



Making the Business Case for Safety: Use These Case Studies to Get Management's Support

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INTRODUCTION

Getting senior management to invest in safety programs and initiatives can be challenging. Management usually understands that it must invest in taking the steps needed to comply with the OHS laws and regulations—but it may not be willing to go beyond minimal compliance efforts. Showing the benefits

of exceeding minimal standards often falls on the shoulders of a safety professional.

Trying to get the support of senior management by making abstract arguments about the various benefits of voluntary safety initiatives isn't likely to get you very far. But using case studies

that show how other companies took the steps that you propose and reaped benefits from doing so can be more persuasive. So here are several case studies that you can use to get senior management's support for different kinds of health and safety programs and initiatives.

Car Company Saves Nearly \$250,000 from Ergonomics Program

Here's a [case study](#) from the [Institute for Work & Health](#) (IWH) that you can use to get senior management's support for an ergonomics program by showing that such a program can benefit the company by both preventing costly musculoskeletal injuries (MSIs) and saving the company money.

An Ontario auto parts manufacturer asked IWH researchers to help it implement a participatory ergonomics (PE) program to improve workers' musculoskeletal health. A PE program brings workers, supervisors and other key workplace personnel together to identify and solve problems to reduce the risk of MSIs.

An ergonomics change team was set up to implement the PE program at the worksite.

The team included:

- Worker representatives from all shifts;
- A union and a corporate health and safety representative;
- A mechanical engineer;
- The production manager;
- The tooling supervisor;
- Human resources representatives; and
- A person from the

research team.

Following the steps outlined in the how-to guide [Participative Ergonomic Blueprint](#), the team identified and prioritized potential ergonomic changes based on departmental injury rates, worker suggestions, worker pain reports and production and quality issues.

Over the next 11 months, the team made 10 physical changes to the plant. They included five easier-to-implement "fast track" changes, such as installing anti-fatigue matting to reduce leg and back fatigue, and fabricating a 45-degree angle on a tool to reduce wrist flexion. They also included five more-involved "full process" projects, such as installing platforms to reduce low-back stressors and changing a packing protocol to reduce above-shoulder work.

Benefits of Program

IWH Scientist Dr. Emile Tompa and his team conducted an economic evaluation of the PE program. They calculated the program costs at \$24,400, including the time and money spent on training, meetings, change implementation, ergonomics expertise and equipment.

They then looked at the

number and duration of workers' comp claims, modified work cases, first aid-only injuries, short- and long-term disability (STD/LTD) claims and casual absences before and after the PE program was introduced. Significant reductions were seen in only one measure — the length of time workers spent on STD/LTD. That figure went down by 52%, representing a savings of about \$244,420 over 23 months.

All in all, the findings indicate how important it is for companies to look beyond workers' comp costs when determining the economic benefits of prevention programs. "The benefits of a PE program can surface in many places within a company," Tompa points out. The results of the economic evaluation indicate that "PE can play a role in both primary and secondary prevention in the workplace," says Tompa. "In other words, it can be effective in not only reducing injuries, but also reducing the severity of injuries when they do occur."

5 Case Studies Prove that Companies Save Millions on Wellness Programs

Here are five case studies demonstrating the return on investment (ROI) some Canadian and US companies have realized from their wellness programs.

Defining Our Terms

By “wellness program,” we mean any company program designed to improve workers’ general health. Such programs typically include onsite fitness classes, health fairs, lunch-and-learn sessions with health and fitness professionals, discount gym memberships, etc.

Case Study #1: Husky Injection Moulding Systems

Husky Injection Molding Systems, based in Ontario, is well known for its wellness program, which includes a health education program, on-site fitness centre and other initiatives, such as a company naturopathic doctor. Husky estimates that it saved **\$8 million** overall based on its \$4 million investment in the wellness program. Benefits include:

- An absenteeism rate of 2.25 days per worker, compared to the industry average of 9.6 and the Canadian average of 5.7;
- An annual drug cost per

worker of \$153, compared to a sector average of \$495; and

- 0.77 injuries per 200,000 hours worked in 1998.

