledge/Experience

The observers must have knowledge of Intel Safety Guidelines that apply to construction, including but not limited to:

- Fall Protection/Ladder Safety
- Mobile Elevated Work Platforms
- Control of Hazardous Energies/LO/TO
- Barricading
- Scaffolding
- Project Specific PPE Guidelines
- Project Specific Demo guidelines
- Fatality prevention subjects as required

In addition, observers will receive the following training:

- Pre Task Planning & Auditing
- Injury Free Environment
- Observer Training
- Coaching and Mentoring Process

The team must keep in mind that it is very damaging to the program for an observer to condone behaviors that are unsafe.

The Observer Training materials can be found in Appendix A. (added by your site)



Contractor Training

Purpose

Training contractor safety representatives and/or management on the purpose of the Safety Observation Program improves communication and aids the contractors in using the information to drive safety issues through their workforce.

Requirements

Items to be covered include:

- Card/data system information
- Category definitions
- Contractor weekly reports/pareto

New Contractor Orientation Training

Introducing the general workforce to the Safety Observation Program improves understanding of why Intel utilizes SOP and expectations around being approached and/or coached by the observer group.

Contractor SOP Training materials can be requested from your site Construction EHS representative.



Communication

Purpose

Timely and open communication of SOP results is key to success of the program as a leading indicator for driving safety issues. Several different forums can be used, however it is highly recommended that at least a weekly report out at a staff/ops meeting and weekly emailed results are used.

Weekly Presentation

This presentation should occur at a staff or ops where both Intel project management and contractor representatives are present on a weekly basis. Items to be communicated include:

- Six week project percent safe observations
- Six week project pareto of categories
- Six week PTP Audit results (if applicable)
- Individual contractor results (cards & rollup handed back to contractor reps, not presented out)
- Recognitions (Is a cornerstone of a successful program)

Weekly Email

A high level report out of the week's results should be emailed to the observer team, EHS, Intel project management, and any other applicable groups. The report should include:

- Week's percent safe observations
- Top two/three focus areas taken from unsafe observations
- SOP Workbook attachment

An example report out can be found in Appendix C. (added by your site)

Bulletin Boards/Toolbox Topics

The six week project percent safe observations and unsafe pareto can be posted and proliferated throughout the job site to ensure all workers have visibility to the program.

Observer Team/Weekly Focus

A communication to the observer team reiterating the focus areas for the week is helpful in focusing the team.



Recognition

PURPOSE

Recognizing safe behaviors in the field real time is invaluable in driving an injury free environment.

SUMMARY

Construction teams should develop a recognition program based on and tied to the Safety Observation Program categories. Recognitions are awarded in a progressive manner, i.e. at the start of a project when unsafe behaviors might be common place, recognitions would be given for simple compliance to safety requirements (wearing PPE, ladder safety); as the project's safety improves such behaviors would not merit recognition (expected part of the everyday job) and exemplary safe behaviors would be rewarded instead (coaching co-workers on safety).

The recognition program foils can be found in Appendix D. (added by your site)



Pre-Task Planning:

Note: This section is relevant if your site includes the PTP audit as part of your observer training and is part of the observer's field audit responsibilities.

Purpose

Pre Task Planning (PTP) is a process we use as a job aid to accomplish our work safely and efficiently and is a condition of the contract. Proper pre-task planning will help in the reduction of injuries and incidents through hazard analyses and evaluation on a project. Pre Task Planning will improve work organization, productivity and communication while minimizing risk and increasing control of work tasks.

- PTP supports the Safe Observation Program by giving workers a tool to organize, plan and identify areas that could contribute to the overall "behavior" of the workers and the task being performed.

