

# CEO SAFETY

How to Actively Engage Executive  
Management in the Promotion of Safety and  
Health in the Workplace

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June 2018

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## Foreword and Acknowledgments

Each year at a state fair a competition was held to see which farmer could grow the best corn. There was one particular farmer who was well-known for growing award-winning corn. Each year the farmer would enter his corn in the competition and win the blue ribbon (first place). One year following the announcement of the winner, a newspaper reporter interviewed the farmer to learn how he grew the best corn every year. The farmer replied, “At the end of the harvest each year I preserve the best seed corn and share it with my neighbors to plant in their fields.” The reporter then asked, “Why would you share your best corn seeds with your neighbors, especially since they are your competitors for the award?” The farmer answered, “The wind picks up pollen from the ripening corn and blows it from field-to-field. If my neighbors grow inferior corn, cross-pollination will steadily degrade the quality of my corn. If I am to grow good corn, I must help my neighbors grow good corn. My corn cannot improve unless my neighbors’ corn also improves.” (Source: **How to Talk Well** by James Bender, McGraw-Hill, New York, NY, 1994)

Safety and safety professionals are no different. This story inspired the authors to create an opportunity through which safety professionals can share their strategies to improve workplace safety. Safety professionals are a major resource for improving work place safety, but they cannot make much impact working alone. If not the safety professional, then who has significant impact on improving safety? A common answer from most safety professionals is “top management.” Executive management personnel are in a position to make a significant impact on safety performance in a way that the average safety professional cannot. What can safety professionals do to get company chief executive officers (CEOs), presidents, and other executive management involved or at least make them look like they are involved? There is no single answer, but many answers to this question. This guidebook is not intended for only safety professionals. Any member of management can customize these approaches to the culture of their organization. Through these methodologies individual members of management can become more “visibly” supportive of the company’s safety efforts, which will lead to improved measurable results.

This guidebook is a medium through which a number of safety professionals share the strategies they use to get their executive management involved, or appear involved, in the safety performance of their organization. The aims of this guidebook are to serve as a toolbox of techniques that safety professionals can use to get their executive management’s involvement in safety, and to provide different strategies to construction organizations with the hope that some of the strategies might be incorporated into their organizations. Executive management’s involvement, if conducted in the right manner, can make a huge positive impact on workplace safety and speed up our industry’s progress towards an injury free environment. The activities described in this guidebook come from the authors’ own experiences and from discussions with other safety professionals. The authors would like to thank the following people who have contributed valuable information for the guidebook: Shawn Connick, Kimberly Gamble, Don Greenland, Bill Hannah, Dave Hardin, Jerry Harr, Byron Loney, Gene Patrick, Thomas Sorley, and Bill Woods. Their contributions to this book are invaluable and the time and effort taken to provide the information is sincerely appreciated.

Brian Clarke, CSP  
June 2018

## Introduction to CEO Safety

Over their careers the authors have had conversations with many safety professionals working in the construction industry regarding the most needed element of a successful safety program. The most common response includes some version of the same answer: “What is important to executive management will be important to the company’s middle management and craft employees.” Safety professionals recognize that executive management’s visible participation in safety is an important component of a company’s safety program. If safety is important to executive management and this priority is communicated throughout the company, field personnel will place importance on it as well. However when asked what constitutes executive management support, no one single answer is consistent amongst safety professionals. In addition, there is commonly not a clear and concise response to the question, “What actions, steps, procedures, or responses are expected from executive management to support a safety and health program?”

In the article “2009 CEOs Who Get It”, the National Safety Council highlights the top CEOs as those who are dedicated to employee safety as a primary goal and cultivate safety leadership at all levels in their organization (*1*). In addition, the CEOs who truly “get it,” emphasize safety around the clock, extending a safety culture to employees’ families and homes.

This guidebook presents in-depth examples of activities in which safety professionals have actively engaged the executive management in their firms to improve safety and health. The activities are practical ways in which safety professionals, working with and through executive management, can establish a positive safety culture in their company. The following are provided for each of the in-depth activities: background information about the activity, the specific actions/tasks involved, who should be involved and when, barriers to and enablers of implementation, observations and perceived impacts from past implementations, and graphics, letters, or other documents to illustrate the activity. The activity descriptions are followed by additional examples of how executive managers can be involved; however the additional activities identified are more concise without results or detailed background information.

A list of references and other resources is provided to inform the reader of other related and supporting sources of information. The reader is encouraged to explore the topic in more detail. Lastly, a glossary of terms is provided to educate those who are not familiar with the area of safety and to ensure clear and consistent understanding of the guidebook content.

Learning firsthand about the level of commitment from executive management to promoting safety and health of the workforce is uplifting. The stories of their involvement and the resulting impact on the workers provide support for their ability to positively impact safety performance. During the development of this book the authors discussed the contents of the guidebook with executives and safety professionals, all requested copies when published publication in order to learn from others as well as provide examples to the companies they work with. Most of the activities included were generated from companies in the construction industry. However, most safety processes are not industry-specific and can be easily adopted for other industries.

It is understood that there is no “one” way for executive managers to show support for and promote safety and health. In doing the research for this book, the findings can be best summarized by quoting one of those interviewed: “**Active visible participation is the key.**”

## Executive Management Impact on Safety and Health

Safety in the workplace is of highest priority. Unfortunately, injuries and fatalities are still prevalent throughout all of our work industries, especially in construction (2). The beneficial impact that executive management can have on safety performance is well known. Academic studies and practical experience highlight the positive impact that executive management personnel can have on safety culture/climate in an organization and worker safety performance (3-11). For example, the studies show that:

- Of those companies studied, when executive management investigates every recordable injury in the company, the recordable incident rate (RIR) was approximately 60% less than those companies that had executive management investigate 50% or less of the injury incidents (10). The results suggest that the more that executive management is involved in accident investigations, safer performances are realized. This impact relates to the frequency of regularly scheduled safety inspections by executive management as well.
- Statistical analyses of data from many projects reveal that better safety performance is associated with projects where inspections are conducted weekly, bi-weekly, or monthly as opposed to quarterly or annually. In companies studied where executive management performs safety inspections on a weekly, bi-weekly, or monthly basis, the RIR was approximately 50% of the RIR in the companies where executive management inspections were conducted quarterly or annually (10).
- Better safety performance is also seen on projects where the safety reports are reviewed by the company president. In a study of construction firms, the RIR was on average approximately 85% less in company's where the president reviews safety reports compared with those companies in which the president does not review the safety reports (12). The study suggests that when executive management reviews and comments on periodic project reports, a clear message is sent regarding the importance of the information included in the report. This is especially true for reports of safety performance on projects.
- Studies show that safety performance also improves when executive management discusses site safety with project and field personnel, when safety is included as a goal in the company's general policies and mission statement, and when employee performance reviews include safety (12-14).

As a result, it is clear that while field managers such as foremen and superintendents have a significant influence on worker safety through the day-to-day activities, executive management plays a big role in shaping the overall attitude of the employees, including attitudes related to safety, and the safety culture of the company. The impact is especially evident when executive management makes its commitment to safety known to the personnel in the field. The commitment indicates to field staff that safety is important and is valued by executive management.

Importantly, executive managers should be actively involved in worker safety at the project or plant level, whether it is through participation in safety inspections and meetings, distributing safety awards, writing letters of commendation, or other firsthand of "visible" involvement. If safety activities involve solely lower level managers, with no involvement of executive management, the message being sent to the field supervisor and craft employees is that safety is

not sufficiently important to warrant the attention of executive managers. In addition, while executive management's commitment can be communicated in a variety of ways, the commitment to safety should always be in line with company policy, and be consistent.

What we learn from the research and practical experience is that getting executive management involved in safety has measurable beneficial results. Executive management's active and visible involvement sets an overall tone in the company that safety is important, and that the safety of each worker is of personal importance to executive management. The culture created by executive management filters down to workers in the field, leading to greater interest in safety and as a result better decisions when exposed to hazards.

## **Safety and Health Promotion Activities**

Given that executive management can have a strong positive impact on safety, the next question is how to get executive management more visibly involved in safety. What activities can CEOs, presidents, and other top management do to be more visibly involved and demonstrate their support for safety for all to see? This section of the guidebook provides a variety of example activities that can be implemented to visibly increase involvement of executive management in safety-related activities in their companies to benefit company safety performance.

The activities presented below are examples of actions/tasks that have been collected from industry professionals. In some cases, the activities are described in detail when sufficient detail was available, while for other activities only summary descriptions are provided. For all cases, the safety professional sharing the activity expressed its positive impact on safety. Actual safety performance data relative to each activity was not collected and analyzed, and therefore not presented herein; the positive impacts on safety are anecdotal and solely based on that company's experience implementing the activity. The activities presented are expected to result in positive change to safety within a company, and are shared to help affect this change in the industry. The authors welcome additional feedback from the industry regarding the impacts of the activities on safety. Further research would be needed to gain empirical data that measures and demonstrates the likely impact of the activities on safety performance.

The following content is provided for each of the in-depth activities: background information about the activity, the specific actions/tasks involved, who should be involved and when, barriers to and enablers of implementation, observations and perceived impacts from past implementations, and graphics, letters, or other documents to illustrate the activity. In the descriptions, the term "CEO" is commonly used to represent executive management personnel; the actual executive management personnel within a company who is involved may differ from one company to another.



## **Activity 1: Review of Project Safety Plans**

### **Introduction**

Project specific safety plans are commonly required, either by the safety-committed company or by the requirements of the owner and/or insurer, for capital improvements and/or sustaining projects. Typically the construction team prepares the project safety plans to address the various safety and health hazards associated with the project. Safety plans serve as a road map for the entire project team to perform the project in a safe manner. In a normal setting the plan is prepared by the project manager (PM), project superintendent, and/or project safety professional. A draft of the plan is commonly sent to the firm's corporate safety director for review and approval. The safety director reviews the plan, makes necessary modifications, and sends it back to the project team for implementation. The project team, led by the superintendent, makes the needed corrections or inclusions in the worksite activities, and implements the plan.

The traditional process of development, review, and implementation described above receives the same expected commitment and results as any other mid-level management process. There is no distinction between safety and other project performance criteria such as productivity and schedule. As a result, added emphasis on the importance of safety to the company is not communicated to the project team, and projects still may experience a high number of accidents. Safety performance can be improved through the involvement of the executive management of the company in the review of the safety plan (3). Their involvement shows support and interest in the safety planning of a project.

### **Activity**

Review and provide feedback on project safety plans directly to the PM/superintendent.

### **Who/When**

CEO, President, or other executive management during pre-construction and/or pre-startup.

### **Strategy**

The CEO may not be familiar with or have time available to provide a detailed review of project specific safety plans. An initial step is for the safety manager to sit down with the CEO to explain project safety plans to the CEO so that the CEO is familiar with the content and requirements of the plans.

Next, prior to the CEO reviewing the plans for a specific project, the safety manager can review the project safety plans and develop a short brief (summary) for the CEO to review that explains the highlights of the plans. After reviewing the summary and plans, the CEO can discuss the safety plans with the safety manager. The safety plans would be revised if needed.

The next step is for the CEO to prepare a letter to the project team to show support for the project safety plan. To assist the CEO in the process, the safety manager could prepare a draft of a letter on behalf of the CEO that the CEO can then review, revise, and sign. The letter must be project specific as well as include a detailed review of the plan so that it provides in-depth guidance to, and support for, the project team for safety on the project.

The letter from the CEO along with the reviewed safety plan is then sent to the superintendent/PM on the project. By doing so, the project team realizes that the safety plan for the project is a priority to the CEO.

Depending on the culture of the company and time availability of the CEO, the safety director may wish to draft a sample letter for the CEO to start with. The letter can highlight important parts of the site-specific safety plan for the CEO to review. The safety director can send the draft letter and the safety plan to the CEO to review, edit as appropriate, sign, and distribute. An example letter is provided in Figure 1.1.

