Driving Toward "0"

Best Practices in Corporate Safety and Health

HOW LEADING COMPANIES DEVELOP SAFETY CULTURES

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About this report

This research report is a direct response to requests by members of the Conference Board's Townley Center for Environment, Health, and Safety Councils—a long-established networking group of senior EH&S executives from approximately 65 leading US companies—for a benchmark on corporate safety culture and a rating of the policies and best practices that affect corporate safety performance. The project was funded by the Occupational Safety and Health Administration (OSHA). To achieve consistency in survey responses, The Conference Board collected information on best practices in consultation with several member companies. The Board then circulated selected examples from one company to several others for feedback and recommendations and this process led to the creation of a core list of best practices.

In February 2003, The Conference Board invited senior safety executives of major corporations—including both members and non-members of the Board—to participate in a survey about these practices. Respondents were asked to:

- indicate whether or not they "used" each of the practices in their safety and health program;

- rate their effectiveness on a scale of 1 (not effective at all) to 10 (extremely effective);

- describe other best practices that they use in their companies; and

- tell us which single best practice they believe is most effective in their programs.

This approach was used to develop profiles of the 23 best practices identified during the iterative process with member companies as well as additional insights from many of the 68 respondents, primarily from industrial goods and consumer products manufacturers; service companies represented approximately 13 percent of the respondents. For the most part, the respondents' qualitative responses reinforce and underscore the ratings for the practices. Case studies of four companies' safety and health programs provide further insights.

About the authors

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by Meredith Armstrong Whiting and Charles J. Bennett, Ph.D.

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Key Findings

The workplace has become increasingly safe in recent years. Job-related injuries and illnesses have dropped for the ninth consecutive year, reaching an all-time low. Injuries in the construction industry, where accident and injury rates have been highest, are down. And there has been a 10 percent reduction in recurring repetitive trauma injuries such as carpal tunnel syndrome and other musculoskeletal disorders. Viewed against the long-accepted goal of continuing improvement, this downward injury-rate curve is very good news. But many leading companies and trade groups—like most regulatory agencies—question whether the current pace of improvement is enough, and have adopted from a menu of best practices in safety and health those they believe will help drive their companies' injury and illness rates down further and faster—ultimately reaching the magic number of "0."

Working with a group of company members of its Townley Global Management Center for Environment, Health, and Safety, The Conference Board developed a list of core practices by circulating selected examples of safety and health best practices from one company to several others for feedback and recommendations. Once the list of 23 best management practices was in place, the Board conducted a survey, asking participants to identify and rate the practices in use at their companies. The Board also conducted interviews with senior safety and health executives to provide some insights into what managers believe are the best strategies for developing a genuinely effective and sustainable safety and health culture within their organizations.

It is important to note that while by design this research was focused on management—and management practices—one of the key themes that emerged from the study was that management practices alone are not sufficient to achieve outstanding safety performance: *all* of a company's workers must be engaged and involved. Ultimately, achieving excellence is about empowering all workers—management, supervisors, employees, and even contractors—to make safety and health practices truly work.

The Conference Board's survey of leading U.S. companies shows a steadily declining rate of lost-time accidents and injuries and OSHA recordables. From 1999 to 2002, the number of lost-time cases per 100 full-time employees among respondents has declined an average of more than 40 percent, and recordables an average of 23 percent—trends that are generally consistent with OSHA statistics.

Companies striving for outstanding safety and health records are not only ensuring strict regulatory compliance, they are developing their own best practices to enhance their performance. The primary drivers appear to be:

- A strong conviction that accidents and injuries are unacceptable in their operations; and

- A firm belief that business benefits—directly, through reduced costs, and indirectly, through improved morale and increased productivity.

Within companies known for safety and health excellence, safety and health is a shared value. If this value, both to the business and to *all* employees, is not shared, any improvements in safety will very likely not be sustainable—even if achieved for a period of time as the result of becoming a "priority."

The core elements or components of successful safety and health strategies, as expressed by the survey respondents and interviewees, are:

Leadership at the top If the top executive believes in the worth of the strategies, sets expectations for other managers, follows through on those expectations, and commits appropriate resources, shared beliefs, norms, and practices will evolve.

Confidence on the part of all employees that the company values safety and health comparably with other values, and an understanding by all employees of how to achieve the expected performance. *Everyone* must be committed and engaged.

Creating and implementing a safety and health management system that works for the individual company.

Monitoring performance regularly Companies must continually assess their norms and provide frequent feedback to all employees and to external stakeholders.

Use of the best practices included in the survey is high—84 percent of surveyed companies have adopted all 23 strategies listed in the survey. (The complete survey form can be found at the end of the report.) Although comments on preferred practices reveal considerable variation as to what practices companies emphasize most—reflecting a variety of specific risks and challenges, as well as "cultural" differences in approach—certain themes stand out as essential:

Clear management visibility and leadership

Ownership of safety and health by *all* employees—moving from "involvement" to "empowerment"

Accountability at all levels of an organization, including positive and negative performance feedback

Open sharing of knowledge and information throughout the organization

If there are similar core principles in play at companies striving toward "0," there is no common template. Each company faces unique needs and opportunities inherent in the nature of its operations and workplaces, and from whatever company culture is brought to bear.

Operational integration, defined in the survey as "the integration of safety into all facility operations and processes"—and the most highly rated practice in the survey—has been adopted by 90 percent of respondents. The practice was given an effectiveness rating of 8 or better by more than 75 percent of its users, and almost 30 percent gave it a rating of 9 or 10, putting it in the "extremely effective" category.

Ratings for some of the more traditional programs, such as safety committees and training, were less positive than might be expected. This may be because respondents were familiar with these safety and health management tools, since companies have employed them for decades; it may also suggest that respondents viewed these programs more as necessary obligations than best practices.

Strategies to increase employee involvement beyond the established use of safety committees may prove the most fertile ground for further improvement of safety and health performance, especially in light of the current emphasis on employee ownership as a vital component of any safety and health program.

Beyond Regulation

Trends in Safety and Health Management

Companies aiming toward—and achieving—dramatically improved occupational safety and health performance are doing so in an increasingly demanding business environment. Expectations for businesses are often contradictory. Persistent calls for "corporate social responsibility" or "sustainability" from an array of stakeholders, for example, can be at odds with the priorities of shareholders and the "financial community," creating tension for corporate safety and health leaders. Added to this are myriad external pressures, not the least increasing stakeholder demands for "transparency" about financial performance and an escalating regulatory focus in the United States (OSHA) and elsewhere around the globe.

With notable exceptions—Dupont has long integrated safety and health into its normal business practices—many businesses have viewed occupational safety and health as primarily a *regulatory* issue. Regulatory inspections and penalties (or the risk of penalties) would be used to drive performance improvements. Many businesses implemented, expanded, or modified safety and health programs both to meet regulatory requirements and to gain the performance improvement that they expected to result. But while significant incremental improvement—measured in terms of adoption of formal safety programs; reductions in injuries, illnesses, and fatalities; and safety and health awareness—occurred steadily through the 1970s and 1980s, the ideal of "0" (or even close to "0") accidents and injuries remained elusive for most businesses.

Developing a Safety and Health Culture

The programs implemented at companies that have achieved or are striving to achieve outstanding safety and health performance go far beyond regulatory *requirements*. For example, many survey companies give high marks to the OSHA Voluntary Protection Programs (VPP), an OSHA cooperative program that recognizes companies that go beyond regulatory compliance and establish exemplary safety and health programs. The primary *drivers* expressed by corporate safety and health leaders in this report's case study interviews, are:

- A firm conviction that accidents and injuries are unacceptable in their operations; and

- A strong belief that business benefits—directly (although not necessarily dramatically) through reduced costs, and indirectly through improved morale and increased productivity, although this is not easy to measure.

Given these basic assumptions, how are companies pursuing dramatically improved performance? As would be expected, no two companies appear to be doing *exactly* the same thing, but there are some very consistent themes across companies and sectors.

Safety and health are (or have become) part of the company culture—and frequently part of the management system. "Culture" is traditionally defined as "a shared set of beliefs, norms, and practices, documented and communicated through a common language." The key word here is *shared*. Companies have found that if safety and health values are not consistently (and constantly) shared at all levels of management and among *all* employees, any gains that result from declaring safety and health excellence a "priority" are likely to be short-lived.

For example, if employees believe that management values productivity over safety and health, they may try to "work around" a hazard and knowingly risk accidents. But if they believe that management values their safety and health, they will often report or repair hazardous conditions—often at some loss of productivity that is acceptable to management—to avoid the potentially greater loss that an accident or illness might cause later. If a bit simplistic, this illustration demonstrates the power of a successful safety and health *culture*.

Leaders' Approaches

What, then, do our respondents say are the *core elements* or components of successful safety and health strategies?

Leadership at the top, and throughout the organization. All levels of management, from the CEO to supervisors or team leaders, must "live" safety. Alcoa's CEO Alain Belda, his legendary predecessor Paul O'Neil, and Baxter International's CEO Harry Kraemer are excellent examples of leaders at the top. All have made extraordinary and public commitments to safety and health, set expectations for other managers, followed through on their commitments, and set aside the resources needed to accomplish safety and health goals—even in demanding business times— based on a conviction that shared beliefs, norms, and practices produce results.

Confidence on the part of all employees that the company values safety and health comparably with other values, and an understanding by all employees of how to achieve the expected performance. Everyone must be committed and engaged.

- Line workers gain confidence in the organization by observing the behavior

of management at all levels, whether that means shutting down unsafe operations, applying all resources necessary to fix a problem, coaching, or making time for—and requiring—training.

- Managers win the confidence of employees through a variety of means, including walking around and listening to workers' concerns, conducting periodic audits of both processes and compliance, and undertaking formal training as appropriate.