10 Critical Steps of PTP

- Scope out the job.
- Review and complete front side of checklist.
- Plan work, Identify tasks to be performed in a sequential order.
- ID Hazards, Discuss and write down potential hazards and risk corresponding to each task
- Mitigating the Hazard, Identify, plan and list actions your crew will take to control the safety, efficiency and operational risks and impacts this work might cause



- Develop contingency plan, In case things go wrong and/or if all hazards cannot be fully controlled.
- Review plan, Crew reviews the final plan and assigns responsibilities.
- Establish ownership & accountability, Everyone on crew signs the PTP and Foreman verifies PTP is sound
- Post plan, Post PTP at the job for crew to review throughout the day.
- Communicate impacts of plan to others, Communicate PTP to affected parties and or crews.



Program Category Definitions

PRE TASK PLANNING

Identified Steps to Complete Task – Did the crew fail to identify all the steps necessary to safely complete their task?

Identified All Hazards for Steps – Did the work crew fail to identify all the hazards associated with the steps on the PTP? This should indicate a good faith effort by the work crew to identify hazards.

Adequately Mitigated Identified Hazards – Did the work crew adequately identify a way to mitigate or eliminate all the hazards identified?

Reviewed – Did the work crew fail to review the PTP with the foreman? Do some members of the crew not understand or recall the steps in the plan?

Appropriately Signed – Did the work crew fail to have the PTP signed by all the members and their foreman?

Posted – Did the work crew fail to post the PTP in the immediate work area?

Being Followed – Did the workers fail to follow the steps outlined in the PTP or fail to modify the plan when the scope of their work changed?

Other – Are there other issues with the PTP that do not fall into any category?

UNSAFE BEHAVIOR DEFINITIONS

Eye/Face PPE – Is the worker violating safety glasses, chemical goggles or face shield requirement?

Hand/Arm PPE – Is the worker violating the project hand protection policy?

Head PPE – Is the worker violating the project head protection requirements?

Foot PPE – Is the worker violating the project foot protection requirement?

Hearing PPE – Is the worker working in a high noise area without proper hearing protection?

Other PPE – Is the worker violating specific PPE requirements (e.g. not wearing Tyvek suits on wet bench demo)?



Respiratory Protection – Are there workers performing functions without a respirator that would normally require one? Is the worker being exposed to an inhalation hazard?

Ladder Safety – Is the worker violating ladder safety rules (e.g. standing sideways or backwards on a ladder, two people working from a ladder or otherwise below 6' and at risk of falling from a ladder?) Is the worker standing on the top two steps of the ladder?

Above 6' w/o Fall Protection – Is the worker without fall protection at a location of 6' or greater? (e.g. working off a ladder or work surface above 6' w/o being tied off, exposure to the edge of a roof)

MEWP – Is the worker incorrectly operating a lift? (e.g. moving a MEWP w/o a spotter) Is the lift travelling too fast in a restricted area?

Scaffolding – Is the scaffold improperly installed? (e.g. no hand rails, toe boards, open holes in deck) Is the worker riding on a rolling scaffold? If above 6', are there ladders for access to the scaffold?

Standing on Utilities – Is the worker standing on, sitting on, or working off of non-load bearing systems without adequate precautions? (e.g. high purity lines, chemical lines, AWN lines)

Trip Hazard – Is the worker in an area with poor housekeeping that could cause a trip or other injury?

Barricading – Is the worker violating red danger tape and/or barricade? Did the worker fail to properly barricade their work area (including signage)?

Proper Tool for the Job – Is the worker using a tool that is not proper for the job, is in need of repair, or is not being used correctly?

Improper Positioning – Is the worker in a position that will cause injury to themselves or others? Will the worker be caught between pipes or structural members? Is the worker lifting an object w/o proper lifting techniques?

Improper LO/TO – Is the worker working on a hazardous energy source without following proper LO/TO procedures?

Other/Comments – Is the worker behaving in an other unsafe manner?

CONDITIONS

Behavior caused unsafe conditions are those that can be associated with poor work habits such as trash and clutter in the work area, materials left in dangerous positions



and unattended power tools left in a energized state and blockage of access and egress routs and safety showers and fire protection.

Environmental unsafe conditions are those that can be associated with weather, design and maintenance of facilities, not inclusive.

ALL conditions included in the assessments must be SPECIFICALLY tied to individual(s) and a behavior. The auditor cannot assume that someone created a situation.

