



Proof of Training

Print name: _____ Signature: _____ Date: _____

Incident Investigation

Purpose

To establish expectations with respect to when, where, why, how and who performs incident investigations. The purpose of these activities is not to find fault or lay blame, but rather to identify the basic causes of incidents so that controls can be put in place to prevent further occurrences. This policy is closely linked to our Crisis Management Program. This policy is designed to provide guidelines that are adaptable to any situation.

Scope

This policy will apply to all work performed by Unger Construction employees and subcontractors including, but not limited to, the following activities: construction, installation, demolition, remodeling, relocation, refurbishment, testing, and servicing or maintenance of equipment or machines and at other times when an unplanned or unintended event occurs.

Objective

The overall reason for an incident investigation policy is to provide a systematic approach to handling incidents such that we can identify the root cause, causal factors and reduce the likelihood of recurrence. We are interested in identifying the direct cause and the indirect cause(s). Our goal is fact finding, not fault finding or placing blame.

Target Audience

This policy is intended to provide guidance for supervisory personnel (Project Managers, Project Engineers, Superintendents, and Foremen). Supervisory personnel are responsible for conducting, documenting and communicating incident investigations. Each project/jobsite shall have a site specific incident investigation team assigned before the project begins. Supervisory personnel of the area where the incident takes place should be extensively involved in conducting the investigation. Since supervisors are responsible for worker training and activities on-the-job, they know the work assignments and have issued the work instructions. The supervisor will be responsible for ensuring that appropriate preventative measures are taken and that those actions are effective in reducing or eliminating the possibility of recurrence.

Responsibilities

Management (Board of Directors and Project Managers)

Management is responsible for ensuring that the materials (e.g., tools, equipment, personal protective equipment) and other resources (i.e., worker training materials) required to fully implement and maintain this program are readily available where and when they are required. Additionally,

management will monitor the effectiveness of the program, provide technical assistance as needed, and review the program bi-annually.

Program Manager

Dave Simpson is responsible for the development, documentation, training and administration of the program. This position carries the responsibility of insuring this program is adhered to and that proper reporting is executed.

Supervisors (Superintendents and Foreman)

Supervisors are responsible for ensuring that a task specific job hazard analysis (JHA), also known as a safe work plan, is developed. The JHA will select, implement and document the appropriate site-specific control measures as defined within this policy. Supervisors will direct the work in a manner that ensures the risk to workers is minimized, adequately controlled and that practices defined by this policy will be followed. Supervisors are responsible for ensuring Unger Construction employees and subcontractors are following expectations. Supervisors will be held accountable for enforcing the requirements of this program. Undesirable behavior will not resolve itself, therefore supervisors must be directly involved with modifying behaviors inconsistent with program expectations. Supervisors will be held accountable for enforcing Unger Construction's disciplinary program.

Workers (Employees and Subcontractors)

Unger Construction has high expectations and requires safety excellence for each employee, crew, project and for our entire company. Workers are required to follow the minimum procedures outlined in this program. Workers are responsible for knowing the hazards and the control measures established in the JHA. Workers are responsible for using the assigned PPE in an effective and safe manner. Workers are responsible for stopping unsafe acts and correcting unsafe conditions on the spot as soon as they are discovered. Any deviations from this program must be immediately brought to the attention of your supervisor. Workers that choose to conduct themselves in a manner that is inconsistent with these expectations will be held accountable for those decisions and may incur disciplinary actions.

Training

Before any employee is allowed to perform a supervisory function, they must first receive Incident Investigation training. The training will include the following subjects: Assessing the situation, informing management, stabilizing the workplace, planning your investigation, collecting data, documentation, communication, preventing retaliation, gap closing actions and tracking.

Proof of training is available on the "S" drive. The training data base can be sorted by employee name or by subject. This ensures supervisors and employees are able to confirm they have the necessary training and if they don't which employees do. Employees that need training should contact their project manager or superintendent to make arrangements for them to be trained.

Retraining

The need for retraining will be indicated when: an employee's work habits or knowledge indicate a lack of necessary understanding, motivation or skills required to properly conduct, document or communicate an incident investigation.

Discussion

Unger Construction expects excellence; in our safety programs, the quality of materials/workmanship and our business practices. Every employee/subcontractor must adhere to the highest quality standards as well as Unger Construction's safety policies. Unger Construction's senior management team empowers each and every employee/subcontractor to stop unsafe acts, to correct conditions that appear to be unsafe and to stop poor quality or substandard workmanship before an incident occurs.