Case Study #2: Coors Brewing Company

Since 1981, Coors Brewing Co. has operated a worker wellness program that initially featured onsite exercise equipment, health education courses and health screenings. In 1986, it funded a cost-benefit study to determine the program’s bottom line value. Some of the study’s key findings:

- For each dollar invested, the program returned between \$1.24 (worst-case scenario) and \$8.33 (best-case scenario). The average return was **\$6.15 for every dollar invested**;
- The program saved the company at least **\$1.9 million a year** by decreasing medical costs, increasing productivity and reducing sick leave; and
- Although the company was operating an elaborate program, its annual cost was recouped with the participation of relatively few workers (approximately 15%) and accounted for less than

5% of the company’s annual healthcare budget.

Case Study #3: Midwest Utility Company

The University of Michigan conducted a nine-year study of the wellness program of a utility company located in the Midwest. The study took into account all bottom line costs for implementing the wellness plan, including indirect costs such as recruitment and costs for changing menus. It also looked at lost work time as well as pharmacy and medical costs.

Over the nine years, the utility company spent \$7.3 million on the program—and showed **\$12.1 million in savings** from it. Thus, it reaped an overall net savings of **\$4.8 million** in worker health and lost work time costs for that time period.

Workers also benefitted financially. Those who participated in the wellness program for all nine years saw their drug and medical costs increase by \$96; the costs for those who participated in some of the years rose \$230; and for those who never participated, those costs jumped by \$355. Because the program cost \$100 per

year per worker whether the worker participated or not, a participation-related savings of \$257 and \$125 was seen by workers who participated in all years and those who participated in just some years respectively.

Case Study #4: Motorola

Motorola's company wellness program benefits more than 30,000 workers, family members and retirees. The program's features include:

- No cost membership for active workers to "Wellness Centres," which are essentially gyms (retirees pay a small fee);
- \$240 to help cover the cost of membership at a qualifying fitness centre for workers at locations without a Wellness Centre;
- Flu immunizations; and
- Health education classes.

Some of the benefits that Motorola has seen from its wellness program:

- Workers who regularly used onsite Wellness Centres or alternate fitness centres saved the company \$3.93 for every \$1 it spent;
- Participating workers cost **\$6.5 million** less in lifestyle-related medical expenses than non-participants; and
- The annual cost of healthcare for wellness program participants rose only 2.5%, compared to 18% for non-participants.

Case Study #5: Johnson & Johnson

Johnson & Johnson had a study conducted to determine the ROI for its wellness program. The study included a financial analysis of medical insurance claims for 18,331 workers who participated in the "Health & Wellness Program" from 1995 to 1999. The study concluded that the reduced healthcare costs attributed to participation in the wellness program amounted to annual savings of **\$225** per worker from reductions in hospital admissions, mental health visits and use of outpatient services.

In addition, the study evaluated worker medical expenditures for up to five years before and four years after the program began. It concluded that Johnson & Johnson's savings averaged **\$85 million** a year for the four-year period after the program began. Overall, the company realized the following benefits from its wellness program:

- A 27% decrease in health care costs;
- A 15% increase in productivity; and
- A 22% decrease in absenteeism.

University of Toronto Study on Wellness Programs

As additional ammunition, you can cite a report from the University of Toronto that documents the savings and financial benefits companies receive when their workers are healthy,

including:

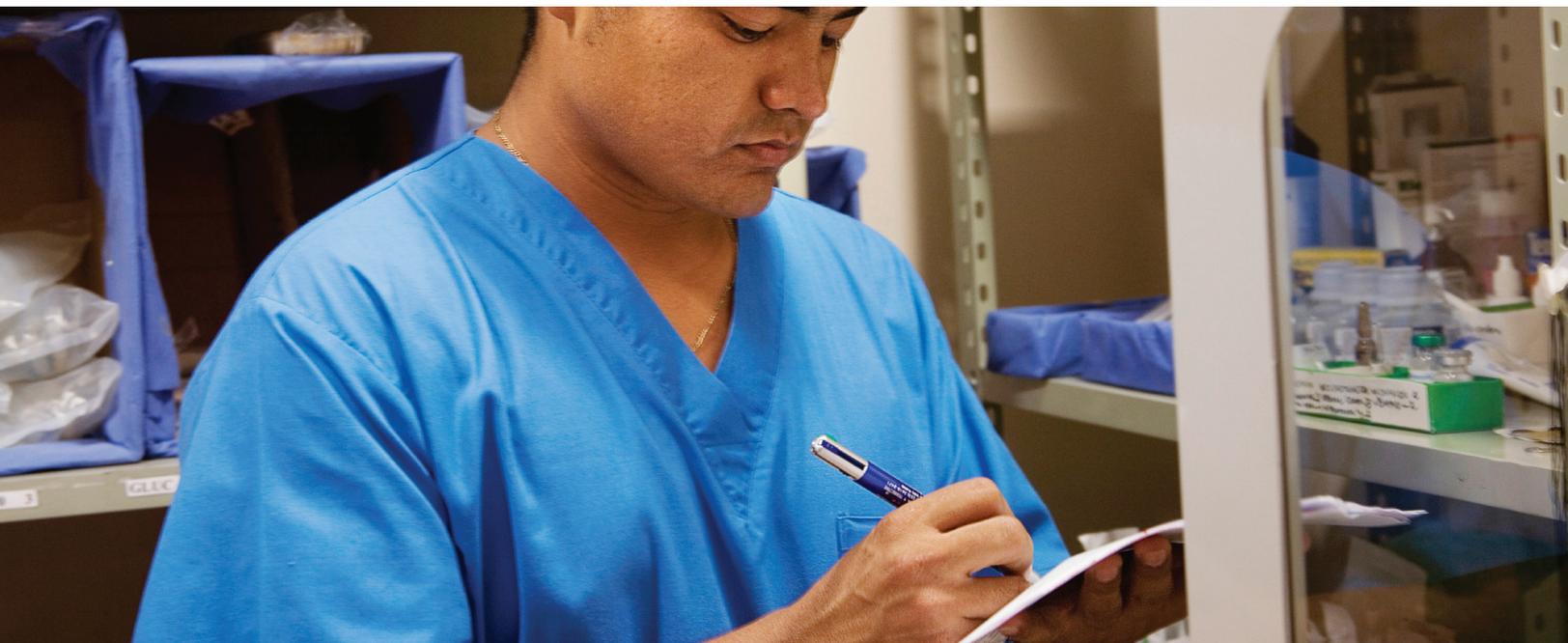
- Fewer workplace injuries and so fewer insurance and workers' comp claims;
- Improved productivity;
- Reduced absenteeism;
- Reduced turnover; and
- Improved attitudes and higher staff morale.

The University of Toronto report also provides evidence of how a wellness program will generate a positive ROI. The report discusses a selection of US workplace health promotion initiatives that had a positive ROI of up to **\$8.81** for each dollar invested in the programs. And the same is true for Canadian programs.

Examples:

- At BC Hydro, an internal cost benefit analysis of its 10-year wellness program showed that the program returned a savings of **\$3** for every dollar spent; and
- A review of the results of Canada Life Assurance Co.'s wellness program found that, over a decade, each dollar spent on health promotion reaped a reward of close to \$7.

INSIDER SOURCE: The Health Communication Unit at the Centre for Health Promotion, University of Toronto



Going Beyond Mere EHS Compliance Can Yield Financial Benefits

Cutting edge environmental health and safety (EHS) management goes beyond mere compliance with OHS and environmental laws to embrace more onerous voluntary standards, such as those from ISO and CSA, and independent initiatives. A case study on Johnson & Johnson's award-winning efforts shows that such EHS programs provide the kind of positive ROI that improves a company's financial performance.

Johnson & Johnson's Approach

Johnson & Johnson is the parent company of about 200 subsidiaries that manufacture healthcare products for the consumer,

pharmaceutical, medical devices and diagnostics markets in 57 countries. Its Technical Resources & Compliance Group (TRCG) provides EHS leadership, support and consulting services to all subsidiaries. In 2005, due largely to TRCG's efforts, Johnson & Johnson won the Robert W. Campbell Award from the National Safety Council for business excellence through safety, health and environmental management.

The company has a "Credo" that embodies three themes:

- **Healthy People**—Valuing all workers while promoting healthy lifestyles and safe work practices;
- **Healthy Planet**—Conserving natural resources, respecting ecosystems and reducing its environmental footprint; and
- **Healthy Futures**—Improving healthcare and supporting the well-being of people and communities.

The first two themes are primarily the responsibility of the TRCG, which uses a "beyond compliance" approach that emphasizes not just meeting regulatory requirements but also doing more. For example, under its Climate Friendly Energy Policy, Johnson & Johnson voluntarily committed itself to reducing carbon dioxide

emissions by 4% by 2005 and 7% by 2010 (using 1990 as a baseline). In addition, by the end of 2004, 97% of its facilities were certified under ISO 14001.