Creating and implementing a safety and health management system that works for the individual company. Possible approaches include:

- Developing a focused safety and health management system—a common *safety* language system (perhaps as part of an EHS management system); and

- Integrating safety and health performance into a more general management system—a common *company* language system.

Monitoring performance regularly—assessing the norms—and providing frequent feedback to all employees and to external stakeholders.

- Performance monitoring varies from periodic comprehensive audits at multi-year intervals to daily monitoring of actual safety and health results (accidents and—for many, more importantly—*near misses*) in individual operating units.

- Feedback varies from "real-time" or daily results for key performance indicators provided to everyone from line employees to the CEO, to comprehensive performance and compliance audit results provided on a need-to-know basis. The transparency resulting from reporting performance publicly may be a very useful tool for driving safety and health within a company, reinforcing the concept of safety and health excellence as a core company value to employees and stakeholders.

Effective approaches consist of many actions or behaviors that demonstrate commitment to the *value* of safety and health. One theme appears to underlie all these actions—creating "trusting relationships" throughout every level of an organization. Successful companies believe that if people truly trust each other's motives, the knowledge necessary to achieve and maintain outstanding safety performance will be learned, shared, and acted upon at all organizational levels.

The Role of Regulation

Companies recognize both the need for and the role of regulation in driving the focus on safety and health generally. For example, one of the survey companies uses regulations from one region of the world to guide its system globally. But some survey participants feel that regulation can become a limiting factor by diverting resources from what they believe are more productive opportunities to requirements that may or may not be relevant to a specific company's needs. This belief is reflected in a comment from one of the participating companies that having a good safety and health management system in place should make regulations irrelevant. While many (although by no means all) companies are initially driven by regulation to create a systematic and focused safety and health function, those achieving true excellence—"0" injuries or illnesses—understand that regulation is insufficient.

Government agencies and businesses both face unique challenges. Government agencies must strive to develop and implement regulations that drive performance improvement in companies where that is needed, yet that don't limit innovation and continuous improvement in the most progressive and forward-looking companies. Individual businesses, on the other hand, must ensure that compliance requirements are met while looking beyond government conventions to achieve the desired overall standard of performance. The best solution to these potential dilemmas is for businesses and government agencies to work together to ensure that regulations play a positive role in the creation of focused safety and health management systems.

What Do the Best Companies Do for Safety and Health?

Les Smith, manager of business development for DNV Business Solutions, a recognized global performance measurement firm, finds that the best companies:

Clearly describe what people are expected to do for safety Every level of employee, from the most senior executive to the newly hired worker, clearly understands what is expected. There are specific, demanding standards for each person in all major work activities. Without adequate standards, there can be no meaningful measurement, evaluation, correction, or commendation of performance.

Make safety a line management responsibility and accountability Safety is better served when it is so ingrained into every activity that it becomes impossible to ignore it. There is little talk of doing things the safe way and more talk of doing things the right way. Safety is equal to all other considerations of production, costs, and quality. This is reflected in performance appraisals, salary adjustments, and promotions.

Incorporate safety into the business process as an operational strategy Leaders around the world increasingly recognize that a well-managed safety system provides an operational strategy to improve overall management. But in recent years a significant number of major organizations have discovered that applying the tools and techniques of good safety management gives them not only reduced injuries and illnesses but also measurable improvements in efficiency, quality, and productivity.

Use proactive health and safety measurements Leading management consultants have emphasized: "If you don't measure it, you can't manage it; if you can't manage it, you can't improve it." The heart of safety management is measuring performance in quantifiable, objective terms. Leading companies constantly assess their processes to determine if they are adequately controlling risk. Although they include in their "safety" measurement after-the-fact consequences such as OSHA recordable rates and lost time rates, they do not rely solely on trailing indicators.

Have executives that do not *support* health and safety management—they *lead* it Scaling the heights of health and safety excellence requires the same leadership skills as attaining excellence in any other area. Health and safety performance is a reflection of corporate culture, and senior management influences that culture more than any other group. As in other areas, executive leadership will get the kind of safety performance it insists on.

Best Practices

How Widely Are They Used and What Works Best?

The Conference Board's survey of leading U.S. companies shows a steadily declining rate of lost time accidents and injuries and OSHA recordables. From 1999 to 2002, the number of lost-time cases per 100 full-time employees among respondents has declined an average of more than 40 percent, and recordables an average of 23 percent. These results are generally consistent with OSHA statistics through 2001; OSHA figures for 2002 are not yet available.

Respondents OSHA Recordables and Lost Time Case Rates

(Median cases per 200,000 hours worked)

Legend: Recordables, Lost Time
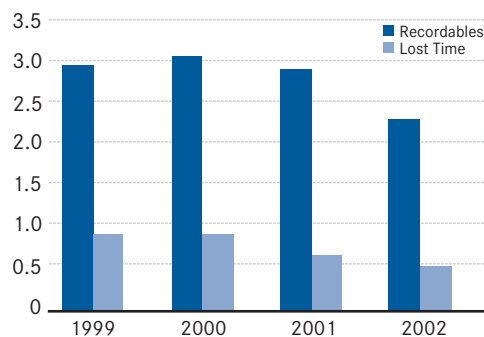
The survey asks recipients to indicate which of the 23 queried best safety and health management practices have been adopted by their companies, and to rank the effectiveness of those they are using on a scale of 1 to 10. Participants confirm that they broadly accept the four categories of safety and health best practices queried in the survey:

- Most respondents use all six listed policy and program initiatives.

- Some 90 percent of respondents employ all eight listed practices for managers.

- More than 75 percent draw on all six listed practices for first line supervisors.

- More than 75 percent utilize all three listed practices for employee involvement.

Survey Participants

	Number	Percent of total
By sector		
Industrial goods manufacturing	40	59%
Consumer goods manufacturing	19	28
Non-financial services	9	13
By number of full-time employees		
Under 20,000	40	59
20,000 to 50,000	13	19
More than 50,000	15	22
By revenues		
Under $5 billion	30	44
$5 to $10 billion	16	24
More than $10 billion	22	32

Survey Segment 1

Practices and programs

1 **Operational integration** Safety is integrated into all facility operations and processes.

2 **Motivational programs** Programs are in place to encourage employees to recommend safety improvements and to implement them. Companies employ various types of recognition and rewards in such programs, ranging from management commendation to financial rewards.

3 **Behavioral observation/feedback** A specific program is in place for employees to provide constructive/supportive feedback to co-workers on their safety behavior and opportunities for improvement.

4 **Safety committee** An effective safety committee with broad-based participation has been established and meets regularly to discuss goals/performance/progress on initiatives.

5 **Case management** Sites work closely with medical professionals to evaluate occupational injuries and illnesses, to ensure that prompt medical treatment is provided, and to coordinate efforts to return recovering employees to their own jobs or alternative assignments as soon as practicable.

6 **Safety survey** Periodic employee surveys or focus-group safety discussions are conducted to assess opportunities for improvement and corrective/preventive action to address needs.

Operational integration is clearly the most highly rated safety and health practice in the Policy/Program category. Adopted by 90 percent of respondents, it is given a rating of 8 or higher by more than 75 percent of its users, and almost 30 percent assign it a score of 9 or 10 — putting it in the "extremely effective" category. By sector, integration's rating soars in industrial goods, possibly reflecting the relatively greater risk involved in heavy industry as opposed to consumer goods manufacturing or services.

Case management follows closely behind, with 90 percent of surveyed companies adopting the practice and nearly 60 percent rating it 8 or higher. Consumer goods producers give this measure a much higher effectiveness rating than either heavy industry or services.

The *safety committee* approach, one of the oldest organized safety performance enhancement tools, is the most widely used in the category, and ranks comparably with case management, with nearly 60 percent rating it 8 or higher and 36 percent ranking it between 5 and 7. An industry category breakout of survey responses shows consumer products companies leading other industry groups slightly in utilization of safety committees. Almost 95 percent of participating consumer products companies have safety committees, and 59 percent rank the practice at 8 or higher, compared with 91 percent utilization and a 59 percent top rating in industrial goods companies.

Ranking fourth on the policy/program list, *motivational programs* are employed by 78 percent of survey respondents, with the majority—56 percent—rating the practice between 5 and 7, and 34 percent awarding it a grade of 8 or higher. Utilization (and ratings) for this practice are some 15 percent higher in heavy industry and consumer goods than in service companies.

Reflecting their relatively new and still somewhat controversial status—and comparatively high cost to implement—*behavioral observation/feedback* programs are used by just over 69 percent of surveyed companies and 42 percent of users rate it at 8 or higher for effectiveness. *Safety surveys*, also relatively new and untested, have the lowest adoption rate in the category, with fewer than 62 percent of respondents using them. Almost one-third of respondents rank them at 8 or higher, indicating very positive perceived results. Close to three-quarters of industrial goods companies have some form of these programs and 41 percent rate them at 8 or higher. Corresponding data for consumer goods producers is 63 and 42 percent respectively; for the service industries, the figures are nearly 67 percent and 33 percent respectively.