### **Barriers/Enablers**

Difficulty in implementing this activity may arise if the CEO does not have enough time available to review safety plans and prepare letters for all company projects. To overcome this hurdle, the safety manager can assist by preparing a summary of the safety plan for the CEO's review that highlights the important and unique features of the plan. In addition, the safety manager can prepare an initial draft of the letter that the CEO can revise if needed. Also, it is important that the letter be personal in nature, and specific to the project at hand. The letter should not be a standard "template" that is sent out to all projects. Lastly, the review should be conducted and the letter written in a timely manner so that the project team can make adjustments if necessary and so that it positively impacts the project right from the start.

### **Observations/Impacts**

According to those who have implemented this practice, the activity has led to more commitment and increased motivation from the project teams. One contributor commented, "One of our superintendents has displayed a framed letter from our CEO on the wall in his home."

Date

Project Superintendent  
Construction Company  
123 First Avenue  
Anywhere, USA

**Re: Project Safety Plan**

Dear Doug:

I just reviewed your project safety plan. Overall it looks very good. I was glad to see you limited the scope of the plan to the demolition process concentrating your efforts on this phase of the project. We have learned from our insurance provider that quality project safety planning is one of the most influential elements of a project's safety success. Continue this level of safety pre-planning as you progress through this phase of the project.

You will be working with subcontractors and crafts that are not be familiar with our company's safety programs. I understand that you have already conducted pre-mobilization meetings. This is time well spent. Be sure to have a pre-job meeting with every subcontractor before they mobilize. I was glad to see that both (name of Project Operations Manager) and (name of Corporate Safety Director) attended these initial meetings with you.

Public protection will be our greatest challenge and exposure. Ensure that every supervisor and employee understands your expectations when it comes to: housekeeping, project deliveries, sidewalks and street cleanliness and our appearance to the neighbors. We have had issues in the past with scaffolding not being erected to specifications. Be sure we get a detailed erection plan for the scaffolding contractor, then ensure it is being followed in the field. I understand security is a concern. Ensure adequate steps are taken to protect the project and our subcontractor's equipment.

I was glad to see your plan included New Employee Orientation. Ensure all craft employees attend your orientation before they are allowed to work on site. This is your first and best opportunity to ensure your personal commitment to safety is communicated to the craft on site. Tailor your orientation as the job hazards change. Having the company's hardhat stickers would be a good control tool.

As you know one of the leading causes of incidents can be attributed to inattentiveness. There are opportunities to involve craft and subcontractor management in addressing this. Please review opportunities to address safe behavior on your project with (name of company safety professional). Additionally, we have seen a large percentage of our injuries from apprentices. Ensure you take time to discuss this with the various supervisors as they staff the project.

Consider inviting OSHA consultation for your project. We have had great success working with OSHA in the past.

I look forward to the completion of a successful and injury-free project. Keep up the good work.

Sincerely,  
President/CEO

Cc: Safety Director

**Figure 1.1: Example Letter from President/CEO Regarding Safety Plan Review**

## **Activity 2: Tracking Additional Company Sales Required to Recover Accident Costs**

### **Introduction**

Executive management may be motivated to promote safety from both humanitarian and financial perspectives. Safety has gained attention in part because of the financial benefits, increased productivity, and higher quality that it provides, and the increasing workers' compensation insurance premiums that have resulted from a great increase in medical costs and convalescent care (15). To expand this commitment to improving worker safety, executive management should be made aware of the costs associated with accidents and the associated billings/product required to recover the costs of accidents. Safety professionals can help executive management realize that safety cannot only save unnecessary expenses and liability issues, but also be a profit center. This can be done by showing executive management and project management the costs related to safety, how the costs can be minimized, and how investing in safety can lead to profits. It is estimated that for every \$1 spent on accident prevention on construction sites, \$3 is gained in benefit (16).

Accident/incident costs can be categorized as either direct or indirect costs. Direct costs are those insurable costs that accrue directly from an accident (e.g., medical costs, hospitalization, permanent disability, rehabilitation, retraining, etc.). Indirect costs are "hidden" costs which are related to an accident/incident but difficult to calculate and are not typically insurable. Indirect costs include those costs associated with such items as: time away from work; idle workers looking at the accidents; accident investigation expenses; lost productivity; and other work performance-related impacts. Since these costs are not included in project budgets, hidden costs are paid directly from company profits. Hidden costs have been estimated to range from 2 to 30 times the direct costs depending on the incident and industry, with most estimates being approximately 4:1 (indirect to direct costs) for the construction industry (11, 17-19). Many managers do not know the direct or indirect cost of accidents let alone the additional company sales required to recover the monetary cost of the accident. Identifying the hidden cost of accidents and the additional sales the company has to make to recover lost profit can be enlightening. This strategy will cause executive management to look at the cost of accidents from a different perspective. In addition, the same strategy can be used to improve the safety performance of subcontractors by providing the same information to the subcontracting company's CEO and/or CFO.

### **Activity**

Report the indirect costs associated with each accident and the additional sales required to recover the lost costs to executive management for their review and consideration.

### **Who/When**

This activity can be performed for each project, plant, facility, or the entire company on a monthly and/or quarterly basis. Safety professionals can assist their firm's CEO/CFO with retrieving the data and calculating the direct and indirect costs. The CEO can also send similar cost totals related to subcontractor accidents/performance to all subcontracting firms. To add additional emphasis, identification of the client's hidden costs can also be included with the contractor's incident costs.

### Strategy

Most firms require some kind of accident investigation report or form to be completed by the immediate supervisor of the injured worker following a jobsite injury accident. This task may involve input from one or more persons who have knowledge of the incident, jobsite, risk management, and corporate authority. A typical accident investigation report identifies the “who, what, when, and where” of the incident, and sometimes why the incident occurred. The important information often not captured in the report or ensuing investigations is the worker-hours lost by the injured employee, the crew, supervisory personnel, safety professional, and others, as a result of the accident. It is sometimes the case that even a minor injury can amount to many worker-hours lost in investigation, recovery, and paperwork. These activities may involve professionals with high billing rates and therefore adding a significant amount of cost. Putting a cost multiplier to the worker-hours spent on the incident can identify the hidden costs of accidents.

Figure 2.1 shows an example of an indirect cost worksheet used to calculate the indirect costs associated with an accident. The first step is to identify the number of hours spent on the accident by company personnel. On-site personnel can easily estimate the number of hours which the various individuals involved with the accident and its investigation expended as a result of the accident. The next step is to identify the billing rate for the individuals involved. Once these values are known, actual costs for each employee can be calculated. Added to these personnel costs are the costs of equipment downtime to get a total amount of indirect costs.

Once the total amount of indirect costs has been calculated, use the amount of indirect costs to calculate the additional sales required to recover the cost of the accident. This calculation can be done using the matrix shown in Table 2.1. Identify the accident cost on the left column and your firm’s profit margin on the top row. The intersecting number shows a rough estimate of the additional amount of sales required by your firm to recover the cost of the accident. This process can be repeated for all of the accidents that occur on a project, plant or within a firm. The cost of each of the individual accidents on a project or in a company can be summed to obtain the total additional sales required by your firm to recover the cost of the accidents. This process can be performed on a monthly or quarterly basis, or as needed.

To influence senior management of your firm or contractor firms, show them all of the documents used in this process – the Indirect Cost Sheet (Figure 2.1) and Cost Recovery Matrix (Table 2.1). Use a highlighter to draw attention to the employee and employer names in the accident investigation forms, the total indirect cost on the incident indirect cost worksheet, the total cost of the accident, your firm’s profit margin, and the corresponding additional sales required. Attach these forms together along with a transmittal cover document or simply a business card. The transmittal message can be as simple as something like, “Carl FYI, see attached sheets. Very large number.” Send this package to the CEO/CFO of your firm or the subcontractor, depending on the frequency/severity of accidents and available support staff. This information can be sent immediately after an accident to the appropriate contractor or this packet can sent monthly or quarterly based on the summary of all accidents.

### Barriers/Enablers

The value in the activity comes from communicating the true costs of accidents/incidents to those involved with overseeing projects and company finances. The benefit received is only as good as

the accuracy of the information in the reports. If the information provided in the Incident Report and/or Indirect Cost Sheet is not accurate, its value comes into question by executive management. Special attention should be placed on the accuracy and completeness of the information provided on each form. After sending the completed forms to the appropriate executive management personnel and/or subcontracting firm, follow-up consultation can be provided to clarify any questions that they may have. A follow-up consultation meeting is also a good opportunity to identify ways that executive management can be involved to address the issues that led to the accidents.

### **Observations/Impacts**

When implemented by the authors, this process has generated a wide variety of responses from internal Executive VP's and owners/presidents of subcontracting firms. Some of the more memorable responses to the documents included: questions from the subcontractors as to whether it was a bill; a request for help on how to improve safety performance and reduce accident costs; if this was going to affect future work opportunities; and, the most memorable, "Holy s\*\*\*!".

| <b>Indirect Cost Sheet</b>   |   |                        |   |
|--|---|------------------------|---|
| Contractor: _____  |   | Date: _____            |   |
| Job Site: _____  |   | Time: _____            |   |
| Injured Employee(s): _____   |   |                        |   |
| Foreman: _____   |   | General Foreman: _____ |   |
| Type of Incident (Near Hit, First-Aid, Recordable, Lost-Time): _____   |   |                        |   |
| Description of Incident: _____   |   |                        |   |
| <b>Supervisor's Billing Rate:</b> \$ <input style="width: 50px;" type="text"/>                                 |   |                        |   |
| <b>Supervisor's Time</b>   |   | <b>Hours</b>           | <b>Cost</b>                               |
| Time at incident event   |   |                        |   |
| Transport and/or time at medical facility with employee(s)   |   |                        |   |
| Related paperwork/reports/incident review  |   |                        |   |
| Repair/re-order of equipment   |   |                        |   |
| Re-schedule of work  |   |                        |   |
| Replacement employee(s) hiring, training   |   |                        |   |
| Other (describe):  |   |                        |   |
| <b>Injured Employee's Billing Rate:</b> \$ <input style="width: 50px;" type="text"/>                           |   |                        |   |
| <b>Employee(s) Time</b>  |   | <b>Hours</b>           | <b>Cost</b>                               |
| Time away from productive work (medical appointments, paperwork)   |   |                        |   |
| Additional training  |   |                        |   |
| % reduction for light duty   | <input style="width: 50px;" type="text"/> | Days                   | <input style="width: 50px;" type="text"/> |
| <b>Average Billing Rate for Crew:</b> \$ <input style="width: 50px;" type="text"/>                             |   |                        |   |
| <b>Crew Time</b>   |   | <b>Hours</b>           | <b>Cost</b>                               |
| Time around incident (hrs.)  | <input style="width: 50px;" type="text"/> | Employees              | <input style="width: 50px;" type="text"/> |
| Investigation time (witness, paperwork). Total hours of all.   |   |                        |   |
| Training about incident (hrs.)   | <input style="width: 50px;" type="text"/> | Employees              | <input style="width: 50px;" type="text"/> |
| <b>Property/Equipment Damage or Loss</b>   |   |                        |   |
| <b>Equipment Repair/Replacement/Rental</b>   |   |                        | <b>Cost</b>                               |
| List items:  |   |                        | <input style="width: 50px;" type="text"/> |
| <b>Others involved in investigation/down time (e.g., proj. engineer, proj. supt., safety/claims, clerical)</b> |   |                        |   |
|  |   | <b>Rate</b>            | <b>Hours</b>                              |
| List person:   |   |                        |   |
|  |   |                        |   |
|  |   |                        |   |
| <b>Total Indirect Cost</b>   |   |                        | <input style="width: 50px;" type="text"/> |
| The above costs:   |   |                        |   |
| - Do NOT include office staff (processing reports, filing claims, return to work monitoring, etc.).            |   |                        |   |
| - Are NOT typically covered by insurance.  |   |                        |   |