The auditor must perform coaching in regards to the condition in order for the program to be of value.

Weather: Working on a roof during lighting storm, ice and water at door entries and work areas, wind factors, and fading light.

Note: conditions may or may be part of your sites Safe Observation Program. If your site includes condition data collection in your leading indicator program you must have a clear and concise management program on how this will be managed and coached in a proactive and positive manner. With conditions remember you own it until it is corrected!



Card Design Guidelines

ADMINISTRATIVE/TRACKING CATEGORIES

The data collection system should meet several minimum criteria for tracking and reporting data. The following are recommended as the minimum:

| Category | Description |
|--------------------------|---|
| Safe Observation | Checked if safe behavior was observed. |
| Unsafe Observation | Checked if unsafe behavior was observed. |
| Number Observed | The number of workers observed exhibiting the <i>same</i> behavior. For example, if a crew of 4 was observed not wearing safety glasses, "4" would be entered here. |
| Observer's Name | Name of the observer. |
| Date | Date of the observation. |
| Time | Time of the observation. |
| Company Observed | The company of the workers observed. |
| Specific Location | Specific location of the observation, to include pole numbers or other applicable location identifier. |
| Foreman/ supervisor name | To be used internally by the company being observed for positive reinforcement. The company must present a management plan associated with the use of this information. |

PRE TASK PLANNING AUDIT CATEGORIES*

If the Safety Observation Program will include Pre Task Planning Audits in addition to behavioral observations (highly recommended), the following categories are recommended:

| Category | Description |
|----------|--|
| Good PTP | Checked if the PTP audited was good on all points. |



| | |
|---|--|
| Inadequate PTP | Checked if the PTP audited was deficient in any of the following categories: |
| Appropriately Signed | Checked if PTP was not appropriately signed. |
| Reviewed | Checked if PTP was not reviewed and understood by the entire crew. |
| Being Followed | Checked if the PTP steps are not being followed by the crew. |
| Posted | Checked if the PTP is not posted in the immediate area of the work. |
| Identified Steps to Complete Task | Checked if steps were not identified to complete the task safely. |
| Identified All Hazards for Steps | Checked if all the hazards for the steps were not identified. |
| Adequately Mitigated Identified Hazards | Checked if the hazards were not adequately mitigated. |
| Comments/Other | Written notes by observer. |

BEHAVIORAL OBSERVATION CATEGORIES*

To reduce confusion and data entry time but still maintain a robust program that will give useful and detailed feedback to the workforce, the following categories are recommended:

| Category | Description |
|------------------------|---|
| Eye/Face PPE | Worker not wearing proper PPE |
| Hand/Arm PPE | Worker not wearing proper PPE |
| Head PPE | Worker not wearing proper PPE |
| Foot PPE | Worker not wearing proper PPE |
| Hearing PPE | Worker not wearing proper PPE |
| Other PPE | Worker not wearing proper PPE |
| Respiratory Protection | Worker not wearing proper respiratory protection. |



| | |
|------------------------------|--|
| Ladder Safety | Worker violating safe work practices on ladders. |
| Above 6' w/o Fall Protection | Worker above 6' w/o proper fall protection. |
| MEWP | Worker not operating MEWP correctly. |
| Scaffolding | Worker violating safe work practices on scaffolds. |
| Standing on Utilities | Worker standing on unstable utilities or work surface. |
| Trip Hazard | Housekeeping issues in immediate area of worker can cause injury. |
| Barricading | Worker crossed barricade inappropriately or did not appropriately barricade their work area. |
| Proper Tool for the Job | Tool/equipment is not adequate for job. |
| Improper Positioning | Worker is not working from/in a safe position. |
| Improper LO/TO | Worker is not following proper Lock-Out/Tag-Out procedures. |
| Other/Comments | Observer Comments/Notes |

CONDITION OBSERVATION CATEGORIES;

Safe or unsafe, if unsafe is checked a comment must be entered into the data collation system on what the issue is and was done to mitigate it

****NOTE****

*Please reference the Pre Task Planning and Behavioral Observations Definitions for the complete, thorough definitions for the categories listed above. This section is merely to help on card design/system and administrative understanding of what a properly completed card is indicating.