"Most Effective Policy/Program Initiatives" Ratings

For all practice ratings, numbers below the practice indicate the percentage of respondents employing each policy or initiative.
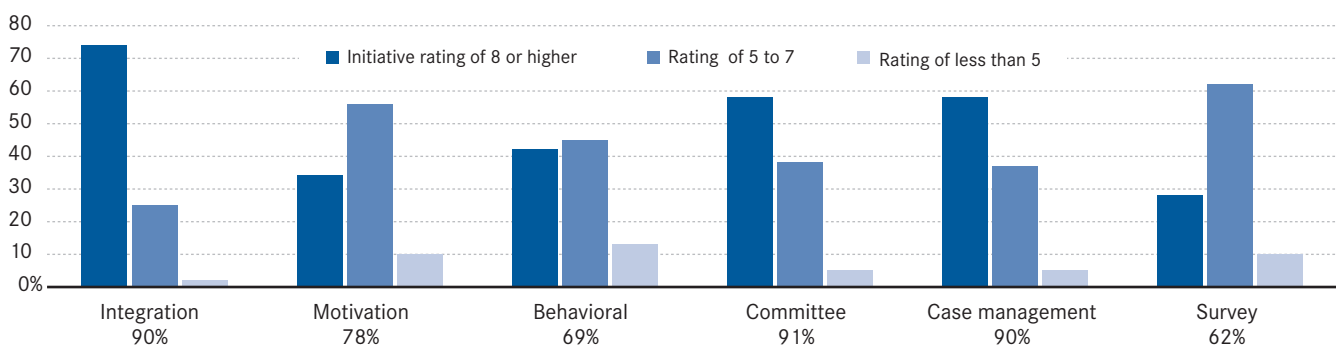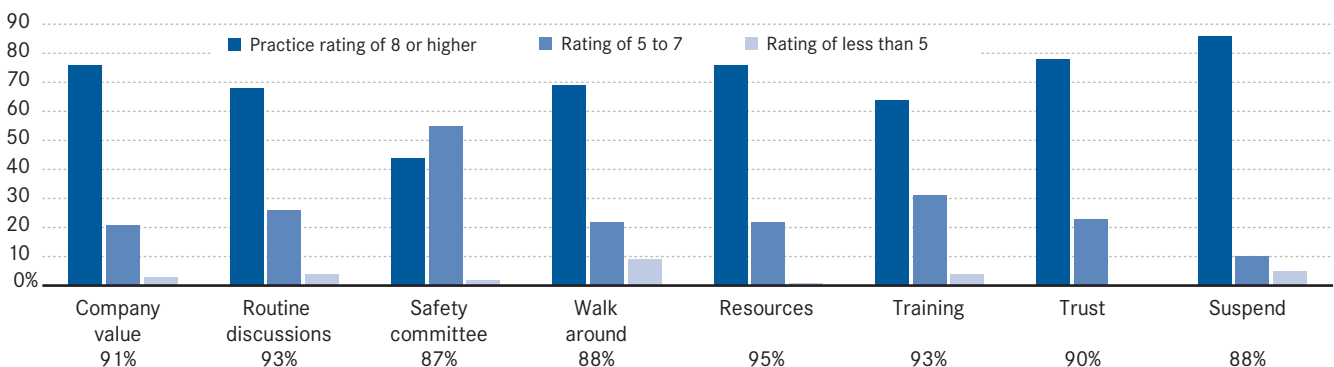
Survey Segment 2

Managers are required to show visible support for safety and health by:

1 Routinely voicing concern for worker safety and health, emphasizing it as a company value.

2 Regularly discussing worker safety and health at staff and employee meetings.

3 Attending and participating in safety committee meetings.

4 Doing frequent "walk-arounds" of the facility, commenting on effective or ineffective safety and health practices observed.

5 Ensuring adequate resources for worker safety and health (e.g., a qualified EHS manager responsible for supporting worker safety and health, adequate personal protective equipment, funds for appropriate equipment maintenance and safety improvements).

6 Ensuring employee and management training at appropriate times and frequencies to minimize the potential for accidents, injuries, or illness in the workplace.

7 Creating a trusting relationship among employees that encourages prompt disclosure of accidents, near misses, and safety and health issues and recommendations.

8 Ensuring that work activities that cannot be performed safely are suspended pending corrective action.

Given the high emphasis placed on management commitment by leading companies, it is not surprising that this category rates highest overall, with some 90 percent of respondents indicating that they use *all* listed strategies. While every best practices tool in the management segment enjoys more than 85 percent usage, the most widely utilized are *adequate resources* and *adequate training*, adopted by more than 95 and 93 percent of surveyed companies, respectively. Four practices in this category stand out as the most effective, with more than 70 percent of respondents rating them at 8 or higher:

- Suspending work activities pending corrective action (the strong leader, earning the highest rating, "extremely effective," from 44 percent of respondents)

- Creating a trusting relationship among employees

- Ensuring adequate resources

- Emphasizing concern for worker safety as a company value

"Most Effective Practices for Managers" Ratings

Legend: ■ Practice rating of 8 or higher ■ Rating of 5 to 7 ■ Rating of less than 5

Category	Percent
Company value	91%
Routine discussions	93%
Safety committee	87%
Walk around	88%
Resources	95%
Training	93%
Trust	90%
Suspend	88%

The practices of conducting *frequent "walk-arounds"* and *routine discussions at staff and employee meetings* follow closely; 69 percent of surveyed companies rank the former at 8 or higher, and 68 percent give the latter the same rating. The relatively lower ratings for the traditional *safety committee* and *training program* elements—somewhat surprising, given their stature as tried and true health and safety management tools—may reflect the respondents' familiarity with these practices as opposed to other, newer strategies. It may also be that "traditional" training is perceived as somewhat less effective than "coaching and feedback" by supervisors, as reflected in the findings in Survey Segment 3.

Survey Segment 3

First-line supervisors are required to:

1 Continuously encourage safe behavior; discourage unsafe behavior through coaching and feedback; and prompt discipline if necessary.

2 Conduct "what if" evaluations and job-hazards analysis of workplace safety hazards with potentially affected employees.

3 Obtain appropriate training on worker safety and health practices and train their employees on these issues.

4 Conduct documented safety inspections at assigned intervals.

5 Initiate investigation of facts/root causes of accidents and near misses no later than 24 hours after they occur;
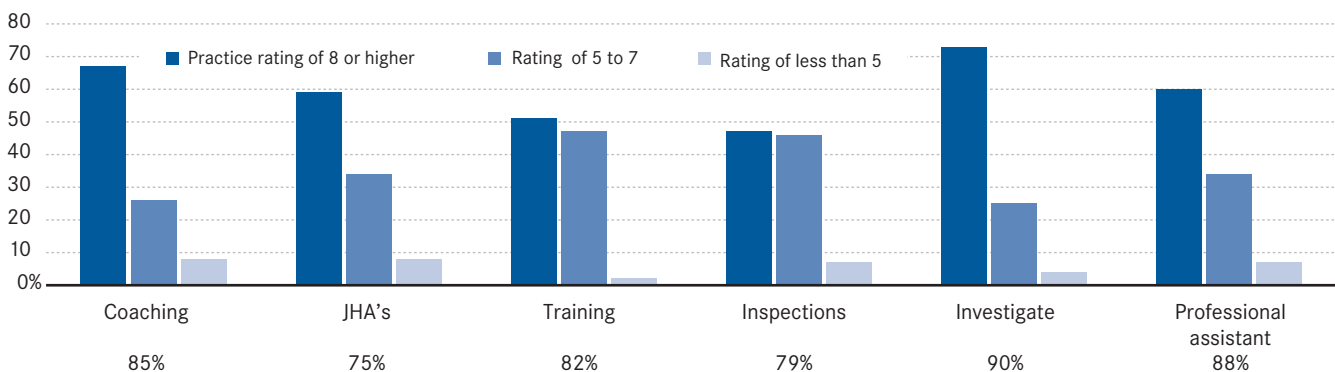
follow up promptly to identify corrective and preventive action; review investigation report/proposed action with facility health and safety experts; implement agreed-upon corrective action; and communicate findings and solutions throughout the facility.

6 Work with assigned internal or external occupational health professionals on management of injury cases that occur in the supervisor's department to assess the potential for modified duties and work restrictions, and periodically contact each absent injured worker directly to show concern and discuss recovery progress/return to work.

The general expectation that supervisors are responsible for implementing corporate policy adds weight to the findings in this category, where the effectiveness ratings are highest for *prompt investigation/follow-up of accidents*, which receives an effectiveness rating of 8 or higher by more than 70 percent of respondents, and the *encouraging safe behavior, coaching, and discipline* strategy, which 68 percent rate at 8 or higher. These are followed closely by *job hazard analysis* and *professional assistance for management of injury cases*, both of which garner a rating of 8 or higher by close to 60 percent of respondents. The high ratings of these four practices suggest that the two major roles supervisors play in ensuring safety and health are:

- Providing guidance and job hazard analysis to prevent accidents and injuries in the future; and

- Dealing with accidents and injuries when they occur and following up to get employees back to work.

"Most Effective Practices for Supervisors" Ratings

Legend: ■ Practice rating of 8 or higher ■ Rating of 5 to 7 ■ Rating of less than 5

	Coaching	JHA's	Training	Inspections	Investigate	Professional assistant
	85%	75%	82%	79%	90%	88%

As in the management category, the "traditional" tools—in this case, *training* and *inspections*—while highly regarded and well represented, receive moderate rankings. Comments from the survey respondents indicate that consistently applying these best practice principles can be a challenge, especially at the lower supervisory level; others say that some programs have not been in place long enough to judge how effective they will be in the long term. Two respondents describe their companies' safety culture, rather than specific process requirements, as the driver for performance.