The beyond compliance approach has paid off financially for the company in several ways:

Wellness program leads to \$9 to \$10 million in annual savings. In 2003, the company launched a comprehensive wellness program that set aggressive targets for improving workers' overall health. By June 2004, the targets for reduction of smoking, high blood pressure and cholesterol were all exceeded. Nearly 20,000 people participated in the program, which produced savings of \$225 per employee per year (\$9 to \$10 million) primarily from reduced use of medical services and lower administrative expenses.

Ergonomics program saves \$50,000 a year. A subsidiary in Mexico made changes to a manual packaging line to address ergonomics risks. As a result, it:

- Cut the risk of musculoskeletal injury by 48%;
- Increased production by 20%; and
- Saved \$50,000 in costs per year.

SAFE Fleet program reduces vehicular accidents by 40%.

The company's SAFE Fleet initiative was designed to reduce traffic accidents by sales associates. As part of the program, regional sales managers include safe driving objectives in their performance reviews of sales associates. And district sales managers ride along with sales associates at least twice a year to evaluate their driving performance. As a result, the number of accidents per million miles driven over a 10-year period was reduced by 40%, which is particularly impressive in light of the fact that the number of fleet cars increased by 139% during that same period.

The benefits Johnson & Johnson has gained from its beyond compliance approach aren't limited to the safety arena. For example, a subsidiary's use of a "Design for the Environment" tool that evaluates processes based on environmental factors, such as water usage, energy consumption, hazardous materials requirements and overall efficiency, cut raw material consumption and waste generation in half—representing **\$2 million** in annual cost savings. And a subsidiary based in Brazil developed an innovative program for recycling industrial waste that:

- Increased the amount of waste recycled from 42% to 73%;
- Reduced the amount sent

to landfills from 57% to 20%; and

- Saved the facility **\$1.1 million** in raw material and waste disposal costs—in one year alone.

PRACTICAL POINTER:

Johnson & Johnson recognizes the efforts of workers who contribute to EHS initiatives. For example, as of 2004, more than 20 EHS professionals were awarded various certifications for projects that generated over **\$2 million** in savings or cost avoidance for Johnson & Johnson.

BOTTOM LINE

One of the reasons for the success of Johnson & Johnson's EHS initiatives is that the "beyond compliance" philosophy is what drives senior management. In fact, the company adopted this approach as a "management imperative" for all aspects of its business. Senior management not only financially supports EHS efforts but also is actively involved in communicating the EHS message and monitoring the progress of EHS projects.

INSIDERSOURCE: [J&J Safety, Health and Environmental Goes "Beyond Compliance" to Create a Competitive Advantage](#), Robert W. Campbell Award Winner, National Safety Council, 2005



Selling Management on ISO 14001 Certification

Many companies have implemented fully developed environmental management systems (EMSs). And more and more companies are having their EMSs certified as compliant with ISO 14001, a standard for EMSs developed by the International Organization for Standardization. A study measuring the impact of ISO certification on a US aluminum plant can help you make a compelling business case for certification.

ISO 14001 Certification

ISO 14001 certification demonstrates that a company has an acceptable EMS. To earn certification, a company must take steps

to implement a new EMS or adapt an existing one to meet the standard's requirements. ISO 14001 is based on a simple "plan-do-check" framework and has five major components:

1. The development and adoption of an environmental policy to which senior management is committed;
2. A planning process that identifies all of the environmental aspects of a facility's operations, legal and other requirements, and establishes a set of clearly defined objectives and targets for environmental improvement as well as environmental management programs to achieve those objectives and targets;
3. A system of implementation and operation that includes a clear structure of responsibility for environmental management; programs for training, awareness and competence among all employees of the facility; internal and external communication of the EMS; a system of environmental management documentation; a documentation control system; procedures for operational controls of environmental impacts; and emergency

- preparedness and response;
4. Creation of a system of checking that includes monitoring and measurement, reporting of non-compliance, taking corrective and preventive action, recordkeeping with regard to environmental management and EMS audits; and
 5. A management review process through which senior management reassesses the suitability, effectiveness and adequacy of the EMS at appropriate intervals to assure continuous improvement.

Some companies have informally adopted the ISO 14001 principles without getting formal certification. Others have sought official certification of their EMS. Although much has been written about the benefits of ISO certification, few studies have documented the actual benefits companies realize from certification. That's where the Alumax study comes in handy.