**Figure 2.1: Example Indirect Cost Worksheet**

**Table 2.1: Additional Company Sales Required to Recover the Cost of an Accident (\$)**

| Total Accident Cost | Company Profit Margin |            |            |            |           |           |           |           |           |
|---------------------|-----------------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|
|                     | 2%                    | 3%         | 4%         | 5%         | 6%        | 7%        | 8%        | 9%        | 10%       |
| \$50                | 2,500                 | 1,667      | 1,250      | 1,000      | 833       | 714       | 625       | 556       | 500       |
| \$100               | 5,000                 | 3,333      | 2,500      | 2,000      | 1,667     | 1,429     | 1,250     | 1,111     | 1,000     |
| \$500               | 25,000                | 16,667     | 12,500     | 10,000     | 8,333     | 7,143     | 6,250     | 5,556     | 5,000     |
| \$1,000             | 50,000                | 33,333     | 25,000     | 20,000     | 16,667    | 14,286    | 12,500    | 11,111    | 10,000    |
| \$2,500             | 125,000               | 83,333     | 62,500     | 50,000     | 41,667    | 35,714    | 31,250    | 27,778    | 25,000    |
| \$5,000             | 250,000               | 166,667    | 125,000    | 100,000    | 83,333    | 71,429    | 62,500    | 55,556    | 50,000    |
| \$10,000            | 500,000               | 333,333    | 250,000    | 200,000    | 166,667   | 142,857   | 125,000   | 111,111   | 100,000   |
| \$25,000            | 1,250,000             | 833,333    | 625,000    | 500,000    | 416,667   | 357,143   | 312,500   | 277,778   | 250,000   |
| \$50,000            | 2,500,000             | 1,666,667  | 1,250,000  | 1,000,000  | 833,333   | 714,286   | 625,000   | 555,556   | 500,000   |
| \$100,000           | 5,000,000             | 3,333,333  | 2,500,000  | 2,000,000  | 1,666,667 | 1,428,571 | 1,250,000 | 1,111,111 | 1,000,000 |
| \$250,000           | 12,500,000            | 8,333,333  | 6,250,000  | 5,000,000  | 4,166,667 | 3,571,429 | 3,125,000 | 2,777,778 | 2,500,000 |
| \$500,000           | 25,000,000            | 16,666,667 | 12,500,000 | 10,000,000 | 8,333,333 | 7,142,857 | 6,250,000 | 5,555,556 | 5,000,000 |



## **Activity 3: Winning Contracts through Safety**

### **Introduction**

Over the past several decades the construction industry has opened its doors to different project delivery methods. With the rising popularity of different project delivery methods, the lowest bidder may not get the contract. This scenario is especially true in the private sector where owners are willing to select firms based on best value and negotiate contracts in contrast to the traditional competitive bidding. In fact, in addition to cost, schedule, and quality, progressive owners are considering several safety performance indicators when selecting contractors. Traditionally incident rates on past projects and experience modification ratings (EMRs) have been used as safety indicators. Some owner perceptions/expectations have changed and owners are beginning to use other indicators such as: qualifications of the contractor's safety staff, qualifications of the contractor's project management team, personal knowledge of the contractor, personal interviews, and an assessment of the quality of the contractor's overall safety program. In recent years the use of "on-line" contractor pre-qualification systems has become popular. These programs rank/score safety performance and compliance for the company as a whole. A word of caution: a new consulting industry has emerged that caters to writing safety programs for contractors to submit to these services to increase the contractor's rating/score.

A typical negotiated contract process begins with a call for proposals distributed by the owner through various means. Interested/invited contractors submit a proposal package through their marketing department. After review by the owner, if the contractor is selected for further consideration, this step is typically followed by an interview with owner representatives. In this meeting, the contractor's team will look for every strategic advantage over their competitors to win the contract. A company's safety commitment and performance can be a significant strategic advantage and will add value to the company's goal to win the contract, especially when working with owners on projects where construction will be near critical operations and/or with owners that have high exposure to public image concerns or stockholder demands.

### **Activity**

During pre-construction and design identify project specific safety, health, security, and/or environmental concerns that will or have the potential to impact the owner's operations, processes, staff, guests, and/or reputation. Then, during the contractor's presentation to the owner (written and oral proposals), project specific exposures can be presented and controls/possible solutions recommended.

### **Who/When**

The safety professional can be part of the project team's presentation and/or help prepare the presentation team for the meeting with the owner/client.

### **Strategy**

Knowing the scope of the project, the safety professional can identify safety, health, environmental, security, and possibly even harassment and/or minority-owned business concerns of the owner. Different owners have different concerns for different projects. Different members of the owner's selection committee may even have different environmental, health, and safety (EHS) concerns.

Table 3.1 lists some additional project concerns that owners may have. Experienced safety professionals have the ability to identify these unique project-specific concerns, which can also be addressed in their company's marketing proposals.

### **Barriers/Enablers**

When presenting to owners/clients in project interviews, contractor employees must provide a unified and knowledgeable voice. When the CEO presents information about the safety concerns and safety program for a planned project, the CEO must be knowledgeable about the information presented. If not, the construction team appears disjointed and the priority given to safety appears insincere. Prior to the interview, all of the project team members need to be well-versed in safety and the safety plan for the project.

The impact of this activity will be enabled if the owner/client shares an interest in safety. Those owner organizations that have a positive safety culture will appreciate the attention to safety given by the construction team. If the owner organization does not place the same value on safety, additional information should be presented to inform the owner about the importance of safety and encourage greater interest and involvement to benefit the overall project and entire project team.

Different owners and owner representatives will have varying degrees of interest in and concern for safety, and place different value on "site safety." It is important to identify impact factors relevant and critical to the decisions to be made by the owner and/or owner representative.

### **Observations/Impacts**

Below are three examples of contracts issued in part because the owner's site specific safety hazards were identified and addressed by the contractor in the contractor's proposal to the owner. The examples were generated through informal lunch meetings between the contractor safety professionals and the owners. However the messages were delivered by contractor senior management, showing project familiarity and visible commitment to delivering an "impact free project."

Project site: Zoo. The primary goal at every zoo is animal health and welfare, followed closely by the safety of the visitors. While at a zoo, have you ever ordered a drink and received a plastic straw or lid with your drink? The answer is likely, never. Why? Plastic can kill animals. Some families enjoy a day at the zoo together. Other guests use zoos as a day care where unsupervised kids run freely. Think of the miles of danger tape, caution tape, and plastic fencing that contractors use. For this project proposal, the elimination of plastic on the project and the budgeting for front and back escorts for every delivery through the zoo won the votes of every "zoo keeper" on the selection committee.

Project site: University. Everyone knows that student safety is of primary concern on university campuses. However other issues are growing in importance. For example: alumni and associated donations are more important now than in the history of public education; administrations are building more and more buildings within the same campus footprint; and research is growing as an income source for many universities. Simple planning activities, such as overlapping the project schedule with critical university dates (i.e., midterm exams, final exams, graduation, new student orientation, and homecoming events), commitment to opening up more parking for homecoming

and graduation events for parents and alumni, eliminating load noises during final exams week, and not performing operations that cause significant vibration during key experiment times for researchers, will help ensure that university members representing academic and research concerns as well as the Alumni Association vote in your favor on the project proposal.

Project site: Hospital. Hospitals expect a contractor to have craft employee safety processes. Hospitals cannot afford impacts to their emergency room and ambulance routes (land and air). Hospitals also do not want to experience low Joint Commission Scores, traffic delays from construction operations, HIPPA violations, negative Fire Department inspection reports, and other detrimental performance impacts. There is but one time to make a first impression: with Senior Management initial statements. These statements should express interest in and involvement with the safety of patients and guests as well as knowledge about the importance of no interruptions to medical research and patient care. Doctors, medical researchers, and hospital facility managers will push for selection of a contractor that will eliminate operational impacts (and additional stress) during the project.

Project site: Prison. The prison superintendent has one concern that is always at the forefront: an escaped prisoner. When executive management can talk about tool control, key control, use of sally ports, and the use of inmate labor and supervision during the project, the prison superintendent will pay attention. The most important vote a contractor must have during contractor selection is that of the prison superintendent. Prisoner security being stated by the CEO as the contractor's top priority will show both commitment from the highest levels of the contractor as well as industry familiarity.

The authors have consulted with many companies that have implemented this practice of emphasizing site specific owner safety/impacts exposures and controls, and feel that this activity has positively contributed to their firm winning many contracts. The activity has also benefited the company by helping develop numerous "repeat" clients without going through a competitive award process.

**Table 3.1: Common Project-Specific EHS Concerns of Owners**

| <b>Owner Selection Committee Member</b> | <b>Project Type</b>                    | <b>EHS Concerns</b>  |
|---|--|--|
| Jail Superintendent                     | Occupied jail or prison                | Prisoner / inmate release  |
| Animal care handler                     | Animal care, zoo, ranch, research labs | Animal escape or harm, noise, plastic, flashing lights, etc.   |
| Dean of Students                        | Education                              | Student safety   |
| MD, Director of Facilities              | Hospital                               | Interruption to ambulance (ground/air), loss of revenue, delayed medical service   |
| Director of Facilities                  | Education                              | Environmental  |
| Alumni Association                      | Education                              | Interruption of sports or alumni returning to attend games   |
| Risk Manager                            | Hospital                               | Interruption to ambulance (ground/air), loss of revenue, delayed medical service.<br>Dust control – aspergillosis: patient exposure to construction dust |
| Director of Medical Services            | Hospital                               | Vibration, air intake, noise, and welding flash  |
| Public Relations                        | Factory near residential area          | Any interruption to neighbors, traffic, utilities, noise; attractive nuisance to local children  |
| Fire Chief                              | Emergency response, fire               | Following industry adopted standards, reference of NFPA  |
| Airport Controller                      | Airport                                | Foreign object debris  |
| Museum Director                         | Museum                                 | Dust/dirt on artifacts and art   |

## Activity 4: “Keep up the Good Work”

### Introduction

Managers have direct control over the plant and construction activities. One way to improve site safety is by keeping the motivation level of managers high and by increasing their commitment to safety. There are several ways to motivate personnel to improve their safety performance and their involvement with safety. Incentives are one technique that has been used by safety professionals to motivate field personnel. Incentives can either be tangible (extrinsic) or intangible (intrinsic). Tangible rewards, such as baseball caps, gift certificates, and cash rewards, have worked well with craft workers (20). Alternate means may be needed to motivate some managers. It is likely that managers will be motivated by incentives that are intangible (20). Executive management may not have to spend excessive amounts of money to motivate managers. Executive management spending time to personally acknowledge and appreciate any acts of managers that improve the safety performance at both the plant/project and company level can act as an incentive.

### Activity

CEOs/executive management personally recognize and acknowledge at the project and company level the positive safety performance of field managers.

### Who/When

Acts of appreciation can follow any notable safety-related activity performed by the field managers. These safety-related activities might include: inviting Occupational Safety and Health Administration (OSHA) consultants to assess the facility/project, attending safety conferences and workshops, conducting project specific safety training, and achieving project specific safety milestones. A significant incentive to managers for these activities will be if the appreciation of these safety acts comes directly from the CEO.

### Strategy

The following process can be used as an opportunity to make sure the CEO gets involved with organizational safety. Facility/project personnel may invite an OSHA consultant to the facility site to perform a safety audit, identify/discuss complex safety and health hazards, and provide suggestions to eliminate these hazards. Similar to the letter from the CEO to the project superintendent described previously in Activity 1, a letter can be drafted from the CEO to the project management team. The letter should: (1) show appreciation to the managers for their commitment to safety; (2) direct the managers to implement any corrective measures suggested by the OSHA consultant; and (3) advise the managers to send notes of thanks to the OSHA consultant. The CEO should sign the letter and send it to the manager directly from the CEO's office. An example letter is provided in Figure 4.1. Personal recognition from the CEO to an individual shows personal involvement from the CEO and the CEO's desire for continued activities/accomplishments of a similar nature. This letter is often proudly displayed or retained by the recipient.

### Barriers/Enablers

Difficulty in implementing this activity may arise if the CEO does not have enough time available to review the safety efforts/activities of all managers and prepare letters for all company

acknowledgment opportunities. To provide assistance, the safety manager can assist by alerting the CEO of special efforts/activities of field managers that deserve recognition. In addition, the safety manager can prepare an initial draft of the letter that the CEO can revise if needed. Also, it is important that the letter be personal in nature, and specific to the field manager. The letter should not be a standard “template” that is sent out to all deserving field managers. Lastly, the letter should be written and delivered in a timely manner so that the field manager understands that the CEO is actively aware of the efforts/activities and so that the recognition positively impacts the field manager for the remainder of the project.