Survey results by sector generally track consistently with these findings, allowing for small variations in both utilization or ranking of all six best practices, with three exceptions. Job hazard analysis appears to be more widely used in heavy industry, where it garners a rating of 8 or higher by 63 percent of respondents. Prompt root-cause investigations are initiated in 100 percent of both consumer goods and service companies, while they exist in just under 84 percent of heavy manufacturing companies. Finally, every responding service company has an occupational safety and health professional advisory program, compared with just over 89 and 84 percent respectively of heavy industry and consumer goods companies.
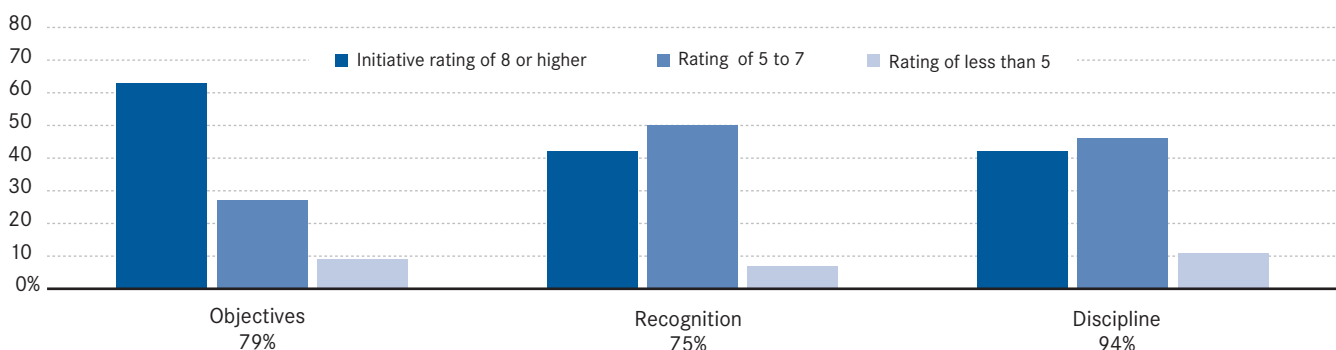
Survey Segment 4
Employee involvement

1   Facility managers, management teams, and first-line supervisors have meaningful and reasonable safety performance objectives. Bonuses, merit increases, and promotions for employees and managers are substantially affected by safety performance and the adequacy of the safety program.

2   Special commendation or other recognition is provided to supervisors and employees for superior safety performance.

3   Progressive discipline–up to full dismissal–is used, to the extent allowed, for those who violate safety work rules, perform other unsafe practices, or otherwise fail to meet safety responsibilities.

As a category, employee involvement contains the lowest number of widely accepted best practices. This suggests fertile ground for expansion and improvement—especially in light of the current emphasis on employee ownership as a vital component of any safety and health program. Indeed, the narrative comments strongly emphasize how important employee ownership is. One company states that "employees are expected to be *partners* in reducing the number and frequency of work-related injuries," and that without such a partnership its safety program could not succeed. Another stresses the need to make safety initiatives "personal" so individual employees can "connect to the program," and a third describes the improved morale and attitude that have resulted from its proactive safety and health management system.

"Most Effective Employee Initiatives" Ratings

Legend: Initiative rating of 8 or higher · Rating of 5 to 7 · Rating of less than 5

	Objectives 79%	Recognition 75%	Discipline 94%
Initiative rating of 8 or higher	63	42	42
Rating of 5 to 7	27	50	46
Rating of less than 5	8	6	11

Of the three practices queried, *progressive discipline* ranks highest in acceptance by far, with more than 90 percent of surveyed companies utilizing such programs. But only slightly more than 40 percent give the idea an effectiveness rating of 8 or higher, with a higher percentage (43 percent) ranking it at the lower 5 to 7 level. *Recognition programs*, while less accepted (only 75 percent of respondents have recognition programs in place), are viewed as more effective, with 43 percent giving them a ranking of 8 or higher and 50 percent rating them in the 5 to 7 range.

Establishing *safety performance objectives* tied to bonuses, merit increases, and promotions is viewed as the most effective strategy for gaining employee involvement. Some 79 percent of companies surveyed have established such programs, and 63 percent of those rate them at 8 or higher for effectiveness. Comments on this practice generally underscore these results, although the linkage between objectives and compensation (bonuses and merit increases) appears to vary somewhat, with performance objectives most consistently used. In an instance given by a respondent, the CEO of a company established that a full 50 percent of all incentives increases should be predicated on attaining prescribed safety and health goals. Another company responding to the survey ties bonus levels specifically to an overall corporate lost time case rate. Not all comments were favorable, and one company states that linking pay, bonuses, or merit increases to safety performance often drives underreporting, not improved performance.

Participant remarks also suggest that this practice is more common among supervisors and managers than among line employees, even though line employee involvement is considered critical in many of the comments on best practices. One respondent suggests that "activity-based objectives" (e.g., setting goals for a specific number of coaching or feedback sessions aimed at improving performance) are preferable to "numerical goals," especially at the supervisor and line employee levels.

Behavior-Based Safety at ExxonMobil

ExxonMobil's commitment to a behavior-based approach to safety evolved from the company's understanding of the necessity of safety and health improvement and its dedication to a simple and clear vision: "Nobody gets hurt."

Prior to 1990, and well before its merger with Mobil in 1999, Exxon achieved safety improvements by implementing engineering standards– "Facilities"–using traditional safety programs. Post-merger, the process was fully integrated by ExxonMobil (the chart "Improving Safety at ExxonMobil" uses pre-merger figures). In 1990, the company implemented the comprehensive 11-element Operations Integrity Management System (OIMS)–"Systems"–and realized major improvements in safety and health performance, reducing its global incident rate by nearly 60 percent between 1990 and 1997. When ExxonMobil's initially rapid performance improvement began to plateau, the company realized that greater progress in the drive toward its vision would require further innovation. Four factors were deemed critical:

- Managers are committed and actively involved as leaders.

- Supervisors have the knowledge and skills to effectively apply safety management tools and systems.

- The workforce is convinced that all accidents and injuries are preventable–and have the skills to consistently recognize and mitigate hazards.

- Individuals accept personal accountability for their own safety, are willing and able to intervene, and do intervene to ensure the safety of themselves and others.

The first two factors ensure that leadership visibly demonstrates commitment and personal accountability for safety, promotes the open and trusting environment necessary for effective behavior-based safety activities, understands the impact of its own behavior, and acquires the skills to ensure successful employee involvement.

The third and fourth factors drive the adoption of behavior-based safety–"People"–based on the conviction that the entire ExxonMobil workforce must be engaged and involved in identifying and avoiding unsafe conditions and unsafe behavior, and be willing to accept leadership from *anyone* else in achieving this.

Called the "Job Observation and Intervention Process," behavior-based safety at ExxonMobil consists of one simple objective and three implementation strategies:

Objective All employees and contractors proactively and routinely identify and eliminate unsafe behaviors by themselves and their coworkers.

Strategies
- Implement a process for active employee involvement.
- Put in place a systematic site-wide job observation and intervention process.
- Identify and make available individuals from sites that demonstrate strong employee involvement and effective observation and intervention processes to advise and assist management.

In the mid to late 1990s, some ExxonMobil organizations launched behavior-based safety. Since deciding in 2000 to make the process systemic, the "Job Observation and Intervention Process" is being implemented at all ExxonMobil operating sites worldwide. The results have been dramatic: The incident rate worldwide decreased by 50 percent between 1997 and 2002, and in mid 2003 the OSHA lost-time incident rate for roughly 200,000 employees and contractors stands at 0.065 per 200,000 hours for employees and 0.099 for contractors.

Improving Safety at Exxonmobil
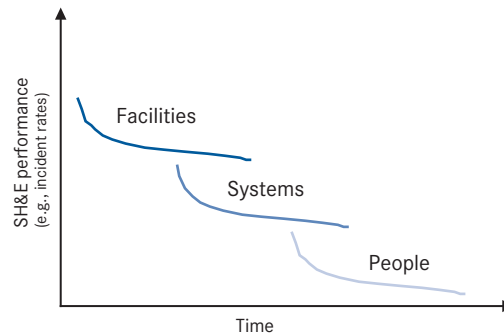
ExxonMobil's committment to behavior-based safety to achieve its vision of driving accidents and incidents to "0" is summarized in a recent Conference Board meeting discussion:

"Our goal is to drive injuries, illnesses, operational incidents, and releases to as close to zero as possible."

"We believe that *no* injuries, illnesses, operational incidents, or releases is possible."

"It is going to be a great world when we get there."

"Nobody gets hurt."

Rating the Most Effective Best Practices

Out of the survey's 68 participants, 43 responded to the question of what they considered to be their companies' single most effective safety and health best practice. The most popular reply, with a total of 14 comments, points to top management's commitment to and verbal support of safety and health. Performance accountability comes in second place with eight replies, and employee involvement ranks third with four votes. Other responses varied widely and formed no clear consensus.

While there was support for a wide assortment of strategies, most of the narrative responses reflect individual concerns or combinations of the best practices included in the survey. The replies also indicate that there is considerable range in the practices different companies place the greatest emphasis on, reflecting both a large number of specific risks and challenges and "cultural" differences in approach.

Certain themes stand out as essential:

Clear management visibility and leadership.

Ownership of safety and health by *all* employees, which several respondents suggested must go beyond "involvement" to "empowerment."

Accountability at all levels of an organization, including both positive and negative performance feedback.

Knowledge and information must be shared openly throughout the organization.

While both the quantitative survey results and the narrative commentary reveal that there are certain core principles in play at companies driving toward "0," they also demonstrate that there is no common template for all organizations. Each company has unique needs and must choose practices based on the specific nature of their work and their workplaces.

Top-Rated Best Practices by Category

Policy/Program Initiative →	Operational Integration
Best Practice for Managers →	Suspension of Work Pending Corrective Action
Best Practice for Supervisors →	Case Investigation Initiation and Follow-Up
Best Employee Involvement Program →	Performance Objectives

Leading Companies
in Health and   Safety Best Practices

Benchmarking—both within and between companies—is one best practice not specifically queried in this research but clearly relevant to individual company success. This investigation, initiated by Conference Board member companies and carried out voluntarily by survey respondents and profiled companies, is a measure of businesses' willingness to share across companies the perspectives and practices that can only benefit the health and well-being of all their employees and improve their overall productivity. The corporate profiles that follow are further examples of that willingness to share.

These profiles illustrate how four leading companies are seeking to prevent accidents, injuries, and occupational illness at their facilities, with the ultimate goal of achieving and sustaining a "0" accident and injury rate. While each company has had a respectable program and approach for a long time, all have recently placed increasing emphasis on workplace safety and health, reflecting a desire to move beyond good performance to excellent achievement and to accelerate progress toward the goal of "0" illnesses, injuries, and fatalities.