Unger Construction is a team centered, learning oriented organization that promotes excellence through, awareness, empowerment and participation at all levels. We make continuous improvement through fact finding, not fault finding. Freely identifying our short comings, celebrating our successes and putting proper measures in place help make measureable progress in our excellence journey. We believe few incidents occur as the result of a single failure. Most incidents are symptoms of management system failures and not just physical or human failures. Our investigation process collects data on each of the following components (management system, physical and human) which ensures blame cannot be inadvertently placed on anyone. Our investigation process demonstrates that opportunities for improvement reach to all levels of the organization.

Underlying principles: Incidents don't just happen. They are caused. Incidents can be prevented if causes are eliminated. Causes can be eliminated if all incidents are investigated properly. Unless the causes are eliminated, the same situation will reoccur.

Incidents to Investigate

Situations to investigate include but are not limited to: serious injury, collapse or structural failure (building component, equipment, excavation), spills, fires, flooding, schedule delays, quality excursions, near misses, ethical violations, business interruptions, property or equipment damage and other times when an unplanned or unintended event occurs. All incidents shall be investigated regardless of their severity. The degree to which an incident is investigated is dependent on its severity and the potential for it to happen again.

Types of Incidents

Incidents vary greatly, roles and responsibilities are to be used as a guideline and flexibility is to be expected. Incidents can be categorized as either simple or complex. For simple incidents, a single team member could have numerous roles and responsibilities. As the complexity of the incident increases, additional resources will be brought forward. Simple incidents may not require detailed documentation, they do however require simple documentation, communication and gap closing actions. Simple incidents may not require escalation to upper management. Workers that have the appropriate training and authority can effectively handle these events.

Tools/Techniques

An incident investigation is the account and analysis of an incident based on information gathered by a thorough examination of all contributing factors and causes involved. Our primary tools/techniques to support the incident investigation are 5 Why's, Taproot, W5 Method and Fishbone diagrams. Five Why's is used to collect information during interviews. Taproot is used to find the single event that caused the incident as well as the numerous contributing factors that if done differently would have prevented the event. Taproot investigates individual performance, team performance, the management system, procedures, training, quality control, communications, human engineering and immediate supervision. The W5 Method determines who, what, when where how and why the event occurred. Fishbone diagrams ensure the investigation looks into the following areas: Equipment, Process, People, Materials, Environment and Management.

Outside Resources

When specialized equipment or tools are required to assist with the investigation they will be made available. When independent consultants would benefit the investigation they will be made available. Depending on the circumstances, persons with expertise may be called upon to be involved or actually conduct the investigation. The determining factor for involving outside resources relates to the severity and complexity of the incident.

Protection of Employees and Subcontractors That Report Incidents

Unger Construction will not tolerate any reprisals against persons who report safety issues and concerns. Any reprisal will be considered a violation of our Code of Ethics Policy. Unger Construction will take disciplinary action against anyone who initiates such a reprisal. The most common types to watch out for might include reassignment of the complainant (without their consent), unfair or hostile treatment post-investigation, layoff (of complainant), etc.

The key to our success is how we handle failures/mistakes. We get over them fast; we do not dwell on them and do not let others dwell on them.

Incident Investigation Flow Path

The following steps are designed to provide a guideline for conducting a fair and thorough investigation.

Preparation – As little time as possible should be lost between the incident event and the beginning of the investigation. The ideal situation would be to have all the necessary resources available before the incident so that the investigators can attend immediately to their tasks. Every incident is unique and requires an investigation tailored to the particular situation.

Who should conduct an incident investigation and under which circumstances are investigations performed? Take the time up front to determine the techniques that will be employed, sequence of events, data to be analyzed, individuals involved and expected outcomes. The investigators must be seen as sincere, impartial and knowledgeable in terms of the techniques of conducting an incident investigation. It is important that the investigator exhibit a behavior of non-judgement and diplomacy. Much of the success of the investigation depends on the investigator's attitude, approach and communication style.

Investigation Kit: investigation checklist, investigation forms, high visibility tape, pencils, pens, measuring tape, clipboard, camera, notepaper, and a flashlight.

Assess the Situation – inform management of what is happening, activate the emergency response team, activate investigation team. Speed and thoroughness are both necessary in incident investigations. Memories fade and evidence disappears. Balancing the numerous activities to be undertaken when visiting the scene is a great challenge for the investigator, assign task such that no member of the investigation team is overwhelmed.