### **Observations/Impacts**

Those who have implemented this process believe that managers have increased their involvement in safety related activities and are making use of OSHA consultations a habit. They mentioned that managers have now started calling the safety manager’s office more frequently to use the safety manager’s guidance on how to improve their plant and project safety performance. Above all, they say that the safety performance of the company has improved in part as a result of implementing this activity.

Date

Project Superintendent  
Construction Company  
123 First Avenue  
Any town USA

**Re: OSHA Consulting Visit**

Dear Jim:

I just reviewed the OSHA consultant report. Very impressive. I do not recall any company project in recent years having two OSHA consultations resulting in zero recommendations.

Please pass on to the team a "Good job!" from me. Even though we should not measure our success against OSHA's minimum standards, this accomplishment deserves acknowledgement.

It is the efforts like yours which make our company the premier safety contractor that it is. Keep up the good work!

Sincerely,

President/CEO

Cc: Safety Director

**Figure 4.1: Example Letter of Appreciation from CEO to Field Manager**

## **Activity 5: Participation in Foreman Accident Cost Meeting**

### **Introduction**

Construction foremen have direct control and supervision over the employees on a project. Hence, they have a good share of the opportunity to improve the safety performance of the project in addition to the PMs and the superintendents. Foremen in the construction industry are likely aware of the fact that accidents cost money. However, they may not be aware of exactly how much accidents cost. Educating foremen about the cost of accidents and the incentives to prevent them can have a positive impact on their interest in safety and, as a result, safety performance on the jobsite. Many construction companies place this educational responsibility in the hands of the safety managers and other safety staff in the company. A question may arise regarding whether the safety professional's message is received openly and has the intended impact. Imagine the impact if the CEO or CFO discusses the accident costs directly with the team of foremen involved in a project.

### **Activity**

Executive management personnel (e.g., CEO/CFO) of the company presents the cost impacts of accidents to the team of project foremen.

### **Who/When**

The company CEO and/or CFO should perform this task. This task can be performed at the start of the project, during the peak work period(s) on the project, at times of high safety risk on the project, immediately following an accident, or when a project is experiencing an increase in injury frequency.

### **Strategy**

As the individual directed to discharge the duty of educating the foremen on safety and accident costs, the safety manager should call a meeting of all foremen that is separate from progress or other regular meetings. When the meeting is called, the attendees should be informed about the purpose of the meeting and who will be in attendance. The foremen may be surprised when they see the CEO or CFO of the company attending the meeting also. The CEO can prepare a speech to be presented at the beginning of the meeting, and then should participate in and be present throughout the entire meeting. The speech should be on target and come from the heart; remember the purpose is to highlight the CEO's care for and commitment to the safety of the company employees. The presentation and attendance at the meeting will illustrate the CEO's involvement and help to convey to the foremen why safety is important from both humanitarian and cost perspectives. With the CEO present in the meeting, the attendees may be more likely to listen. They hear and realize how much an accident costs and how it affects their company's profit. For this purpose, a cost sheet that presents and calculates the indirect cost associated with an incident can be used, similar to that shown in Figure 2.1 for Activity 2. The meeting is also an opportunity to educate the foremen about the impact of accidents on insurance premiums and the Experience Modification Rating (EMR), and its role in acquiring/losing future contracts (see Table 2.1 in Activity 2). If in a union environment, consider inviting the Union Business Agent to the meeting, and ensure the Agent understands his/her desired roll in the presentation.



**Barriers/Enablers**

Finding time to hold another meeting during a busy project may be difficult. However, while the meeting time may cut into work time, the secondary benefits received from improved productivity and quality as a result of improved safety will offset the lost time. The CEO's words during the meeting, and actions while on the site can greatly impact the views of the foremen with respect to the safety message that the CEO delivers. Any executive management personnel who does not follow safety procedures when on site, or whose words are interpreted as placing safety below other project performance criteria, will hamper the safety message. A CEO whose both words and actions support a high level of safety will help motivate the foremen to work safely.

**Observations/Impacts**

Those safety managers who suggested this activity indicated that it has helped improve not only the awareness of safety amongst foremen, but also the safety performance of subcontractors who perform work for the contractor on the projects.

## **Activity 6: Rewarding Project Team when Client Recognizes Good Work**

### **Introduction**

Employees are motivated in different ways. One means is through positive recognition of the employees. Employees are often motivated when their efforts are appreciated by the client and by their supervisor in front of other fellow employees. The recognition received can be a significant incentive for employees to perform their work in a safe manner.

### **Activity**

Executive manager calls for and conducts an appreciation function (meeting, lunch/dinner, etc.) for the company staff.

### **Who/When**

The company CEO or other executive managers can perform this task. The functions can be held twice a year or more frequently according to the culture and custom of the company.

### **Strategy**

Twice a year the executive manager who oversees an office within the company has an employee appreciation function for the staff. The function allows the executive manager to spend focused time with the employees who are generally dispersed to various jobsites. The afternoon starts with a group lunch that encourages employees to reconnect with each other and relax. The lunch and activity are scheduled to avoid peak project activity times when possible. The lunch is provided in a private room at a mid-priced restaurant that allows for employee interaction. Towards the end of lunch, the executive manager makes an informal presentation that might include general company highlights along with specific topics that can be reviewed and discussed as a group. It is a good opportunity for the executive manager to review new policy procedures and discuss existing issues during the lunch presentation. If available, the executive manager then reads aloud the “letters of recommendation” and “thank you letters” that clients have written to the company about specific projects and/or employees. The executive manager then invites each of those employees cited in the letters up to the front of the group, congratulates the employee, and presents them with a gift certificate. The gift certificate is usually to a nice restaurant and valued at \$50-\$100. This personal recognition is repeated until all client letters are read. The employee gains recognition from his/her peers and executive management, and receives a small monetary reward that might be shared with family (often transferring the safety message from safety at work to safety at home). In addition, there is client recognition that may assist in obtaining additional projects and marketing of new clients. The group then departs for an afternoon activity such as bowling, golf, mini-cart racing, etc. This program has been successful with a group size of about 25 people.

### **Barriers/Enablers**

When recognizing employees, fairness and transparency are critical. An employee who was part of a project and part of the recognized safety effort on the project, but was not recognized, can become disgruntled. When the employee feels left out, the employee may think that his/her actions relative to safety are not worthwhile. The CEO must ensure that all employees who were involved in the recognized safety aspects of the project are also recognized at the appreciation function. In

addition, it should be transparent to all employees why specific employees are being recognized for their safety efforts.

**Observations/Impacts**

Those who have been involved in this activity indicate that the obvious result is recognition from the owner/client in the area of worker safety. This activity communicates to the employees that safety is recognized by the client as being important and that their contributions are not going unnoticed. The letters from clients also provide the company with a database of recognition letters that can be used in future marketing opportunities. Of course, these letters do not need to be limited to safety. Meeting quality, budget, schedule, and/or other performance measures promotes the activity and results as well.

## Activity 7: Tracking and Reporting Accident Costs

### Introduction

One item that CEO's are typically concerned about is company profit. Tracking profit helps enable executive management to assess company performance. If the indirect or uninsured costs of injuries and accidents are not being accurately captured and accounted for, the amount of profit earned is not accurately known. In the words of a supervisor, "We must know what losses are leaking over the side before we can capture and then prevent said losses." When losses due to the indirect costs of injuries and accidents "leak over the side," unidentified lost profit accrues not only from the event itself, but also from the inability to properly estimate the cost of labor. If the losses are not stopped or captured in the cost of labor, the profit/loss margin will continue to widen. This uncaptured cost of injuries has been estimated to range from 2 to 30 times the direct costs depending on the incident and industry, with most estimates being approximately 4:1 (indirect to direct costs) for the construction industry (17-19). This ratio can be large given an event of significant magnitude that may result in the loss of future customers, loss of reputation, higher insurance premiums, or complete liquidation. To capture the direct and indirect costs, a thorough incident investigation must be completed. Some may say that such an investigation increases the cost of the event. While this may be true to some extent, not fully understanding the cause of the event is likely to result in repeating the event and thus losing profit again. Some of the indirect or "out of pocket" costs to be captured during accident investigations include (12, 21):

- Injured worker's wages paid on the day of the injury
- Number of days absent for which the injured worker was paid
- Number of additional trips for medical care after returning to work for which the worker was paid
- Wages for time lost due to other workers helping with the injury/event
- Supervisor(s) wages for time involved in assisting with and investigating the event
- Decreased output of the injured worker if he/she returns to light duty work position
- Lost production of the injured worker's crew
- Company vehicle cost to transport injured worker to receive medical treatment
- Uninsured medical costs
- Increased insurance premium costs
- OSHA citations
- Equipment downtime, replacement, and repair
- Material replacement and repair
- Learning period for a new, replacement worker
- Re-training of existing workers
- Overtime caused by event to get project back on schedule
- Management and clerical costs
- Attorney fees

### Activity

Present a report to the CEO that identifies the out of pocket costs (direct and indirect) associated with injuries on each project that is currently being performed by the company.

### **Who/When**

The company safety professional can prepare this document as part of an on-going reporting process. The report gets updated periodically, e.g., monthly or quarterly.

### **Strategy**

To be able to accurately identify whether an individual project, department, or supervisor made or lost money, the out of pocket expenses associated with injuries must be added into the balance sheet prior to making the profit/loss determination. Often, however, these costs are not known until a long time after project completion.

The report shown in Figure 7.1 along with the accompanying data on the following page provides an example of the data needed to make the profit/loss determination. It is simple, yet effective. This report can be sorted by project, department, supervisor, or other injury tracking system that may be in use within the organization. The report can provide the estimating department a 3-year and 5-year average of out of pocket costs per worker-hour and be used as the basis for graphical data presented during management meetings. The example provided is sorted primarily by field supervisor and secondarily by project manager. Sorting in this manner also provides a quick snapshot of a supervisor's safety records over time. The bottom section of the report provides a comparison between the company's data and national, publicly-available data for companies in the same Standard Industrial Classification (SIC).

A company's estimators and accountants can accurately identify the burdened cost of labor. For the average organization this cost will include wages, taxes, and employee benefits (insurance and pension plans), workers' compensation insurance, and other pre-paid insurance expenses. By relating indirect costs directly to the cost of labor per worker-hour, accounting and estimating personnel are able to identify the uncaptured losses per worker-hour.

### **Barriers/Enablers**

This activity is valued so long as the information contained in the report is accurate. If the data captured in the calculation sheet is not accurate, its value comes into question by executive management. Special attention should be placed on the accuracy, consistency, and completeness of the data. In addition, after sending the completed calculation sheet to the appropriate executive management personnel, follow-up consultation can be provided to clarify any questions that they may have. A follow-up consultation meeting is also a good opportunity to identify ways that executive management can be involved to address the issues that led to the accidents.

### **Observations/Impacts**

Safety managers who have implemented this activity indicate that the report has served at times as a wake-up call to executive management as well as field supervision. According to the safety managers, it impresses upon them the financial impacts of injuries and shores up support for increasing safety awareness.