Observation Calculations

OBSERVATION NUMBERS

The number of observations required to give statistically relevant data can be determined using the following table*.

| <u>Size of Population</u> | <u>Suggested Minimum Sample Size</u> |
|---------------------------|--------------------------------------|
| 2-10 | 100% |
| 11-25 | 100% |
| 26-50 | 50% |
| 51-100 | 25% |
| 101-250 | 15% |
| 251-500 | 10% |
| 501-1000 | 5% |
| Over 1000 | 2-3% |

* Petersen, D.: *Safety Management, a human approach*, second edition, Aloray, Inc., 1988

Note: This chart may be applied with two (2) methods; 1st, A project with combined head count with a multitude of construction companies = the percentage of inspections is based on the projects total head count 2nd method. Individual company percentage; inspection percentage is based on the head count of each company and not constrained by the overall project headcount.

Note 2: The Audit and Tracking System calculates percentage (%) safe based on people, not behaviors, each person observed is one (1) observation. This correlates with percent requirements based on population above.



- People safe/unsafe identify safety culture and work practices Behaviors are added by category (Numbers) with no percentage assigned.
- Number of unsafe behaviors identify areas where you need to place emphasis (Areas to work on for improvement)

Application: Observations in the Field

- Instantaneous observation –
 - 10 second rule, (it is like a snap-short in time) Longer than 10 seconds individuals start to get nervous and apprehensive about being watched, shorter than 10 seconds will not give the observer sufficient time to capture all behaviors.
- People who are working
 - No more than 5 workers on one card. Trying to observe more than 5 individuals in 10 seconds snap shot will affect the accuracy of the total observation.

SAFE OBSERVATIONS, the following is for example only; the system used at your project site may be added here.

Each person observed working in a safe manner is counted as 1 safe observation.

Example 1:

The card shows two people were observed working safe. This card would be entered under ABC Contractors as 2 safe observations.



Safety observation Program

Unsafe Observation Safe Observation

Circle Number Observed
1 2 3 4 5 1 2 3 4 5

| | |
|--------------------|-----------------------------|
| Observer's Name: | Joe Smith |
| Date: | 1 Nov 2008 |
| Time: | 10:45am |
| Company Observed: | ABC Contracting |
| Specific Location: | F-22 SF. Column 54 F |
| Foreman: | John Star |

| | |
|---|--|
| <input type="checkbox"/> Eye/face PPE | <input type="checkbox"/> MEWP |
| <input type="checkbox"/> Hand/Arm PPE | <input type="checkbox"/> Scaffolding |
| <input type="checkbox"/> Foot PPE | <input type="checkbox"/> Standing On Utilities |
| <input type="checkbox"/> Hearing PPE | <input type="checkbox"/> Trip Hazard |
| <input type="checkbox"/> Other PPE | <input type="checkbox"/> Barricading |
| <input type="checkbox"/> Respiratory Protection | <input type="checkbox"/> Proper Tool for the job |
| <input type="checkbox"/> Ladder Safety | <input type="checkbox"/> Improper Positioning |
| <input type="checkbox"/> Above 6' w/o Fall Protection | <input type="checkbox"/> Improper LO/TO |
| | <input type="checkbox"/> Other |



UNSAFE OBSERVATIONS

Each unsafe behavior per person is counted separately as 1 unsafe behavior. If multiple people are observed exhibiting several unsafe behaviors, all of these behaviors are tallied.