Take Control – care for the injured takes priority. If chemicals are involved, ensure that copies of the material safety data sheets (SDS's) are provided to the hospital with the injured. Secure the area. Protect evidence and the scene. To protect evidence and to avoid further injuries or damage, people should be kept out of the incident scene until the investigators arrive (except to relieve suffering). Required items involved in the incident (e.g. equipment, materials) will not be moved unless it is necessary to release an injured person or to avoid creating additional hazards. The incident area will not be accessible except for members of the incident investigation team. One method is to barricade off the area and notify management that the incident scene is not accessible.

Stabilize the Situation – make the area safe, put out the fire, stop the spill, focus on ending the emergency response. Make the area safe for other investigators entering the scene.

Communication – Authorized team members shall contact the appropriate people (management staff, client staff, trade partners, family of injured and outside agencies. Serious incidents will have to be communicated to the client and perhaps outside agencies. Timing for these communications will depend on the client's contract requirements. Typically the initial response should be as soon as practically possible and not longer than 8 hours after the incident. The first draft of written reports shall be submitted within 24 hours. As the information develops, written reports will be submitted at the agreed upon communication frequency. OSHA must be notified of work related fatalities within 8 hours. Amputations, loss of an eye or hospitalization for other than observation shall be reported to OSHA within 24 hours.

Identify Witnesses – Inquire with those at the incident scene and management staff as to who witnessed the incident. Obtain the witnesses name, address and phone numbers and make a point of contacting them for an interview as soon as possible. Interview witnesses promptly, separately and privately. Interviews should also be conducted with anyone who can give relevant information; those who came on the scene immediately after the incident, those who saw events leading to the incident, those who have information about the work tasks, processes, safety devices in use, materials, equipment and other conditions involved in the incident, even if they were not present. To obtain as untainted version of the story as possible, witnesses should be interviewed as soon as practicable after the incident.

Witnesses should be interviewed individually rather than in a group, preferably at the scene of the incident where it is easier to establish the positions of each person involved and description of the events. If necessary, conduct more detailed interviews later as evidence, such as photographs, become available. If witnesses are under stress or you cannot speak to each one immediately, ask each to go into a separate room and write out what they saw happen during the incident in their own words. This method can serve as an effective means for information gathering since individuals will jot down their own ideas in their own words, without influence of an interviewer or other witnesses. Interview each witness afterwards. Read each person's statement back and clear up uncertainties. When you are

satisfied that you have all the necessary information, ask each witness to review and sign their statement.

Use the W5 method to plan interviews as well as to collect and analyze evidence. The W5 method uses the questions what, who, where, when, and why/how to find out what happened and determine the causes of the incident. Examples include: Can you tell me what happened? Who was involved in the incident? Where did the incident occur? When did the incident happen? Why did the incident occur? How did the incident happen? What did you see, hear? Where were you at the time? Explain how this task is done? Ask questions to get more information as required. Use visual aids (photographs, sketches and illustrations) to help witnesses recall information and clarify important points. Consider asking witnesses to draw a sketch.

Use the Taproot form to assess individual performance, team performance, the management system, procedures, training, quality control, communications, human engineering and immediate supervision.

Sometimes witnesses' statements will conflict and this is normal. People see things differently and may remember events differently. Each witness likely saw the incident from a slightly different angle. Opinions and perceptions differ. Avoid accepting opinions as fact until you have all the evidence.

End the interview on a positive note by expressing appreciation to witnesses and others who aided you in gathering information. Encourage the witness to contact you at a later date should they think of something else. Give credit if an individuals' ideas are used later. Reiterate the goal of the investigation (prevention) and what will be done with the information you gather.

Document the Area – Sketch the scene or use floor plans or drawings to map out the area. Measure the positions and condition of the injured workers, tools, equipment and materials involved, safety devices and personal protective equipment, machinery and equipment controls and anything else of value. Photographs and video recordings should always be taken as soon as possible. Here are some useful techniques for documenting:

- Start by photographing the general area then move to the specific scene of the incident.
- Take photos from all sides and several angles, as well as close up and isolation shots.
- Ask witnesses to direct where shots should be taken and note their comments.
- Create a photo log which includes when the shot was taken (date and time of day), by whom, location, under what lighting conditions, what the shot contains, identifying number on a sketch of the area and a brief description of what the photograph is trying to identify.
- When video recording, narrate the pertinent points identified above.