Alcoa

H&S Management Systems Are Key

Alcoa contends that achieving an injury-free workplace begins with the firm belief that "0" work-related injuries and illnesses are possible, and that goal is being met in many of its locations. The company's real-time safety data system reports that over a recent 12 month period, 76 percent of its 487 operating locations experienced "0" lost workdays, 40 percent experienced no recordable injuries, and more than 98 percent of Alcoa's employees went home injury-free.

With one of the country's longest-standing safety cultures, Alcoa has been a charter member of the National Safety Council since its formation in 1913. Jeff Shockey, director of safety and EHS regional services for North America, says, "There were Alcoa safety rules and recognitions for outstanding safety performance beginning in the early 1900s, and we established the position of worldwide safety manager as part of the corporate organization in the late 1970s. By the mid '70s, Alcoa had adopted a comprehensive health and safety management system, and developed cumulative accident data analysis capabilities—mainly as a diagnostic tool for tracking and trending incident history. In the late '70s, Alcoa began hiring its first degreed safety professionals, who have teamed up with our operations staff over the past two decades to improve our original model. Today the linkage between health and safety and Alcoa's overarching business system is not just desirable—it's expected."

"The human interface aspects of work activities are not always articulated in health and safety management systems," Shockey continues. "We tend to treat the human element as a constant, when in reality there are many variables—age, strength, gender, and risk profile are just a few of them. Human interface also comes into play in training; no two trainers are exactly the same. We continue to look at human factors, and try to design proven safety work methods, counsel those who would deviate, deliver more task specific training, and capture identified ergonomics opportunities as a way to help reach the next level. We now have the capability to share news on incidents as well as preventive techniques—real-time, worldwide, 24/7. We also are much more focused in our efforts to assess risk, so we can provide multiple layers of protection—particularly during upset conditions, which is when most serious incidents seem to occur. The workforce clearly knows and is expected to signal for help if a job or task cannot be done safely."

Former Chairman and CEO Paul O'Neil is generally credited with breathing new life into Alcoa's safety culture in the late 1980s. "Paul brought a real passion to the company's approach to health and safety," Shockey says. "He made it his business to know exactly how many and what kinds of injuries our people (employees and contractors) were incurring. Having a CEO who knew literally everything about our health and safety performance made a fundamental change in our line leaders' view of health and safety's ranking in their daily priorities. Alain Belda, who became Chairman and CEO in 2001, has added impetus to the goal of '0' injuries and work-related illness. By stressing continuing improvement of our health and safety management system and encouraging and rewarding demonstrated results, as a company we have been able to drive our lost workday rate down to 0.11, even in a period of extraordinary growth and economic uncertainty."

A substantial opportunity for the future appears to be online learning and Webcast delivery of task-specific training. Electronically-delivered training often enables companies to put the best instructional design techniques and trainers in front of the most people at the least cost. The company recently adopted its first electronic training initiative, the National Safety Council's on-line defensive driving course, after initially testing the program in both English and Spanish versions with more than 3,000 employees. Shockey says, "Having this course available on-line and in languages other than English enables us to reach a broader audience more effectively. It also allows us to give new hires whose jobs involve driving the training they need almost immediately, so we don't have to wait for the course to be offered in a traditional classroom situation." Next in line for implementation is an OSHA compliance-based training course.

Alcoa is investing great effort in tailoring training programs to individual situations. Shockey explains: "We need to be able to reach a focused audience with information that is highly specific to their jobs. If we can take the same hours that are devoted to some very general OSHA-mandated training programs and deliver those programs in ways that target specific aspects of work that can cause harm, we are getting to the person at a time and place where they will recognize the risk, understand it, and act in time to avoid it—or seek help to control it. Many jobs or conditions in our plants are unique to our industry and even to Alcoa; our goal is to analyze our employees' work environment, risks, and performance challenges so thoroughly that we know what very specific processes need to be applied given our unique conditions."

Risk assessment is integrated into daily operations, and Shockey is passionate about the potential for that aspect of safety and health management, declaring, "Once you have an incident, its severity generally becomes a matter of luck. Regulation and management systems alone can do only so much. We have to attack the underlying aspects of risk if we are to have an impact and change the circumstances that allow risk to exist. When we focus our efforts on risk, non-compliance just doesn't happen. Risk-based processes add value to the security and safety of our workforce, to the way we do business, and to our competitive position in the marketplace."

Alcoa's safety and health process comprises 52 protocols in nine major elements—all directly connected to elements of a combined H&S management system (see "Alcoa's Safety Tools, Tactics, Programs, and Processes" on page 22). The challenge is to link environmental, safety, and health standards and activities directly to the way the business runs on the plant floor. Shockey says, "The closer we get to where the work is done, the more we are able to identify opportunities for improvement, and the easier it is to determine whether there is risk and where human factors can play a role in eliminating or controlling it."

A mature, integrated audit system includes periodic external audits designed to both validate and question the existing management systems. The decision to conduct an external audit is based on past performance, lost days, fatalities, or major operational changes. Combined with strict incident reporting requirements—all accidents and near-misses must be reported and an action plan filed within 24 hours—the system allows plants earning good audit grades to use self-assessment tools that are based on auditable criteria, and to continually review and improve their own performance. Using these tools rigorously enables the corporate-directed audit function to readily verify that the necessary systems are in place, that documentation is thorough, and that predictive safe outcomes are repeatable. William O'Rourke, vice president for EH&S and audit, says, "The drive for our 'trust but verify' philosophy comes from the top. I report on our safety and health performance at a twice-monthly meeting of the company's top twelve managers. That report generates assignments specifically aimed at eliminating repeat incidents. Supervisors know that if their facility fails one audit they can count on our help; if they fail two audits they know they can expect their successor to appear."

Employee health is an increasingly important agenda item, O'Rourke says. "We are looking very seriously into where the risks are and pursuing them as aggressively as we do our safety risks—so we see a similar benefit on the health side."

Wade Hughes, manager for global EHS training, education, and communication, says, "Alcoa's real-time safety data system tracks incidents and provides deep insights into our safety performance. The database has evolved over the years into a rich source of information, and it has been a huge enabler for us. We can see at a glance where we're achieving '0' work-related injuries. It gives us any number of views of our performance, and we can mine the data for trends and helpful insights by such things as process, injury type, location, or time.

"As we get closer to our goal of '0,' analysis of events that cause injury becomes even more important," he continues. "If we can predict the circumstances that lead to injury or illness, we are more likely to eliminate them in the future. The key to success, of course, lies in the people in our organization pulling together to properly implement the systems, design the jobs and work processes, execute the work, and record and report incidents— all underpinned by the powerful, inescapable need for belief that '0' is possible."

Alcoa's Safety Tools, Tactics, Programs, and Processes

- EHS value, policy, and principles
- Alcoa Balanced Scorecard (links operating plans and EHS goals)
- Risk assessment by process (hazard analysis tools)
- Focus on behavioral safety
- Online incident tracking system
- EHS intranet home page
- EHS training and education
- EHS Excellence Awards Program, EHS Annual Report
- Fault tree analyses of manufacturing processes
- Worldwide health protocols
- Major incident investigation process
- EHS audits
- Behavioral safety tools
- Benchmarking
- Health and safety toolboxes
- Toolbox meetings
- EHS reports to Board of Directors

Baxter International

Taking Best Practices to a New Level

Until the arrival of Baxter International's current CEO in 1999, the company—which had always had an active safety program—mostly emphasized compliance and continuous improvement. As Duane Amato, vice president for EH&S compliance until August of 2003 puts it, "We had always tried to improve our safety performance every year, but safety wasn't a part of our corporate fabric and culture, as it is now. Harry Kraemer provided the turning point for us. We knew things were going to be different when, after we presented our 1998 performance figures— our best yet—his reaction was that it was good to have improved, but that any injuries were unacceptable."

The first step to better performance was establishing a series of annual accident and injury rate reduction goals using the Balanced Scorecard approach. (The goal for 2003 is a 10 percent reduction in both lost time and lost workdays per 100 employees – goals have varied year to year depending on the potential for progress perceived by the company for each period.) Some improvement was achieved from the very start of the initiative in 1999, but for Baxter, the keys to accomplishing its goals have proven to be (1) accountability and (2) a rigorous set of best safety practices.

In November 2000, the company established its current requirement that everyone—from managers to line supervisors to employees—be accountable for safety and health. As much as 15 percent of bonuses awarded to managers, their staff, and, in some cases, the first-line supervisor level are geared to safety and health performance, and an aggressive culture emphasizes the sharing of responsibility for safety and health by both management and employees. Kraemer took a highly visible and active role in the policy, telephoning plant managers after a serious accident. Amato says, "He made sure everyone reporting to him understood his commitment, and he tied safety and health into Baxter's shared values by asking how we could hope to be the Best Team if people still were being hurt on the job. Since then, we have showed significant improvement."

Taking the drive for excellence to the next level involved developing a set of safety best practices that could reflect the company's long-term, proactive safety and health management system. That meant identifying proven process models. Sue Miller, director for corporate safety, explains: "We put together a team of people to look at our best-performing facilities and asked them which of their practices worked best. We also worked with outside advisors and other leading companies. The result was Baxter's two-page *Best Safety Practices Standards*, published in late 2000." This set of standards formed the basis for the development of The Conference Board's safety and health best practices survey, and all of Baxter's standards were included in the survey instrument and are reflected in this report.

Bill Blackburn, then vice president and chief counsel for corporate environment, safety, and health, says, "As we evolved and gained experience with these standards, we increased the effectiveness of our safety programs exponentially. The rewards are there when things go well, and the disciplinary processes are there when safety is ignored. We make safety performance—both good and bad—highly visible with top management. Poor safety performance affects managers' compensation. The message is that the company is serious about safety, and the path to success is our *Best Safety Practices*."

But the safety emphasis is not all top-down. Employees and supervisors are asked to identify operational and behavioral weaknesses and strengths, both independently and through a Train the Trainers program, in which safety professionals invest significant time and effort in helping employees feel comfortable giving feedback that promotes safety.