## Accident Cost and Injury Rate Calculation Sheet

PERIOD BEGINNING: 1-Jan-2014

PERIOD ENDING: 31-Dec-2014

| FIELD SUPERVISOR | PROJECT MANAGER | JOBSITE | TOTAL HOURS TO DATE | TOTAL # OF ACCIDENTS | COST TO DATE | TOTAL EXPECTED COST | TOTAL OUT OF POCKET COST | AVERAGE HOURS PER ACCIDENT | AVERAGE COST PER ACCIDENT | OUT OF POCKET COSTS PER ACCIDENT | TOTAL COST PER WORKER-HOUR | OUT OF POCKET COST PER WORKER-HOUR | DAYS LOST | RESTRICTED DAYS | TOTAL INCIDENT RATE | OSHA RECORDABLES |
|------------------|-----------------|---------|---------------------|----------------------|--------------|---------------------|--------------------------|----------------------------|---------------------------|----------------------------------|----------------------------|------------------------------------|-----------|-----------------|---------------------|------------------|
|                  |                 | 05-0721 | 252,186             | 3                    | \$47,053     | \$66,196            | \$38,961                 | 84,062                     | \$15,684.33               | \$12,986.99                      | \$0.19                     | \$0.15                             | 16        | 130             | 2.379               | 2                |
|                  |                 | 04-2599 | 2,132               |                      |              |                     |                          |                            |                           |                                  |                            |                                    |           |                 |                     |                  |
|                  |                 | 06-0814 | 10,512              | 1                    | \$2,188      | \$3,688             | \$1,584                  | 10,512                     | \$2,188.45                | \$1,584.00                       | \$0.21                     | \$0.15                             | 1         | 4               | 19.026              | 1                |
|                  |                 | 03-0627 | 12,000              | 1                    | \$23,647     | \$33,927            | \$20,407                 | 12,000                     | \$23,646.95               | \$20,407.10                      | \$1.97                     | \$1.70                             | 0         | 73              | 16.667              | 1                |
|                  |                 | 03-0511 | 873                 | 2                    | \$8,280      | \$8,280             | \$8,280                  | 437                        | \$4,140.00                | \$4,140.00                       | \$9.48                     | \$9.48                             | 0         | 25              | 458.190             | 1                |
|                  |                 | 04-3700 | 297                 | 1                    | \$100        | \$100               | \$275                    | 298                        | \$100.00                  | \$275.16                         | \$0.34                     | \$0.92                             | 0         | 0               | 672.269             | 0                |
|                  |                 | 05-0755 | 114,315             | 1                    | \$4,370      | \$8,850             | \$100                    | 114,315                    | \$4,369.91                | \$100.00                         | \$0.04                     | \$0.00                             | 0         | 0               | 1.750               | 1                |
|                  |                 | 05-0763 | 18,819              | 3                    | \$1,774      | \$6,274             | \$2,039                  | 6,273                      | \$591.40                  | \$679.83                         | \$0.09                     | \$0.11                             | 0         | 7               | 31.883              | 1                |
|                  |                 | 06-0801 | 12,834              | 2                    | \$3,835      | \$3,835             | \$4,599                  | 6,417                      | \$1,917.51                | \$2,299.35                       | \$0.30                     | \$0.36                             | 0         | 15              | 31.167              | 1                |
|                  |                 | 06-0821 | 764                 | 0                    |              |                     |                          |                            |                           |                                  |                            |                                    |           |                 |                     |                  |
|                  |                 | 05-0743 | 4,794               | 0                    |              |                     |                          |                            |                           |                                  |                            |                                    |           |                 |                     |                  |
|                  |                 | 06-0799 | 10,113              | 2                    | \$91,271     | \$115,591           | \$51,150                 | 5,057                      | \$45,635.33               | \$25,575.00                      | \$9.03                     | \$5.06                             | 154       | 172             | 39.553              | 2                |
|                  |                 | 05-0788 | 843                 | 0                    |              |                     |                          |                            |                           |                                  |                            |                                    |           |                 |                     |                  |
| <b>TOTALS</b>    |                 |         | 440,483             | 16                   | \$182,518    | \$246,741           | \$127,395                | 27,530                     | \$11,407.38               | \$7,962.21                       | \$0.41                     | \$0.29                             | 171       | 426             | 7.26                | 10               |

Figure 7.1 Example Accident Cost Calculation Sheet for Designated Time Period

**Figure 7.1 (continued)****Summary:**

|   |          |
|---|----------|
| Total out-of-pocket per worker-hour cost:                             | = \$0.29 |
| Total accident cost per worker-hour:                                  | = \$0.41 |
| Average number of hours per accident:                                 | = 27,530 |
| Company incident rate (# of accidents x 200,000 / # of worker-hours): | = 7.3    |
| Company recordable rate:  | = 4.5    |
| Company lost workday rate:  | = 1.4    |
| Company restricted day case rate:                                     | = 1.8    |
| Nationwide industry recordable incident rate:                         | = 6.1    |
| Nationwide industry lost workday rate:                                | = 2.0    |
| Nationwide industry restricted day case rate:                         | = 1.1    |

**Report Legend:**

- Total number of accidents reflects all injuries that required medical attention other than first aid. This includes accidents that are not recordable.
- Costs to date include both direct and indirect costs (insured losses and uninsured).
- Total expected costs include what the insurance carrier may reserve. This provides management with an estimate of what to expect.
- Average hours worked per accident. (Hours divided by accidents)
- Average cost per accident. (Total cost divided by number of accidents)
- Out of pocket costs per accident (Total out of pocket costs divided by # of accidents)
- Total cost per man-hour (Costs to date divided by worker-hours)
- Out of pocket costs per worker-hour (Total out of pocket cost divided by worker-hours – it is this number that typically can be related directly back to production)
- Days lost (OSHA lost days)
- Restricted days (OSHA restricted days)
- Total Incident Rate = (total number of accidents) x (200,000) / (# of worker-hours)
- OSHA Recordable (separates out the recordable injuries from the non-recordable)

## Activity 8: Personal Message from Executive Management to Employees

### Introduction

The Construction Industry Institute's report, "Safety Plus: Making Zero Accidents a Reality," (9) lists communicating top management's commitment to safety as the number one practice for preventing construction injuries and illness. Another best safety practice listed by CII is involving workers in safety. A strategy that combines these two best practices has been implemented by a major electrical subcontractor.

### Activity

Circulation of a laminated card from the CEO to the craft employees that indicates that the CEO cares about the employees' safety and wants the employees to stop the work if conducting the work is not safe, regardless of how much it costs the firm in terms of schedule or budget.

### Who/When

The laminated cards are sent directly from the CEO to the craft employees. The cards can be distributed at the start of every job or on a regular basis, such as yearly or every other year, to remind the employees of the commitment to safety.

### Strategy

"With support and commitment, prevention injuries is possible" is the message that the CEO of the company aims to pass on to his/her employees. The CEO circulates a laminated card among the craft employees to send a direct message that he cares for the safety of his employees. Along with the company's name and emblem, the message on the front of the card states:

"Project safety does begin with me, and I will look out not only for my safety, but also for the safety of my co-workers."

The message on the back of the card, accompanied by the personal signature of the company president/CEO, states:

**"Employee is authorized to Stop Work.** Safety begins with me and I've been given the authority, without fear of reprimand or retaliation, to immediately STOP any work activity that presents a danger to me, my co-workers, or the public; I will be involved in safety pre-task planning, question and correct any situation that is not in compliance with our safety and health policies; to report any unsafe acts or conditions to supervision and to questions and work activity that involves violation of the established safety and health policies or the established safety pre-task plan."

This card and message are intended to create a sense of ownership among the employees and gives them authority to stop unsafe work. Safe work means zero injuries. It is a very simple and effective strategy.



### **Barriers/Enablers**

This activity is fairly simple to implement. Input and involvement of the CEO is needed, as well as official policy for workers to stop unsafe work. In some cases, however, authority to stop unsafe work may already be in place but is not adhered to. That is, while employees are given permission to stop unsafe work, they never do so because of the company culture, fear of being reprimanded, drive to meet schedule or productivity goals, or other reasons. This activity must be backed up by actual support for stopping unsafe work. Additionally, the cards should be distributed to, and carried by, all employees, not just field employees.

### **Observations/Impacts**

Contributor's testimony: "I never put a lot of credit in these kinds of programs until I had an opportunity to meet the CEO and Vice President of the company in a meeting. I asked the CEO what he had done to support safety in his firm. The CEO took out his wallet and showed me a laminated card. The company's Vice President did this as well. I was still not convinced of the extent and effectiveness of the cards. However, what really impressed me was when I had a chance to talk with a number of the company's employees on a project in Arizona several months later. I inquired about the cards and five of the six employees had the card in their wallets, while the sixth employee continued to look through his wallet and pockets until I left. The employee "swears" that he had his card somewhere. I thought to myself that these people have understood the message that **"safety is important."**

## **Activity 9: Message to Stockholders**

### **Introduction**

Large, publicly-traded companies commonly have an annual stockholder meeting in which the CEO or other executive personnel presents the major developments that have taken place in the company during the past year. In their reports, it is common for CEOs to stress the financial performance of their company. If a company's policy and culture is such that safety is highly valued, the environmental, health, and safety (EHS) performance of the company should be reported to the stockholders in addition to other developments. This gesture publicly displays the CEO's commitment to worker safety and environmental stewardship. In addition, this commitment will go a long way towards further improving the EHS performance of the company.

### **Activity**

Presentation of the company's EHS performance in the annual company progress report and stockholders meeting.

### **Who/When**

The CEO presents the EHS performance of the company in the annual stockholders meeting.

### **Strategy**

Some companies may set their goal as zero tolerance for fatalities, injuries, and illnesses. In order to create greater impact and benefit, the company's progress towards this goal can be integrated into the company's annual report. The reporting could include the annual budget for EHS activities, number of incidents, comparison of annual results to goals, and so forth. The following pages contain excerpts from the annual reports of the Walt Disney Company and Intel Corporation which serve as examples of what the readers can produce for their companies.

### **Barriers/Enablers**

Metrics cited in the reports need to be tracked regularly in order to accurately include them in the report to stockholders. In some cases, the amount of information can be very extensive. As a result, for very large companies, accurately aggregating the metrics can be difficult. An on-line tracking system can be set up to quickly input, store, organize, analyze, and report the safety data.

### **Observations/Impacts**

The specific safety impacts to these companies as a result of this activity are not known. However, the companies are unique in their effort to publicly communicate with their shareholders the company's support, commitment, and expectations in regard to safety, health, and the environment. An annual report should be a report to stockholders of company matters and goals, not an advertising brochure. The open and sincere attitude presented by the companies will help develop a culture of awareness and caring for EHS issues within their companies.

## EXCERPT FROM INTEL CORPORATION'S 2005 ANNUAL REPORT

“Our performance expectations for business integrity, ethics, and environmental, health, and safety compliance are the same regardless of whether our supplier and subcontractor operations are based in the U.S. or elsewhere. Our employment practices are consistent with, and we expect our suppliers and subcontractors to abide by, local country law. In addition, we impose a minimum employee age requirement regardless of local law.”

### **Compliance with Environmental, Health and Safety Regulations**

“Intel is committed to achieving high standards of environmental quality and product safety, and strives to provide a safe and healthy workplace for our employees, our contractors and the communities in which we do business. We have environmental, health and safety (EHS) policies and expectations that are applied to our global operations. Each of Intel’s worldwide manufacturing and assembly and test sites is registered to the International Organization for Standardization (ISO) 14001 environmental management system standard, which requires that a broad range of environmental management processes and policies be in place to continually improve environmental performance, maintain compliance with environmental regulations and communicate effectively with interested stakeholders. Intel’s internal environmental auditing program includes not only compliance components, but also modules on business risk, environmental excellence and management systems. We have internal processes that focus on minimizing and properly managing hazardous materials used in our facilities and products. We monitor regulatory and resource trends and set company-wide short- and long-term performance targets for key resources and emissions.

As Intel continues to advance process technology, the materials, technologies, and products themselves become increasingly complex. Our evaluations of new materials for use in R&D, manufacturing, and assembly and test take into account EHS considerations and are a component of Intel’s design for EHS processes. Compliance with these complex laws and regulations, as well as internal voluntary programs, is integrated into our manufacturing and assembly and test processes. To our knowledge, compliance with these laws and regulations has had no adverse material effect on our operations.”

(Source: Intel Corporation, <http://www.intel.com>)

## EXCERPT FROM WALT DISNEY COMPANY'S ANNUAL REPORT

**“Environmental<sup>TM</sup>** - Disney’s Environmental programs promote financially sound corporate environmental practices and educational programs to safeguard the world in which we live. For further information, go to [www.environmentality.com](http://www.environmentality.com).