Examine Physical Evidence - Examine all physical evidence thoroughly (e.g. condition of the equipment) have equipment tested for malfunction by qualified personnel, obtain the relevant specs for the equipment, review written documentation (e.g. SDS, Manufacturer's specs). Broken equipment, debris, and samples of materials involved may be removed for further analysis by appropriate experts. Make notes which will identify exactly where these items came from. Any tools, materials, machinery part or subassembly which is suspected of failure, malfunction, misfit or faulty design shall be examined and documented. When warranted factory representatives should assist in the investigation. Avoid destroying or altering evidence during examination. Depending on the incident, you may want to take one or more samples of evidence found at the incident scene, which may require examination by qualified personnel. (The decision to utilize experts to collect evidence should be exercised – e.g.

handling controlled products or analysis of engineered systems). Carefully wrap and label everything in clean, dry and leak proof containers. Note where each specimen came from and what the initial appearance was like.

Analyze the Evidence - Once you have collected evidence, you will need to examine it closely in order to draw conclusions about what happened. This may involve sending the evidence to an expert for analysis (e.g. engineer, health professional, manufacturer) Physical evidence found at the scene is usually more reliable than evidence obtained from your witnesses. Since witness accounts, documentary or physical has been gathered, you are ready to begin analysis. By this stage, you should know how the incident happened and what the immediate causes were. Use this information to determine why the incident occurred. All causes of an incident must be considered for analysis. Be sure to keep an open mind to all possibilities and seek out all pertinent facts. If there are gaps in your tracing or sequence of events, you will need to fill these gaps by the necessary means (e.g. re- interviewing witnesses). If this is not possible, you may need to develop a “best guess” scenario that can be supported by the majority of facts you gathered during your investigation.

Returning the Scene to Normal - Once you have gathered all the evidence and information needed, ensure that the incident scene is returned to normal use. This may involve disinfecting the area if blood was spilled, checking equipment and materials to assess functionality, and ensuring that the incident will not be repeated. If a process or piece of equipment needs to be stopped until further examination proves its effectiveness, notify the management immediately to cease operation. If in doubt about the functionality of equipment, materials or process, have it checked by those who are technically qualified preferably those external to the organization.

Prepare the Report – A succinct report detailing specific recommendations is critical to the effectiveness of prevention at the workplace. The report should be written with consideration as to who the target group that will be reading the report will be. Identify root cause and causal factors, and determine the gap closing actions. Root cause: The single event, that if done differently, would have prevented the incident from occurring. Causal factors: The various items that contributed to or enabled the event to occur. Gap closing actions include corrective actions that are immediate, interim, or long term. For simple incidents the report format shall include: summary, narrative, root cause, causal factors and gap closing actions. For complex incidents the report format shall include: summary, injuries, business interruptions, narrative, sequence of events, timeline, root cause, causal factors, barriers that worked, barriers that failed, new barriers needed, gap closing actions (immediate, interim and long term), drawings, sketches, floor plans, photographs, laboratory analysis, safe work plans, methods of procedure and other items that were discovered or will support the investigation.

Narrative: What happened and where are we now. Gap closing Actions: What is being done about it. Barriers that worked: protection mechanisms /actions that responded accordingly, Barriers that failed: protection mechanisms/actions that either were not done properly or did not effectively prevent the incident. New barriers needed: Additional protective mechanisms / systemic solutions designed to prevent a similar incident for occur.

When an incident investigation identifies areas for improvement, they shall be cataloged as gap closing actions. Gap closing actions shall follow the “SMARTER” format: Specific, Measurable, Achievable, Realistic, Timely, Effective and Regularly Reviewed. This practice ensures we are focusing our continuous improvement efforts appropriately and will receive a true benefit from our incident investigation efforts.

Distribute the Report – Generally speaking two reports are generated, a summary report and the full report. Who gets what report is dependent upon their relationship to the incident and the nature of their contract. Often times the summary report is all that is needed for trade partners and workers on the jobsite. The full report will be distributed to the client, the projects management team, and Unger Construction's senior managers and others directly involved in the incident or impacted by the incident.

Findings are summarized in Lessons Learned communications which are distributed monthly. Lessons Learned communications are distributed throughout the entire organization therefore everyone learns, not just those that had personal or direct exposure to the incident.

Follow Through - Implement corrective actions, track completion of corrective actions, report progress, critique process for continuous improvement. Ensure that actions are closely coupled with learnings.