One of the greatest opportunities for strengthening safety performance, according to Duane Amato, is to change unsafe behavior patterns, which are estimated to cause 85–90 percent of accidents. Working together, Baxter's HR and EHS groups developed a system that tracks and helps change unsafe behavior patterns. Depending on the severity of the violation, management response to accidents or injuries resulting from disregard of safety standards progresses from a discussion with the employee for a minor offense to written warnings and loss of pay. Repeat offenses or serious flagrant violations can result in employee termination. The system has been generally successful, but Amato says the eventual goal is to establish a safety culture so pervasive that workers take ownership and responsibility for their own and their co-workers' wokplace safety and health. "If we can get to that point, safety responsibility will penetrate far beyond the plant manager or line supervisor level, and safety will be totally integrated into our corporate fabric."

Performance at individual sites still varies significantly. Amato describes the 20 facilities that represent 50 percent of the company's lost-time accidents as its "top opportunity;" and proportionate attention is being given to turning them around, with safety personnel conducting site visits and personnel interviews, upgrading line management training programs, and studying accountability chains.

The behavior-based Safety Impact Program, a training tool that focuses on managing people to produce improved safety performance, has been particularly useful. Amato says, "It was an eye-opening experience for both managers and employees in the sites completed to date. It had never been made clear to them that safety is an integral part of their own role and responsibility, not just something the EHS staff has to worry about. We spent a lot of time interviewing managers and employees to find out what they were thinking, and found that many times they were on different wave lengths. Employees sometimes thought management didn't care about their safety, but managers would say employees were their most important assets."

Baxter requires a proactive safety stance of all managers. "We want our managers to deploy the program further into the workforce. We ask to see evidence of discussions with employees, disciplinary letters, inspection documentation, evidence of recognition for good safety performance, and proof that everyone is involved. We ask them to focus on and report near-misses, because they are precursors of accidents and injuries."

Annual EHS audits evaluate the company's progress in compliance, risk management, and accident and waste prevention. Baxter's significant manufacturing, R&D, and distribution sites are not only expected to meet company standards, but to maintain certification to the ISO 14001 management standard. In order to counterbalance any tendency to emphasize environmental performance over safety and health, sites must now obtain certification against the OSHAS 18001 health and safety management standard.

Blackburn concludes, "We have learned that EHS management standards are basically Trojan horses—they can be highly effective or not, depending on what you load into them and how you approach them. So we loaded into the horse the practices that drive the performance. It has helped us make great strides, and we're working to do even more. The combination of best practices and a good safety and health management system makes us very optimistic about taking our safety culture to the next level."

American Express

A Service Company's Perspective on Safety

Our profiles mainly feature manufacturing companies' viewpoints because they frequently have higher safety and health risks. But service-based companies also have their own health and safety issues and for an outlook on this sector's concerns we reached out to American Express, a leading global services provider. According to Hannah Sesay, director of global corporate safety, "For non-manufacturing companies, where accident and injury rates are not generally significant compared to other types of businesses, the challenge is to integrate safety into all management processes. American Express has made a commitment to integrate safety performance across every aspect of its global operations. Our safety processes are still evolving, but we have established a global safety team and developed a set of processes and guidelines that we believe deliver maximum effectiveness for our kind of business.

"Performance is constantly measured and improved through an audit, inspection, and training cycle to ensure compliance with regulations everywhere we operate and to eliminate the relatively few injuries that can occur in our working environments. Compliance is a critical aspect of our safety culture. We utilize a set of best practices to further spread safety awareness throughout the company globally. Corporate safety goals are tied to business units' internal compliance ratings and monitory incentives.

"Developing safety and health processes appropriate to regulatory climates and risks in other countries, which vary dramatically, can pose real challenges. We want to make sure our own policies have a positive impact in other countries. We always use U.S. regulations as our base, but then adapt our processes to qualify under the most stringent but flexible rules in existence worldwide."

Eastman Kodak

"We Are Never Done"

A 26-year veteran of Kodak's health and safety staff, director of safety and industrial hygiene Debra Schoch personifies the company's culture of valuing people. "Safety is fundamental here," she says. "It's ingrained in the way we treat each other with respect and care, and that attitude is in alignment with the way we operate around the world."

Kodak's deep involvement in safety and health has its roots in the company's beginnings. George Eastman formed the first safety committee in 1911, and helped found the National Safety Council in 1912. Kodak's Laboratory of Industrial Medicine started operations related to toxicology and industrial hygiene in 1930, and in the 1960s the company began studying ergonomics as it relates to both job and product design. Its ergonomics legacy, a two-volume treatise entitled *Ergonomic Design for People at Work*, is referenced worldwide.

A Well Defined Management System Drives Performance

Kodak's corporate health, safety, and environment standards and procedures manual spells out the company's guiding principals: "Safety and health performance at Kodak is governed by laws, regulations, and Kodak's established best practices, a set of performance criteria in the health, safety, medical and environment categories…These corporate performance standards apply to all Kodak operations worldwide in addition to local laws and regulations that are applicable to the site. These performance standards are used by the Corporate Health, Safety, and Environment Assessment Program (CHSEA) as one of the main criteria against which they conduct assessments, to assure compliance of Kodak facilities worldwide." The standards also outline the responsibilities that the line leader owns in order to ensure a safe and compliant organization (see "Examples of Kodak's Safety Performance Standards").

Kodak Corporate Values

- Respect for the individual
- Uncompromising integrity
- Trust
- Credibility
- Continuous improvement and personal renewal
- Recognition and celebration

Examples of Kodak's Safety Performance Standards

- Health hazard assessment and control
- Health, safety, and environmental education and training
- Chemical management control
- Contractors and other non-Kodak personnel
- Equipment safety
- Facility safety
- Electrical safety
- Personal protective equipment
- Employee health and safety
- Emergency preparedness and community involvement
- Occupational health surveillance program
- Preventive medical services

Line managers are charged with implementing these standards and procedures globally. Schoch says, "We consider that our line leaders are first and foremost leaders of people, and we make sure that health and safety is integrated into their leadership training." Safety performance standards spell out management's intent and performance expectations for line leaders, employees, and safety and health support staff, facilitating a management system that builds with the business. Kodak aligns the core elements of this system with the OSHA Safety and Health Management Guidelines.

A robust health, safety, and environment management system depends heavily on audits and assessments, and Kodak makes this process more efficient by integrating it with medical assessments. This unique approach involves teams of auditors looking at all aspects of health, safety, environments, and medical processes at once. Each major Kodak facility is audited every three years, although the frequency can vary depending on performance and its operations.

Kodak's Health, Safety, and Environment Management Council (HSEMC), an executive committee led by the senior vice president and director of global manufacturing and logistics, provides direction and reviews performance; and a coordinating committee provides recommendations and develops and administers HSE programs. A safety and health committee reports to the coordinating committee.

Measures designed to raise awareness and improve performance include tying executive pay to safety results, reward and recognition programs, a mandatory report on performance to the Board of Directors, and a significant investment of time and effort in the sharing of practices and statistics—both internally and externally. Schoch credits the latter with developing a great deal from Kodak's British facilities in particular: "The U.K. and northern European countries have led the rest of the world in developing regulations based on a risk management approach for a broad set of health and safety topics. The relationship there between government and industry is collaborative."

Operations Managers, Key to Success, Have Broad Mandate

One tool that has been very effective at the site level involves assigning one member of each *kaizen* (lean manufacturing principles) team worldwide responsibility for judging the health and safety implications of proposed alterations to manufacturing processes. A scorecard is used to rate the current level of health and safety controls, and to reassess the proposed changes for control quality prior to implementation. Schoch says, "Many of the process improvements actually result in reduced health and safety risk." A built-in checklist helps prevent the safety and health scorecard from declining during changes, and in most cases the scorecard improves as a result—particularly in the ergonomics area (see "Sample Questions from Kodak's Health, Safety, and Environment Review Checklist").

Kodak's Safetrack, an employee safety and health communications program based on DuPont's auditing principles, gives line leaders another reason to be on the floor talking about something that matters to all employees: health and safety. Leaders hold routine conversations with employees—weekly for team and group leaders, twice monthly for supervisors, and monthly for managers—discussing one positive performance and one that needs attention. In 2002, more than 28,000 of these conversations took place in the company's Rochester, NY, facilities alone. Schoch says, "It's made a huge difference in safety performance, but the program also offers a chance to improve communications in general." Safetrack is being expanded to focus on one specific issue each month, and is linked directly to the root cause of incidents or near misses.

Another key role for line leaders is the investigation of incidents. Supervisors are trained to send the message, "Something awful happened on my watch; I am responsible and I need to lead the incident investigation immediately to understand the truth and ensure appropriate corrective actions are taken so it will never happen again." When an incident involves serious injury, investigations are required to begin immediately, even if they occur at night or on a weekend. The sense of urgency and leader concern is a message in itself.

Root cause analysis is crucial to this process. The area in which an incident occurs is frozen and no work goes forward until the area is safe. A line leader accompanies an injured worker who must go to an emergency facility, talks with family members, and determines what needs to be done for the person.

A contractor safety program, established in 2000, provides Kodak with stop-work authority, to the extent that contractors may be walked off site and not allowed back, and all contractor safety performance statistics are included in corporate reporting. The company's recognition program for superior contractor safety performance has become a status symbol for local contractors. Schoch says, "Contractors use their awards as marketing tools to get other business. Also, we make it clear that good safety performance helps them become Kodak-preferred suppliers."

Sample Questions from Kodak's Health, Safety, and Environment Review Checklist

- Will the change involve construction/renovation/dismantlement/demolition/equipment or machine relocation?

- Will the change involve any new or modified equipment or processes (e.g., pumps/tanks/filters/change to hours of operation/speed-ups/different construction material/change in operating procedures/process-control software or logic changes/etc.)?