**International Labor Standards** - Disney is committed to the promotion and maintenance of responsible labor practices in our licensing and direct sourcing operations. This commitment is outlined in the *Disney Code of Conduct for Manufacturers* and supported through programs designed to monitor working conditions in factories making Disney products worldwide. Follow our efforts at [www.disneylaborstandards.com](http://www.disneylaborstandards.com).

**Safety and Security** - Our focus on promoting the safety of Disney’s Guests and Cast Members is evident in programs, practices, and training efforts throughout the Company.”

(Source: Walt Disney Company, <http://disney.go.com>)

## **Activity 10: Meet the CEO**

### **Introduction**

Worker involvement in safety can be one aspect of motivating and communicating the importance of jobsite safety to employees. Understanding that safety is important to the company and contributes to the success of a project can help gain an employee's acceptance of and positive mindset towards safety. The importance of safety can be effectively communicated through meetings between the executive managers and field employees. The level of importance given to a meeting topic is especially significant when field workers are asked to meet with the CEO at the company's headquarters or home office. From the field worker's perspective, meetings in the company headquarters are in a different atmosphere and with different people, and often carry a higher level of importance in the field employee's mind. A concrete subcontractor has recognized the positive impact that these meetings can have on safety and implements a focused safety meeting with the CEO as described below.

### **Activity**

Schedule a meeting at the company headquarters between the CEO and the field employees and their supervisor following an accident involving an injured employee, a damaged vehicle, or damaged property. During the meeting the employees and the supervisor describe: (1) what happened that caused the accident; and (2) what will be done to prevent the accident from happening again in the future. More specifically, the meetings should include a determination of "who" is going to do "what" by "when" to prevent a future like occurrence.

### **Who/When**

The CEO, the employees involved in accident, and the supervisor in-charge meet in the company headquarters after every serious accident. The safety manager may also elect to join the meeting.

### **Strategy**

Every time there is an accident involving an employee, vehicle, or property, the employees and the supervisor are required to meet the CEO. The employees involved in the incident and in charge of the project will be flown to the company headquarters the Saturday following the accident to describe to the CEO what caused the accident and what has been done in order to prevent future occurrence.

This activity has been carried out by many companies in different stages of the development of their safety culture. Initially many personnel might interpret meeting with the CEO as simply a "fear" factor, but hopefully as time passes, a culture should develop in which it is recognized that executive management cares enough about safety to spend time and money to prevent accidents. This activity can be adapted to different companies based on their philosophy towards all types of accidents. Some companies may choose these kinds of meetings only in the event of major incidents, while other companies might also choose to meet following "near hits." Additionally, depending on the severity of the incident and the frequency of prior incidents, the meeting may carry more impact if it takes place on the jobsite. Having the CEO visit the jobsite will demonstrate the CEO's level of commitment to safety.

### **Barriers/Enablers**

One barrier to implementing this activity is the financial cost of bringing all of those involved in the incident to the company headquarters for a meeting. The cost of travel plus the cost of lost time on the project may be significant and not viewed as financially feasible. Alternative means for a meeting, such as web-based meetings and conference calls, may be economically justified.

A considerable barrier to realizing the benefits that can accrue from this activity is when the meetings are primarily viewed as punishment. If the meetings are intended to reprimand the employees for their actions, their interest and openness in the meeting will wane. Rather than trying to place responsibility for the incident on someone's shoulders, the meetings should be about clarifying the circumstances surrounding the event, learning from the incident, and determining how best to move forward to prevent similar incidents in the future.

### **Observations/Impacts**

Due in part to this activity, the company experienced a dramatic decline in its OSHA recordable injury rate (57% decrease), and its lost time injury rate dropped by 50%. It should be noted that other companies that implement this activity may not realize the same level of improvement.

## Activity 11: Worker Involvement

### Introduction

As previously mentioned, worker involvement in safety management on a project is identified by CII as one of the nine high impact zero accident techniques (10). “Worker involvement” is a term used by safety and health professionals to describe the ways in which workers can take part in making decisions about managing safety at their jobsites. One of the important parts of this practice is management personnel requesting input on safety and health issues identified on the jobsite from the workers who actually do the work. Making this request helps promote a sense of ownership among the workers with respect to site hazards and encourages them to participate freely with management in the safety decision-making process.

### Activity

While not listed by CII as a certified practice to encourage worker involvement, for this activity, project management staff distributes a “request for information” memo/letter to employees who have completed a week working on the jobsite to identify the employees’ observations of safety on the jobsite. The purpose of the request is to gather salient input from the workers on any safety issues that they have observed during the week on the jobsite.

### Who/When

The sender of the request could be the project superintendent or other person on site in a supervisory role; however a memo/letter from the CEO can be more effective. The recipients should be new employees who have worked at least one week on the jobsite.

### Strategy

It has been shown that workers are at a higher risk of being injured during their first 30 days on a jobsite (12). During their initial month on the jobsite, workers learn about the jobsite hazards and become familiar with the work environment, project culture, and co-workers’ habits specific to that project. The activity mentioned above will help newer workers focus on and understand the jobsite. As a result, it will also make them feel that safety is important and motivate them to participate in the safety decision-making process. A project manager or the safety manager can prepare an “RFI letter” (see example in Figure 11.1) along with a response form that details the information about the project, the purpose of the survey, what to do, and where to submit the form upon completion. This action on management’s part is also intended to convey a strong message to the workers that executive management cares for the workers’ safety.

### Barriers/Enablers

Lacking follow-up from executive management, employees responding to the request may feel that their input is falling on deaf ears. Knowing that their views and input are being considered and acted upon, employees may have greater motivation to participate and contribute, and have greater appreciation for the results. The benefits of this activity can be magnified through follow-up discussion of both the request and any hazards identified/eliminated during project meetings and individually with each employee.

**Observations/Impacts**

The contributors who have implemented this activity in their companies were not able to provide specific measurable results with respect to reduced employee injuries that could be attributed directly to this activity. However, the contributors expressed receiving positive feedback from new employees and their spouses. All of the employees expressed appreciation for being involved and exhibited a renewed interest in safety.



Date

Dear Bruce,

Welcome to the project on our university campus. You are working on the new home for the Department of Biology (north building) and Ecology (south building).

These two buildings will be occupied by some of the world's leading scientists whose research and teaching will result in the advancement of the bio-medical and genomic sciences field of study, ultimately making better medicines and treatments for us and our families.

However, our concern at the moment is with your safety on this project. The statistics indicate that over 80% of the accidents on our projects involve employees who have been on the jobsite less than 30 days. These projects are large and complex, with a lot of things happening around you, and until you have had the opportunity to completely understand your working environment, you are at a higher risk than folks that have been on-site more than 30 days.

You have now had the opportunity to be on the project for approximately a week. You have observed the work environment, attended orientation and safety meetings, and have been diligently getting your work done. At this point we need your help.

We request that you share with us your observations and experiences to date on this project. Specifically, we would like your input on what actions should be taken on any items related to safety on the project site and what could be done to improve the project safety.

On the attached sheet, please write your comments, observations, and recommendations. You can submit these comments anonymously or you may sign your name—your choice. You have two options to return the form: there is a drop-off envelope in the construction trailer at the receptionist's desk for you to submit your response, or you can mail it back in the self-addressed, stamped envelope provide for you.

Just because we are all in the construction trade doesn't mean that we should get hurt doing our jobs! Our goal is not to hurt anyone on this project. Your valuable input will help us address the issues that may be keeping us from achieving that goal.

Thank you,

Project Superintendent, or CEO

**Figure 11.1: Example Request for Safety Information Letter**

## Activity 12: CEO Safety Audits

### Introduction

Imagine a company's CEO auditing the safety efforts of all company projects. The audits are not just of safety performance measures (lagging indicators such as incident rates), but of the proactive safety activities performed on different projects (leading indicators). These audits are intended to send a message that executive management cares about safety. The end result is anticipated to be improved safety performance. This activity follows a belief that, "What gets inspected gets inspected, but what gets measured gets results."

### Activity

Executive management identifies the major safety activities important to the prevention of construction injuries and illnesses on all projects and tracks the efforts of their staff in fulfilling these activities.

### Who/When

Once a quarter the CEO or other executive management member physically audits each project and reviews the safety efforts on the projects and that of the project teams.

### Strategy

Executive management could require each project team to prepare a chart exhibiting the safety efforts on the project and their level of implementation. To perform the assessment, a scale from 1 to 5 can be used to indicate a level of implementation (for example, 1 = poor and 5 = excellent). Using this scale, the CEO of the company could audit the project once every quarter by walking around the site and verifying/rating the efforts of the team. The CEO could then present the results from all projects in the quarterly managers meeting. The CEO audit is intended to motivate the project team given the CEO's presence on the jobsite and involvement in the project. In addition, the added peer pressure to perform better than other projects can also lead to improved attention to safety. One regional company determined their "key elements" to be assessed by the CEO to include: jobsite orientation, progressive discipline, site safety jobsite walk, accident review, incentives, pre-task planning, field review, and an overall team evaluation. The project team may identify other elements that should be measured as well.

Contracts for construction often include penalty clauses (liquidated damages) for late delivery of projects. With Owner-Controlled Insurance Programs (OCIPs), contractors (primarily the CM and/or GC) may see incentive opportunities included in their fee structures. These incentives may be based on the number of claims and/or recordable injuries. Negotiated contracts may also include provisions for incentives that include "proactive" measurements that may be captured in safety audits (see example in Figure 12.2). Including more than just the recordable injuries and/or claims provides the project team an opportunity to influence the project's safety score by efficiently and effectively implementing the key programs that executive management, and sometimes the project owner, believes have the greatest influence on success with respect to safety on the project. The example in Figure 12.2 identifies Leading Indicators, Programs, and Extra Credit. It should be noted that the Extra Credit section includes training. According to research conducted by CII, those

project managers who attended over four hours of safety continuing education each month had significantly lower recordable injury rates on their projects (9).

The use of recordable rates as a metric to compare safety performance from one project to another, and from company-to-company, has its limitations. Some of the reasons for the limitation are: larger projects typically have on-site registered nurses (RNs); larger companies/projects often have budgets and staff devoted to safety; additional involvement from insurers for some companies and for high risk/value projects; greater knowledge level of local medical providers in providing over-the-counter medications instead of prescriptions; and simply the interpretation of what is or is not a recordable incident. Thus, owner and contractor firms may find better results when measuring more than just recordable incidents and claims.

### **Barriers/Enablers**

Rating safety on projects using personal perception rather than objective data is subject to bias. The person conducting the audit may be biased to certain types of hazards, due to recent high-impact events, as a result of personal preference, or other intangible factors. A common set of standards for rating safety practices should be developed to eliminate potential bias, and those conducting the audits should be trained on how to implement the standards. In addition, multiple executive management personnel conducting the audits can help eliminate the bias that exists with just one person rating safety on a project. Additionally, the audit forms can be reviewed by a third-party to ensure accuracy and completeness.

### **Observations/Impacts**

Contributor testimony: “Having the opportunity to work with many different project teams, including both owners and contractors, I have found that identifying project-specific processes to be included in the audit and/or incentives has been very rewarding. I have never worked with a project team that has not identified the project-specific hazards/concerns that would have the most impact on the success of the project and included in the measuring matrix. In safety incentive reviews, it is rewarding to observe that the contractors are often more harsh on themselves, saying ‘We could have done better,’ than the owner’s representatives (or CEO) involved in the evaluation and grading of the project team’s safety efforts and results.”

Quoting one of the authors’ safety mentors: “What gets inspected gets inspected. What gets measured gets results.”