Example 1:

| Safety Observation Program | |
|--|--|
| <input checked="" type="checkbox"/> Unsafe Observation | <input checked="" type="checkbox"/> Safe Observation |
| Circle Number Observed | |
| <input checked="" type="radio"/> 1 2 3 4 5 | <input type="radio"/> 1 2 3 4 5 |
| Observer's Name: Joe Smith | |
| Date: 1 Nov 2008 | |
| Time: 10:45am | |
| Company Observed: ABC Contracting | |
| Specific Location: F-22 SF Pole . 54 F | |
| Foreman: John Star | |
| <input type="checkbox"/> Eye/face PPE | <input type="checkbox"/> MEWP |
| <input type="checkbox"/> Hand/Arm PPE | <input type="checkbox"/> Scaffolding |
| <input type="checkbox"/> Foot PPE | <input type="checkbox"/> Standing On Utilities |
| <input type="checkbox"/> Hearing PPE | <input type="checkbox"/> Trip Hazard |
| <input type="checkbox"/> Other PPE | <input type="checkbox"/> Barricading |
| <input type="checkbox"/> Respiratory Protection | <input type="checkbox"/> Proper Tool for the job |
| <input checked="" type="checkbox"/> Ladder Safety | <input type="checkbox"/> Improper Positioning |
| <input type="checkbox"/> Above 6' w/o Fall Protection | <input type="checkbox"/> Improper LO/TO |
| | <input type="checkbox"/> Other |

The card shows one person was observed working unsafe on a ladder. This card would be entered under ABC Contractors as 1 unsafe behavior for Ladder usage.

Note that 2 workers are classified as working safe

Example 2:



| Safety Observation Program | |
|--|---|
| <input checked="" type="checkbox"/> Unsafe Observation | <input checked="" type="checkbox"/> Safe Observation |
| Circle Number Observed | |
| 1 2 3 4 5 | 1 2 3 4 5 |
| Observer's Name: | Joe Smith |
| Date: | 1 Nov 2008 |
| Time: | 10:45am |
| Company Observed: | ABC Contracting |
| Specific Location: | F-22 SF Pole . 54 F |
| Foreman: | John Star |
| <input checked="" type="checkbox"/> Eye/face PPE | <input type="checkbox"/> MEWP |
| <input type="checkbox"/> Hand/Arm PPE | <input type="checkbox"/> Scaffolding |
| <input type="checkbox"/> Foot PPE | <input checked="" type="checkbox"/> Standing On Utilities |
| <input type="checkbox"/> Hearing PPE | <input type="checkbox"/> Trip Hazard |
| <input type="checkbox"/> Other PPE | <input type="checkbox"/> Barricading |
| <input type="checkbox"/> Respiratory Protection | <input type="checkbox"/> Proper Tool for the job |
| <input type="checkbox"/> Ladder Safety | <input type="checkbox"/> Improper Positioning |
| <input checked="" type="checkbox"/> Above 6' w/o Fall Protection | <input type="checkbox"/> Improper LO/TO |
| | <input type="checkbox"/> Other |

The card shows two people were both observed not wearing the appropriate Eye PPE, working above 6' without fall protection and standing on utilities. This card would be entered under ABC Contractors as 2 unsafe behaviors for Eye PPE, 2 unsafe behaviors above 6' w/o Fall Protection and 2 unsafe behaviors standing on Utilities. For a total of 6 unsafe behaviors.

Note that 2 workers are classified as working safe

WORKBOOK CALCULATIONS

Note: Remember that observations are based on people observed and not behaviors (refer to page 16)

The workbook calculates percent safe observations using the following:

$$\% \text{ Safe Observations} = \frac{\# \text{ Safe Observations}}{\text{Total \# Observations}}$$

The workbook calculates percent unsafe observations using the following:

$$\% \text{ Unsafe Observations} = \frac{\# \text{ Unsafe Observations}}{\text{Total \# Observations}}$$

Program Examples

- Initial Observers (the most technically sound)
 - Generally the first set of observers should be the most technically sound on the project with the initial goal of getting the program started, having good interface in the field and developing reliable data.



- These core group members may be utilized for developing the overall team through 1:1 walks and training.
- Training Program Development/Implementation
 - Customize the base program (or other) to the needs of the project.
- Target date for integration of observers
- Data Collection
- Target Date for Integrity Check
- Target Date for Utilization as Indicator
- Monthly Update Meetings for the Observers
- Identification of Communication Forums and Target Dates