- Will the change involve any new or modified chemicals, materials, formulations, or products (e.g., raw materials/paints/oils/lubricants/cleaners/maintenance materials/etc.)?

- Will the change introduce or modify any ergonomic hazards (e.g., lifting/pulling/bending/twisting, reaching/repetitive motion/lighting/etc.)?

- Will the change introduce or affect any health or industrial hygiene issues (e.g., ventilation/heat noise/radiation/lasers/asbestos/lead/chemical exposure/biological or blood-borne pathogens/personnel protective equipment/hazard communication/ etc.)?

- Will the change introduce or affect any plant safety and/or property loss issues (e.g., alarms/sprinklers/flammable liquids/electrostatics/egress/exits/room electrical ratings/electrical safety/safelights/building emergency action plans/etc.)?

- Will the change introduce or affect any personal safety issues (e.g., machine guarding/lock-out tag-out/confined spaces/respirators/fall protection/lone operators/harnesses or hoists/eye protection/permits/equipment safety/means of egress/electrical safety/etc.)?

- Are you unsure about the HSE impact of the change?

Co-Location with Medical Function Provides Crossover Benefits

Organizationally, health and safety are co-located not only with the environmental function (which is traditional), but also with the company's medical and ergonomics specialists, who are responsible globally for both processes and employees. This arrangement facilitates crossover safety and health benefits for Kodak's global operations. For example, toxicology testing professionals and epidemiology experts not only advise customers, but assess risks for employees. In addition, teams of industrial hygienists conduct potential chemical exposure assessments for prioritized chemical agents several times a year in a SWAT team approach across Kodak's Rochester operations.

Challenges Ahead

Kodak has set a goal of achieving and sustaining a safety performance record ranking in the top quartile world-wide. Schoch is confident the company can reach that goal, but describes the remaining major hurdles as:

- varying regulatory approaches in different countries;
- sustaining performance once accident/injury rates are reduced;
- cultivating new safety line leaders; and
- maintaining the high level of employee investment necessary for pervasive safety awareness.

Motorola

Integrating H&S Management Systems and Maximizing VPP

Motorola rolled out the beginnings of its present health and safety management system in the early 1990s—more than 100 standards covering all aspects of safety and health management, from training and lockout-tagout procedures to processes for work in confined spaces, chemical exposure avoidance, noise abatement, and industrial hygiene. In 1998, the company's health and safety standards approach evolved into an integrated environment, health, and safety (EH&S) management system—consistent with the "Plan, Do, Check, Act" methodology of the ISO 9000 Quality and ISO 14001 Environmental Management Systems Standards.

The same year, Motorola produced its first EH&S report—now published annually as part of its annual corporate citizenship report and expanded into broader sustainability information. A team of executives has been charged since the program's outset with developing meaningful short- and long-term safety and health goals and with creating the necessary tools for measuring performance. The team continues to work to refine and upgrade the EH&S management system.

Rich Guimond, vice president and corporate director for environment, health, and safety, explains, "The company had always had a pretty good safety and health program, and always strove for continuous improvement, but with the new program we were aiming for extraordinary performance. It was a significant change, and one of our biggest challenges was driving the thought process beyond the accepted standards for manufacturing. Once we got beyond that hurdle, things really began to come together."

Guimond says, "Particularly valuable in the establishment of our health and safety management system were some of the concepts of OSHA's Voluntary Protection Programs (VPP). VPP participation at Motorola is so pervasive that at one point the company had more employees enrolled in VPP than any other company in the country. Our best performing sites are VPP facilities, and we're seeing other sites follow their example more every day."

OSHA's Voluntary Protection Programs (VPP)

VPP is designed to recognize and promote effective safety and health management. VPP participants are a select group of facilities that have designed and implemented outstanding health and safety programs. *Star participants* meet all VPP requirements. *Merit participants* have demonstrated the potential and willingness to achieve Star program status, and are implementing planned steps to fully meet all Star requirements.

Through the VPP, management, labor, and OSHA establish a cooperative relationship at a workplace that has implemented a strong program:

- Management agrees to operate an effective program that meets an established set of criteria.

- Employees agree to participate in the program and work with management to assure a safe and healthful workplace.

- OSHA initially verifies that the program meets the VPP criteria. The agency then publicly recognizes the site's exemplary program, and removes the site from routine scheduled inspection lists (OSHA may still investigate fatalities, major accidents, and other significant events).

- OSHA also reassesses periodically to confirm that the site continues to meet VPP criteria—every three years for the Star program, every year for the Merit program.

While all of Motorola's sites have injury and illness rates less than the industry average, not all sites perform to the same level. Any sites with accident/injury rates above the Motorola average must develop a detailed plan to improve their performance; their progress is reported back to the Board of Directors. The company regularly charts performance for all sites, and a safety and health professional team from sites with the lowest rates may be assigned to work with managers at sites with the highest rates. New facilities get similar attention, as do distribution centers, which Guimond describes as "our biggest challenge."

With the recent business downturn in telecommunications, Motorola has been forced to downsize its number of operations and workforce. Past experience has shown that such actions generally result in increases in reported workplace injuries and illnesses. "We believe having a robust EH&S management system in place helped ensure that our injury and illness rates continued to drop during these difficult times," says Guimond.

Safety and Health Management System Gets Results

Director of health and safety Stan Christian says the real benefit of the new system is that "it really requires the sites to manage and integrate EH&S into the business, rather than just manage EH&S as a separate function. Once the EH&S management system was deployed, our rates went down drastically (see chart)—and they continue to go down. Determining site-specific hazards and risks can be done best by management at the facility itself. Once we engage the site general manager and get his approval—and continue to engage him with at least one safety and health goal-setting and performance meeting a year—line management and employee involvement follows."

"Goals make a real difference too, and we make a real effort to make safety and health awareness part of the daily routine," he continues. "Building the VPP into our program has been invaluable, because it requires participation at both supervisory and employee levels. Each business unit must report its safety and health performance annually to the office of the CEO, and those statistics are reported in our global citizenship reports. Plus, everybody knows that individual facility performance statistics will be circulated to the entire Board at the annual meeting. No one wants to be on the wrong end of the chart. On the positive side, if a facility makes its goal of qualifying for VPP in a year, there's a recognition ceremony and celebration to be had."

Motorola U.S. Recordable Injury and Illness Rates

Per 100 Employees — EHS MS Implemented — 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002
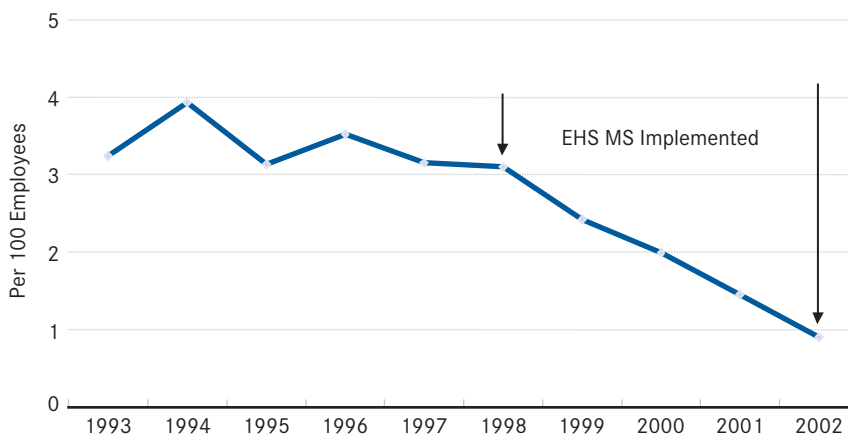
Expected Return on the Investment

Guimond says implementing the management system has been relatively inexpensive, especially in light of the benefits it offers, "Our workmen's compensation costs are extremely low now—about a quarter of what they were before we established the system. Our Board of Directors is engaged, and senior management gives us the attention necessary to solve any problems. We've developed a robust three-year program for all Motorola sites worldwide that begins with an EH&S audit and advisory team working at a site the first year, ISO certification the second year, and self-assessments the second and third years. And we've seen our global rates drop as significantly as our domestic ones."

While a methodology for clearly determining Motorola's actual return on the investment is still some distance away, Guimond believes there is great potential in continuing to develop the company's health and wellness programs. "Our biggest costs are related to health care for both employees and retirees. If we had ways to improve health and decrease injury rates on and off the job, we would see even less absenteeism. We are looking at ways we can merge health and safety with medical operations and mine the data for patterns. That's a long-term effort, but we know there are enormous benefits to be derived."

Christian believes many of the costs inherent in health and safety are fixed costs associated with compliance requirements. He says, "We are convinced that the additional costs associated with developing and deploying an effective EH&S management system are small compared to the human and financial benefits the company has seen, even though it will be some time before absolute evidence is available. The management system has taken us from a basic program process to a management process involving many more people in safety and health performance than ever before. And having the program institutionalized has helped enormously on a global scale."

The Bottom Line

What Makes Health & Safety Programs Successful?

The preceding company profiles reinforce the findings of the survey in demonstrating both the consistency of each company's approach to pursuing safety and health excellence and the differences in the details of their specific strategies. By comparing the individual qualities of all four companies' programs with the "core elements" of successful strategies discussed earlier, we can also see the similarities and the differences of the four companies' approaches. It is important to note, however, that while "a management system that works" was specifically identified as a core element, all of the program elements and activities that a company engages in are, essentially, a part of their management system.

All of the companies emphasized the importance of CEO and senior operations leadership as well as, for Alcoa and Kodak, a legacy of corporate focus for nearly 100 years. A dedicated senior officer is also part of the core elements for all companies, although Baxter's operations are in transition at the time of this writing.