# Monthly Management Safety Audit

Score: \_\_\_ out of 100 points  
Project goal: \_\_\_ points

|                         |                      |                        |
|-------------------------|----------------------|------------------------|
| <b>Date:</b>            | <b>Project Name:</b> | <b>Superintendent:</b> |
| <b>Project Manager:</b> |                      | <b>Project Safety:</b> |

Score equals 100 minus points subtracted for probability + severity of potential harm. Deducted point values range from 1 (low) to 5 (severe). Repeat (unabated) issues are multiplied by 2.

|   | POINTS |  | POINTS |
|---|--------|--|--------|
| <b>PHYSICAL HAZARDS</b>   |        | <b>LEADING INDICATORS</b>  |        |
| • Housekeeping  |        | • Pre-task plans<br>○ By crew, signed by crew<br>○ Reviewed by Superintendent<br>○ Current to work                     |        |
| • Lighting  |        |  |        |
| • Access  |        |  |        |
| • Open Holes  |        | • Phase Plan completed and submitted   |        |
| • Fall Hazards/Falling Objects  |        |  |        |
| • Public Protection   |        |  |        |
| • Unsafe Acts   |        | • Plans and/or permits completed for all required tasks (confined space, fall protection, hotwork, electrical hotwork) |        |
|   |        |  |        |
|   |        |  |        |
| <b>PROGRAMS</b>   |        | • Subcontractor Safety on Site – Periodic Visits   |        |
| • New Employee Orientation/Drug Testing                                     |        |  |        |
| • No Employee exceeding the overtime policy                                 |        |  |        |
| • Pre-Mob meeting with EVERY new sub  |        | <b>OTHER</b>   |        |
| • Bi-weekly Mass Safety Meeting Attendance (100% Participation – No Deduct) |        |  |        |
|   |        | • Incident reviews conducted on all recordables, major near-miss   |        |

**EXTRA CREDIT** (Add up to 5 Points Each – Last 30 Days)

|   |  |  |  |
|---|--|--|--|
| • Flex/Stretch (if over 50% of craft participating +5)  |  | • OSHA Consultation Visit (up to 5 Points)           |  |
| • 4 Hours per month per individual classroom safety or quality control education for project management (up to 5 Points each – Max 15 Points) |  | • Safety Walk with Union Bus. Agent (up to 5 Points) |  |
| • Quarterly Strategic Plan Updated  |  |  |  |

| No. | Comments | Date of Abatement |
|-----|----------|-------------------|
|     |          |                   |
|     |          |                   |
|     |          |                   |

**SUBCONTRACTOR ATTENDEE’S:**

| Name | Signature | Title | Company | Phone Number |
|------|-----------|-------|---------|--------------|
|      |           |       |         |              |
|      |           |       |         |              |
|      |           |       |         |              |

\* Project Manager to submit with Monthly Combined Cost Report (MCCR)

**Figure 12.1: Example Safety Audit Form**

## **Activity 13: Making Families Part of the Team: The “Brady Bear”**

### **Introduction**

Feeling “part of the team” or “part of the family” is a building block for behavior-based safety. When a new employee becomes part of the company “family,” their commitment to the company’s goals, values, and culture/climate increases (3, 12).

### **Activity**

When an employee has a new child born, the company often sends a card and flowers to the employee congratulating them on the addition to their family. After a week or so the flowers are gone and the card is placed in a baby book for reading years later. A large construction company located in San Diego, CA sends a “Brady Bear” to the newborn. This gesture offers the traditional “Congratulations,” and provides a gift that will be played with for years. The gift communicates that the newborn is part of the “company family.” Additionally the newborn dressed in an outfit with the company logo holding the Brady Bear, which contains the company logo, would make a great photo for the company newsletter, announcements in local newspapers, and posting on the company bulletin boards and website. When the gift comes from the CEO, the employee may associate additional connection and pride to the company.

### **Who/When**

This is an easy activity that can be performed by the CEO with assistance from the company staff. When an announcement of the newborn arrives, the CEO can work with his/her staff to make arrangements for the gift to be sent, and include a personal handwritten note with the gift. This same activity can take place when the child sustains an injury or illness, receives an award, or achieves a milestone.

### **Strategy**

Behavior-based safety programs commonly promote employee involvement and commitment (22). Engaging the employee to increase their level of commitment and involvement can be a challenge. Connecting the company to an employee’s family, and the care and well-being of the family, will help to show both commitment to the employee and care of the employee. The Brady Bear activity is designed to create this connection with the intention that the care and well-being shown to the employee will in turn be exhibited by the employee on the jobsite with respect to worker safety and health also. Creating a positive, caring connection to the company is anticipated to result in improved behavior on the jobsite and, as a result, less risk taking and greater attention to personal safety and the well-being of others.

### **Barriers/Enablers**

As with other activities in which appreciation is shown through giving gifts, transparency and consistency are key components to make the activities a success. The feeling that an employee gets when receiving an award will be impacted by what other employees received, or did not receive, in a similar situation. An employee who feels that they are not being treated equally as other employees will become discouraged. Therefore, this activity needs to be applied across the company. In addition, special effort needs to be put in place so that employees are not forgotten. Sometimes for employees who are not vocal about their personal life, they may not communicate

that they recently had a newborn child. Personal communication and interaction with employees is likely needed in conjunction with giving the gift in order to make this activity successful. Lastly, a personal note from the CEO along with the gift goes a long way to help bring the employee into the company family. CEOs should strive to include a hand-written note with each gift.

### **Observations/Impacts**

During a safety culture evaluation of a firm, a consultant was asked, “What are other companies doing to get employees involved?” The consultant responded with the above story about the Brady Bear. The consultant also described that, during his private interviews with employees, he asks when the employee felt that they became part of the Brady family. In one case the employee’s answer was, “When my wife and I received the Brady Bear at the hospital when my son was born.” These kinds of results are not measureable; they are priceless.

## **Activity 14: Project Life Saver**

### **Introduction**

When an unacceptable level of losses was identified/forecasted by a Private Captive of construction companies, Project Life Saver was implemented. The goal of Project Life Saver was to actively engage senior management, the safety department, and the Captive in identifying past losses, anticipating future losses, and setting goals and identifying responsible parties for implementing these goals. When significant safety concerns are evident on a project, Project Life Saver entails simply meeting with all of the involved parties as a group to discuss safety and determine how best to move forward to improve safety.

### **Activity**

Conduct a safety meeting with the involved parties.

### **Who/When**

Invitees include appropriate executive management (CEO and Board level personnel), senior safety staff, in-house claims staff if available, and representatives from the Captive including account executives, safety personnel, and claims specialists. The meeting can be held at any time during a project yet early enough so that changes made, if necessary, can have an impact on the success of the project.

### **Strategy**

Most of the meetings have similar agendas, set by the insured party, and are typically held in the corporate offices. The agenda typically includes: a review of past losses and major near hits; review of last year's goals and if these goals were met with the desired outcome; review of losses by the Captive compared to losses from like insured's; discussion of safety items that may need to be added, removed, or modified from the current safety programs; and discussion of specific items with which the representatives from the Captive can assist the insured. The final agenda item for the meeting is typically a review of concerns for the upcoming year.

### **Barriers/Enablers**

This activity can falter when the meeting is viewed as just another meeting of management. Lack of interest in the meeting and limited discussion/actions from the meeting can give the impression that it is not valued and/or has not value to the participants. Those who call the meeting should develop an agenda that is of interest to the participants and addresses all of the needed concerns and discussion. The meeting should be efficiently managed as well given the busy schedules of all the people involved. Importantly, follow through on the action items from the meeting should be monitored. Lack of attention to completing the promised actions will diminish the impact of the meeting.

### **Observations/Impacts**

No single item has been identified as the "key" to success of the Project Life Saver program. It could be the setting of formal goals that will be measured or the communication of claims between all involved in the company's risk management. It could also be the company's employees seeing with their own eyes in the "corporate office" that safety is being addressed by the senior

management. It could be as simple as the meeting itself, or a function of all of the above. Whatever the reason, the results as reported by the Captive and its members have been impressive. Those contributing this activity have observed a lower level of losses than the anticipated losses from the Captive in all lines of coverage. In addition, a large variety of improvement ideas have been generated from the meetings including: contract wording changes; subcontractor selection and pre-qualification changes; training/education opportunities; development of pre-job planning forms; sharing of ideas and processes with other like contractors within the Captive including visits and sharing of best practices; and what senior management will be involved with for promoting safety within the company.



## **Additional Examples of CEO Safety Activities**

There are many other examples of practices to actively engage executive management with the goal of positively impacting the safety culture within a company. Below is a list of additional activities that have been collected over the years from different companies. Each activity incorporates executive management's involvement and commitment to safety with just a small amount of time and effort. While no evidence of their success is readily available, the authors believe that the activities will have a positive impact on safety performance.

### **A. Meet with New Employees**

As a member of executive management within the firm, personally meet with every new employee in the company shortly after the employee starts working at the company. At this first meeting, ensure that the new team member understands the company's commitment to safety.

### **B. Safety Slogan Campaign**

The President of a construction company started a safety slogan campaign in the company. Afterwards, the President regularly asks all employees of the company to submit a suggestion for the "Safety Slogan of the Month." A committee was set up to collect suggested slogans and select the slogan for each month. A \$50 gift card is given to the employee whose slogan is selected for the month's contest. At some point during the month, the CEO calls one or more employees at their home. If the person answering the phone knows that month's safety slogan, the individual answering with the correct safety slogan receives a \$50 gift card. On one occasion for a construction firm, the President of the company called a home and a young child answered. The child was able to tell the president the safety slogan. The child's father (a company employee) had informed his kids of the contest and put every monthly safety slogan on their refrigerator in case the president called their home. The President informed the child that he would send the \$50 gift card home with his father. The child asked, "Could you mail it to me to make sure I get it?" The President had more fun (and employee and family involvement) with this contest than any other safety effort implemented in the company. After implementing this program, monthly superintendent training, and the President being active in safety, the company's insurer provided the company with the first ever retro return on the company's workers' compensation policy.

### **C. Broker Commitment Letter**

During the pre-qualification process when a subcontractor is identified that has a less than an acceptable safety record, but yet their safety is not so poor as to remove them from the bid list, the GC asks the subcontractor's CEO to submit a Broker Commitment Letter. This letter informs the GC of the efforts that the subcontractor's insurance broker and insurance carrier are doing to assist the subcontractor in improving safety. The letter also causes the subcontractor to think about its safety program and to plan safety measures for the upcoming project. A request for the letter from the CEO shows the company's commitment to excellence in safety.

#### **D. Tracking Reasons for Not Bidding on a Project**

A recent conference presentation by a large construction insurer was on the topic of Best Practices and included discussion of what the insurer uses to evaluate construction companies as part of its underwriting process. The typical responses and discussion included use of the following: claims history, pre-planning controls, safety/quality processes and procedures; and accountability for safety/quality. However, a different type of measure implemented by the company of one of the attendees was well-received by the presenter and audience. The company keeps a log of all of the projects that the company “passed” on and the reasons for passing on the project. Reasons for passing on projects included: financial concerns about the owner, excessive environmental exposure, public safety/risk, and no experience in that industry or geographic area. This log is forwarded to the company’s insurance underwriter every year at the time of renewal along with the typical renewal information. The underwriter especially appreciated this effort as it showed that the contractor was selectively taking only the projects that would be profitable and at an acceptable level of risk to the company and to the insurer. This activity demonstrates executive management commitment to assessing and managing safety risks on its projects.

#### **E. Company Stand Down**

Following a serious construction site accident on a project, the project owner may hold a project-wide “stand down” to pause work temporarily and meet to reflect on and discuss safety in the workplace. In some cases, the owner has also held a stand down company/world-wide. The purpose of the stand down is to review the accident with every construction employee on every project. This is a significant financial commitment. Additionally, it is especially effective in communicating lessons-learned to help prevent future like occurrences.

#### **F. Visible Support Participation**

As stated throughout this guidebook, visible support from the CEO for safety is a must to ensure the success of a company’s safety efforts. There is no better visible company support for safety than when the CEO tours a project and diligently follows the site-specific safety rules. A CEO, or for that matter the owner’s representative too, in a hardhat, wearing no safety glasses and wingtip shoes (where the craft employees must wear leather steel toed shoes) will demean the safety efforts on a project. A great example of visible support participation by a CEO was when Forbes Magazine published an article when Mr. Coke bought Georgia-Pacific. The lead picture showed Mr. Coke in a Georgia-Pacific mill with a hardhat, safety glasses, ear plugs, and appropriate footwear. In another example, Dave Hardin from the Murphy Company in St. Louis, Mo. reported during a presentation at the ACIG Safety Claims Workshop in 2007 that his company’s improved safety results were the result of executive management meeting individually with each new employee and personally communicating the importance of safety on the project.