Achieving the confidence of all employees in the company's valuation of safety and health—and the resulting involvement and empowerment—requires a greater diversity of approach. Alcoa focuses on the basics of each job and develops customized training based on job-specific risks and hazards. Baxter employs detailed accountability expectations and financial incentives for management and supervisory staff and has embarked on both behavioral safety

and the implementation of the OHSAS 18001 standard that places a high value on employee involvement. Kodak uses financial incentives and management accountability as well as a broad rewards and recognition program for employees. The company also holds thousands of "on-the-floor" employee meetings each year. Motorola emphasizes the use of safety and health goals at all levels of the company while encouraging extensive participation in OSHA's VPP program as an overall corporate objective. All of these companies report publicly and in some detail on their safety and health performance through their citizenship, EHS, or sustainability reports.

Management systems vary as well, but each company understands the critical importance of having one. All of the companies have developed and/or adopted standards that apply throughout their global operations. Different specific elements are employed, but they consistently emphasize the interplay between local initiative and accountability and corporate leadership and oversight.

Finally, all stress the importance of performance monitoring and feedback. Effective programs and practices must function locally and all employees—from managers to line workers—must be engaged in achieving success. The prevailing theme, as articulated by Alcoa, is "trust but verify." Each company has in place both audit and assessment systems for following up on results that indicate potential risks and programs for recognizing performance excellence. All of the companies believe these steps play an integral role in the effectiveness of both their management systems and their health and safety initiatives.

Core Element Comparison Chart

Core S&H Program Elements	Alcoa	Baxter	Kodak	Motorola
Leadership at the top	• CEO Leader • Top 12 Managers • VP Responsible	• CEO Leader • Operations Leadership in Transition	• G. Eastman Legacy • SVP–HSEMC • VP Responsible	• CEO Office Leader • Executive Team • VP Responsible
Confidence by all in company value	• Focused JHA's/ Training-Individuals • Intranet • Rapid Follow-up • Public Report	• Accountability Requirements • Financial Incentives • Behavioral • Public Report	• Management At-risk Pay • Rewards/ Recognition • Operations Accountability • Public Report	• Broad Use of Goals • High Profile VPP Participation • Public Report
Management system that works	• 52 Protocols/9 Elements • "Trust but Verify" • Bi-monthly Reporting to Top Managers	• *Best Safety Practices* • Behavioral • OHSAS 18001 Certification	• CHSEA Standards / OSHA S&H Guidelines • Safetrack • Medical Coordination	• ISO Model • Annual Goal setting at Facility Level • Lagging Site Plans • VPP
Performance monitoring and feedback	• Internal and External Audits • Real Time Performance Data 24/7	• Annual EHS Audits • Focused Staff Follow-up	• Audit/Assessment Program • Safetrack Meetings	• Plan/Do/Check/ Act Overall System • Audits • Self-Reporting to CEO Office

Benchmarking Best Practices in Worker Safety and Health Survey

Ranking Safety And Health Best Practices

Listed below are program elements and practices commonly used in companies known for superior worker safety & health performance. For each one, please:

• Check the box if the program element or practice is integrated in your company's operations

• Rate the program element or practice as to its effectiveness in reducing the incidence and/or severity of accidents and injuries. Please make your ratings using a scale ranging from 1 to 10, with 1 = not effective at all to 10 = extremely effective.

We understand that a company's worker safety & health practices may not be exactly as set forth in the questions, nor may each be appropriate to all company operations. Our goal is to understand generally how companies approach each of the topics, so please respond appropriately. Any caveats may be included in the narrative section. Thank you.

01/8-9

1. Managers are required to show visible support for safety and health in this organization by:

Used   **Effectiveness Ranking**

10 ☐ Routinely voicing concern for worker safety & health, emphasizing it as a company value.

15-16

11 ☐ Regularly discussing worker safety and health at staff and employee meetings.

17-18

12 ☐ Attending and participating in safety committee meetings.

19-20

13 ☐ Doing frequent "walk-arounds" of the facility, commenting on effective or ineffective safety and health practices observed.

21-22

14 ☐ Assuring adequate resources for worker safety and health (e.g., qualified EHS manager responsible for supporting worker safety & health, adequate personal protective equipment, funds for appropriate equipment maintenance and safety improvements).

23-24

Used   **Effectiveness Ranking**

25 ☐ Assuring employee and management training at appropriate times and frequencies to minimize the potential for accidents, injuries or illness in the workplace.

28-29

26 ☐ Creating a trusting relationship among employees which encourages prompt disclosure of accidents, near misses, and safety and health issues and recommendations.

30-31

27 ☐ Ensuring that work activities that cannot be performed safely are suspended pending corrective action.

32-33

2. First-line supervisors are required to:

Used   **Effectiveness Ranking**

34 ☐ Continuously encourage safe behavior; discourage unsafe behavior through coaching and feedback and prompt discipline if necessary.

39-40

35 ☐ Conduct "what-if" evaluations and job-hazards analysis of workplace safety hazards with potentially affected employees.

41-42

36 ☐ Obtain appropriate training on worker safety and health practices and train their employees on these issues.

<div align="right">43-44</div>

37 ☐ Conduct documented safety inspections at assigned intervals.

<div align="right">45-46</div>

38 ☐ Initiate investigation of facts/root causes of accidents and near misses no later than 24 hours after they occur, follow-up promptly thereafter to identify corrective and preventive action, review investigation report/proposed action with facility health & safety experts, implement agreed-upon corrective action, and communicate findings and solutions throughout the facility.

<div align="right">47-48</div>

If your company policy includes some but not all of these practices, please comment here:

_____

_____

Used   **Effectiveness Ranking**

49 ☐ Work with assigned internal or external occupational health professionals on management of injury cases that occur in the supervisor's department to assess the potential for modified duties and work restrictions and periodically contact each absent injured worker directly to show concern and discuss recovery progress/return to work.

<div align="right">50-51</div>

If your company policy includes some but not all of these practices, please comment here:

_____

_____

3. Employee Involvement:

Used   **Effectiveness Ranking**

52 ☐ The facility manager, management team, and first-line supervisors have meaningful and reasonable safety performance objectives. Bonuses, merit increases and promotions for employees and mangers are substantially affected by safety performance and the adequacy of the safety program.

<div align="right">53-54</div>

If your company policy includes some but not all of these practices, or if your accountability program differs significantly, please comment here:

_____

_____

Used   **Effectiveness Ranking**

55 ☐ Special commendation or other recognition is provided to supervisors and employees for superior safety performance.

<div align="right">57-58</div>

56 ☐ Progressive discipline – up to full dismissal – is used, to the extent allowed, for those who violate safety work rules, perform other unsafe practices or otherwise fail to meet safety responsibilities (e.g., repeated failure to attend safety training).

<div align="right">59-60</div>

4. Other Practices and Programs

Used   **Effectiveness Ranking**

61 ☐ **Operational Integration**. Safety is integrated into all facility operations and processes.
                                                                                                       _____
                                                                                                       67-68

62 ☐ **Motivational Programs**. Programs are in place to encourage employees to recommend
safety improvements and to implement them.
                                                                                                       _____
                                                                                                       69-70

63 ☐ **Behavioral Observation and Feedback** – Our company has a specific program is
in place for employees to provide constructive/supportive feedback to co-workers on
their safety behavior and opportunities for improvement.
                                                                                                       _____
                                                                                                       71-72

64 ☐ **Safety Committee**. Our company has an effective safety committee with broad-based
participation (including facility management, line supervisors, and other employees)
and meets regularly to discuss goals/performance/progress on initiatives.
                                                                                                       _____
                                                                                                       73-74

65 ☐ **Case Management**. The site works closely with medical professionals on- or off-site
to evaluate occupational injuries and illnesses, and to assure that prompt medical treatment
is provided and that coordinated efforts are made to return recovering employees to their
own jobs or alternative assignments as soon as practicable.
                                                                                                       _____
                                                                                                       75-76

66 ☐ **Safety Survey**. Our company conducts periodic employee surveys or focus-group
safety discussions to assess opportunities for improvement and corrective/preventive
action to address needs.
                                                                                                       _____
                                                                                                       77-78

BEST SAFETY PRACTICE NARRATIVE

The safety practice that is most effective in reducing accident/injury rates and near-misses in my organization is:

_____

_____

_____

                                                                                                       02/8-9

RESPONDENT INFORMATION

5. My job title is: _____
                                                        10-11

6. To whom do you report (title and function)? _____
                                                                                          12-15

7. What was the number of lost time cases per 100 FTE (200,000 work hours) at your company in calendar years:

1999 _____   2000 _____   2001 _____   Year to date _____
        16-20   21-25   26-30   31-35

8. What was the number of OSHA recordable cases per 100 FTE (200,000 work hours) at your company in calendar years:

1999 _____   2000 _____   2001 _____   Year to date _____
        36-39   40-43   44-47   48-51

9. Which one of the following best describes your company's (or the business unit's) primary business?

52-1 ☐ Industrial goods   3 ☐ Financial services
2 ☐ Consumer products   4 ☐ Nonfinancial services

10. What were your company's total consolidated annual revenues in FY 2001 in US dollars?
(For banking and other financial services, what were your company's total worldwide assets in FY 2001?)

53-1 ☐ < $1 billion   4 ☐ $10 billion – under $20 billion
2 ☐ $1 billion – under $5 billion   5 ☐ $20 billion – under $40 billion
3 ☐ $5 billion – under $10 billion   6 ☐ $40 billion or more

11. How many full-time equivalent (FTE) employees were in your company on December 31, 2001?

54-1 ☐ Less than 1,000   3 ☐ 20,000 to less than 50,000
2 ☐ 1,000 to less than 20,000   4 ☐ 50,000 or more

12. In what country is your company's head office located? _____
55-57

May we interview you in connection with this Conference Board research project?

58-1 ☐ Yes   2 ☐ No

Telephone number: _____   E-mail Address: _____

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59-1

_____ I do not wish to receive information about other Conference Board activities.
2

_____ I do not wish to participate in future research.
3

Thank You For Your Participation.

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