#### **G. Handwritten Notes**

The importance of individual handwritten notes and letters is often taken for granted and understated. During a keynote address at an industry workshop, one of the presenters reported his company’s improved safety results when senior management “paid attention to the little things.”

A company-wide world tour was conducted by the CEO and CFO to “touch” every employee and communicate the commitment to and purpose of the safety program. Following the tour, a follow-up letter continued the communication. On every employee’s birthday, a card is sent to the employee with a handwritten note signed by the CEO saying, “Happy Birthday...Keep working safely.”

## **H. CEO Attending Safety Meetings**

To emphasize the importance of two key elements of their safety program (stretch and flex and pre-task planning), the CEO and senior staff attended various daily crew meetings. Word spread around the company that these elements must be important since the President and Vice President were attending the meetings.

## **I. Interviewing New Employees**

At a homebuilding construction company, each supervisor who does direct hiring was given instructions by executive management on how to interview new employees. Traditional interviewing for craft employees was left to site supervisors who asked about work history, availability, and ability to pass the company’s drug and alcohol tests. This interview questioning gives a first impression to potential employees that what is important is their work history, availability, and ability to pass the drug and alcohol test. On the other hand, instructing the supervisors to ask the potential hires about past safety training and whether he/she has received information on working injury free will demonstrate that safety is important to this hiring agent. Craft hiring is not typically an activity for the CEO of large employers. Directing the hiring agents to include safety related questions and statements during an interview helps set the tone for future safety communications. The company has seen improved safety and quality as a result of implementing this change.

## **J. Accident Analyses**

A national commercial contractor experienced improved safety results when the COO reported to his project teams that after an analysis of employee accidents, he identified that all injuries could be classified into two categories under body parts: heart and head. If the cause of the injury was the “heart,” there is little opportunity for improvement. If the injury was caused by the “head,” there was opportunity for improvement. It has been said that, “the only thing more costly than training an employee and having them leave the company is not training an employee and having them stay.”

## **K. Safety Question of the Day**

On a daily basis, a plant manager in a manufacturing facility would ask employees and maintenance contractors what the topic of that morning’s safety meeting was. If they answered correctly, they received a company hat or shirt as a gift. However, if they did not know the topic, they were escorted immediately off the facility and told to come back the next day when they knew the safety topic.

### **L. Leading the Way in Safety**

The owner of a large roadway contractor in Texas was notified by his insurer that the company's safety record was unacceptable. The CEO was shown how much money he was paying above his competitors for insurance as well as the retro amounts that other contractors who had much better safety records were receiving. To address this problem, all employees at the foreman level and above were called to a mandatory Saturday meeting. Safety improvement was the topic. The CEO stood at the entry to the meeting room and every supervisor who walked in with a hardhat was given a \$100 bill. To start off the meeting, the CEO stated that he does not know of one incident on a roadway project in which an injury was minimized or eliminated by use of a hardhat. However, in the construction industry, the symbol of safety is a hardhat. As supervisors, example is not only the best way to lead, but it is a very motivating way to lead.

### **M. Safety Excellence**

In Dan Peterson's list of the Six Criteria for Safety Excellence, the number one criterion is "Top Management is Visibly Committed." According to Dan, do not make your visible participation activities the "Safety Flavor of the Month." To be effective, Dan says you must be committed to continue your visible participation. "I heard the following story from a CEO talking about his company's safety results. Like many other CEO's, he was told of the problem (poor safety results which increased insurance costs), he directed resources to fix the problem (he personally got involved), the company received short term positive results, he moved on to the next top priority, and then poor safety performance returned. In fixing the problem (poor safety performance) he achieved the same result as so many before him. The short term "flavor of the month" results were followed by return to normalcy when his attention was diverted to other corporate priorities. The CEO made the following analogy with a new landscaping project at his house. At first it was exciting when he and his wife were designing the landscaping, reviewing all of the exciting recommendations from the various consultants, and traveling to other locations to see what their landscaping and gardens could look like. Then during construction, the various people worked together to complete this new project that he and his wife would proudly show to their friends and colleagues. The garden flourished. After a while, though, the excitement of "new" was gone and the massive gardens and landscaping became a chore, maintenance was overwhelming, and other projects took priority. The garden's beauty started to fade."

### **N. "I Care" Program (23)**

At General Motors, the safety culture is built and shaped by leadership initiatives in what are termed the five core elements of a safety-oriented culture. These elements are: safety observation tours, employee safety concern process, plant safety review boards, safe operating practices, and accident investigations. All five elements contain a unique method, termed "I Care," that allows management to become more involved in molding the safety culture. The elements demonstrate the "I Care" message through frequent, visible, personal contact with employees and prompt, personal attention to incidents.

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## Glossary

**Accident** – An unplanned event, generally with negative consequences, that may or may not be associated with an injury or property damage.

**American Society of Safety Engineers (ASSE)** – A professional safety organization composed of occupational safety and health professionals that work to create safer work environments by preventing workplace fatalities, injuries, and illnesses. ASSE also works to set the occupational safety, health, and environment community's standards for excellence and ethics. ([www.asse.org](http://www.asse.org))

**Competent person** – An individual who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and has authorization to take prompt corrective measures.

**Construction Industry Institute (CII)** – Based at the University of Texas at Austin, CII is a consortium of leading owner, engineering-contractor, and supplier firms from both the public and private arenas. These organizations join together to enhance the business effectiveness and sustainability of the capital facility lifecycle through research, related initiatives, and industry alliances. ([www.construction-institute.org](http://www.construction-institute.org))

**Contractor-controlled insurance program (CCIP)** – A type of wrap-up insurance in which the contractor provides and oversees various insurance coverages to the subcontractors on the project. A type of wrap-up insurance.

**Experience modification rating (EMR)** – A multiplier applied to the manual rate paid on workers' compensation insurance by a firm, based on the firm's history of workers' compensation claims, reflecting both injury frequency and injury severity.

**Hazard** – An unsafe physical condition that could lead to an injury, physical damage, or other loss.

**Incident** – Any disruption in the normal or smooth flow of work that involves an injury, property loss, damaged equipment, work stoppage or near miss.

**Injury frequency** – Ratio of the number of worker injuries incurred per 200,000 hours of worker exposure (i.e., per 100 full-time workers employed in one year). Typically calculated at the company and project levels.

**Injury rate** – Ratio of the number of worker injuries incurred per 100,000 full-time workers employed in one year. Typically calculated at the industry level.

**Lagging indicator** – A retrospective indicator of performance. A performance measure linked to the outcome of an injury incident.

**Leading indicator** – A prospective indicator of performance that is used to predict a future outcome, condition, event, or change. Measurements linked to preventive or proactive actions.

Measures of attitudes, behaviors, practices, or conditions that influence construction safety performance.

**Lost workday injury (Days away, restricted, and transferred)** – A work-related injury of an employee in which the employee experiences either days away from work (absence from the job for medical treatment or recuperation), days of restricted work activity (inability to perform his or her normal job duties over a normal work shift), or both.

**Medical case injury** – A worker injury requiring the services of a physician.

**National Institute for Occupational Safety and Health (NIOSH)** – The federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness. NIOSH's mission is to develop new knowledge in the field of occupational safety and health and to transfer that knowledge into practice. ([www.cdc.gov/NIOSH](http://www.cdc.gov/NIOSH))

**National Safety Council (NSC)** – A non-profit organization dedicated to educating and influencing people to prevent accidental injuries and fatalities. NSC's mission entails eliminating preventable deaths at work, in homes and communities, and on the road through leadership, research, education, and advocacy. ([www.nsc.org](http://www.nsc.org))

**Near miss (near hit)** – An incident involving no injury and no property damage, but which had high potential for an injury or property damage.

**Occupational Safety and Health Administration (OSHA)** – An agency created in response to the Occupational Safety and Health Act of 1970 to assure safe and healthful working conditions for working men and women by setting and enforcing standards and providing training, outreach, education, and assistance. ([www.osha.gov](http://www.osha.gov))

**Owner-controlled insurance program (OCIP)** – A type of wrap-up insurance in which the project owner provides and oversees various insurance coverages to contractors and subcontractors on the project. A type of wrap-up insurance.

**Personal protective equipment (PPE)** – Equipment worn by workers to protect specific parts and systems of the body, including the eyes, face, head, hearing, respiratory system, hands, and feet.

**Private captive insurance** – A private group that creates a licensed insurance company to provide coverage for itself. An alternative to self-insurance.

**Recordable injury** – A work-related injury of an employee resulting from an event on a work site and requiring treatment by medical personnel or causing loss of consciousness, restriction of work or motion, or transfer to another job.

**Risk** – The potential for injury, physical damage, or other loss resulting from a given action, activity, and/or inaction. The consequences of a hazard becoming active. Implies a negative outcome.



## **Author Bios**

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Brian Clarke is Managing Partner of G.E.W. LLC Solutions in Safety, and Co-Managing Partner of HEILL Safety Solutions. He is a graduate of Central Washington University, with a Bachelor of Science degree in Occupational Safety and Health (1987). Brian's experience includes 7 years in large lines/multi-lines insurance; 17 years as safety director for a regional general contractor/construction management firm, and 18 years as a private consultant. Brian's industry activities include: Industry Advisory Council for Central Washington University's Safety Health Management Program; founding/current Board member for the Construction Industry Crime Prevention Program; and founding/current member of the Oregon Construction Safety Summit. Brian and his wife Betsy established the "Brian and Elizabeth Clarke, ASSE Student Section Endowment at CWU".

Brian has been a presenter at various professional development conferences across the US and Western Canada. He has published various safety related articles, and co-authored a chapter on Steel Erection Safety (both first and second edition) of the text book, "Construction Safety Management and Engineering" published by the American Society of Safety Engineers. Brian was awarded the Gary Bird Horizon Award by the International Risk Management Institute for "Excellence in Innovative Risk Management Techniques and Processes in the Construction Industry". He is actively involved with the American Society of Safety Engineers, for which he has served on the Board of Directors for 4 years (1999 – 2003) as well as various chapter and ROC positions in Sacramento and Portland.

### **John Gambatese, PhD, PE(CA)**

John Gambatese is a Professor in the School of Civil and Construction Engineering at Oregon State University. Dr. Gambatese's educational background includes Bachelor and Master of Science degrees in Civil Engineering from the University of California at Berkeley, and a PhD in Civil Engineering from the University of Washington. He has worked in industry as a structural engineer for a consulting engineering firm and as a project engineer for a construction management firm. He started his current position at Oregon State University in 2000 following three years on the faculty at the University of Nevada, Las Vegas, and one year at the University of Washington. Dr. Gambatese has taught courses on construction safety, construction contracts and specifications, planning and scheduling, structural analysis and design, construction site systems engineering, temporary construction structures, and engineering economics. He has performed research and published numerous articles on construction worker safety, work zone safety, constructability, innovation, and sustainability. He is a member of the American Society of Civil Engineers (ASCE) and American Society of Safety Engineers (ASSE), and actively participates on ASCE's Construction Site Safety Committee. He is a licensed Professional Civil Engineer in California.

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Sathy Rajendran PhD CSP LEED-AP ARM is an Associate Professor and the Program Director for the Safety and Health Management (SHM) program at Central Washington University (CWU). He is also the Chair of the Engineering Technologies, Safety, and Construction Department. Under his directorship more than 170 students have graduated from the CWU safety program. Better than

80 percent of them are employed in Washington, Oregon, and California, with the majority working in construction and manufacturing. The SHM program now enrolls more than 100 students each year and annually graduates 35 industry-ready professionals.

Sathy has 6 years of professional construction safety experience, and over 12 years of construction safety and health research experience. He has managed workplace environmental, health, and safety programs for construction projects, and his experience includes a wide variety of buildings, with complex mechanical systems, including hospitals, a biopharmaceutical facility, high-rise condominiums and office buildings, airport projects, parking garages, and a hotel. He holds a PhD, and MS in Civil Engineering (Construction Engineering Management) from Oregon State University and a BE in Civil Engineering from Anna University in India.