The Alumax Study

Researchers did an in-depth case study of the Alumax aluminum reduction plant in Mt. Holly, South Carolina, to analyze the impact of ISO 14001 certification. Before certification, the Alumax plant already had an extensive EMS and had never paid a fine for any environmental violations. Its quality management program had been registered under ISO 9002. Management saw ISO

14001 certification as an extension of its ISO 9002 registration. They also saw it as a way to improve the plant's overall operations and publicly demonstrate its commitment to protecting the environment.

So management created a team led by the company's environmental manager and that included representatives from numerous departments, including warehouse, lab facilities, engineering and administrative services. This team shepherded the plant through the certification process, which took approximately a year and a half. It earned ISO 14001 certification in Nov. 1996.

In 1999, the researchers began their study. They visited the plant and gathered information from 10 members of the certification team as well as five managers through email and personal interviews. Among other tools, the researchers gave participants statements about the impact of ISO 14001 certification on the plant and asked them to rate the importance of those statements on a five-point scale (with 1=relatively unimportant and 5=extremely important).

The Study's Results

Based on the data the researchers gathered, they identified four key areas that ISO 14001 certification impacted:

Worker awareness. One of the strongest impacts was behavioural. After certification, everyone in

the plant was more aware of environmental aspects, regulations and impact—not only at work, but also at home and in the community. For example, workers offered more ideas for materials recycling at the plant and increased their commitment to recycling at home. Workers began using colour-coded or marked containers for readily recyclable items, such as plastic bottles, cans, cardboard, batteries and used motor oil. Increased awareness also led to many workers volunteering for the plant's "Adopt a Highway" program, in which volunteers pick up trash along a section of highway near the plant.

Operational efficiency. ISO certification also increased the plant's efficiency by substantially increasing recycling and reducing waste. All departments increased their recycling efforts. After certification, the plant's annual trash generation dropped by almost half by 1998. The amount of waste it sent to landfills was reduced from 7,608 tons in 1995 to 4,960 tons in 1998. As a result, its waste cost of production per ton of aluminum dropped from \$8.33 in 1995 to \$6.50 in 1998.

Operation efficiency was also improved in other ways. Departments started looking for new uses for materials that had previously been considered waste. For example, workers began chipping wood scrap for use as fuel outside of the plant. The maintenance department bought a purifier

to expand the useful life of tube oil and hydraulic fluids. And managers worked with workers to reduce the number of chemicals in the lab's inventory by 47% by 1999.

Managerial awareness.

The process of refining the plant's EMS for certification uncovered weaknesses and generated procedural improvements in existing practices. It made management more aware of the environmental impact of every aspect of the plant's operations. For example, the certified EMS required more and better recordkeeping, and forced managers to look at and list *every* item that went into the production process and consider the final disposition of these items. It also required them to set specific and measurable goals for improving the plant's environmental performance and implement appropriate practices to attain them. ISO 14001 was also empowering because it gave senior management licence to demand better work practices and waste reduction efforts from everyone in the plant.

Supervisors were also positively affected by certification. They felt strong pressure to ensure compliance with the EMS because obtaining and maintaining certification was seen as a plant-wide and company-wide priority.

Operational effectiveness.

Lastly, ISO 14001 certification improved

the plant's effectiveness by helping it achieve its environmental goals. And this benefit shouldn't be understated. After all, the plant was already performing well environmentally before certification. So the fact that substantial improvements were still achieved by certification is impressive.

In short, the researchers concluded that the primary benefits to the Alumax plant from ISO 14001 certification were in:

- Reinforcing and strengthening good environmental management practices;
- Reviewing and improving management practices and raising management awareness;
- Increasing operational effectiveness and efficiency; and
- Enhancing workers' awareness of the environmental impacts of their activities.

BOTTOM LINE

Obtaining ISO 14001 certification is voluntary. No environmental law requires your company's EMS to be certified by ISO or any other standard association. However, having a certified EMS is likely to help ensure the company remains compliant with the environmental laws and prevent environmental violations and incidents. In addition, if a violation occurs anyway, ISO certification may help convince a court that the company exercised

all reasonable efforts to prevent the violation and comply with the law and thus prove that it showed due diligence.

You'd think that these arguments would be enough to convince senior management of the benefits of investing in ISO 14001 certification. But senior managers tend to be bottom line people. The Alumax study shows that earning ISO 14001 certification has real financial benefits and *does* deliver a return on the company's investment in time and money. No, certification isn't a panacea for all of a company's possible environmental problems. Nor does it *guarantee* improved environmental performance or compliance with environmental laws. But the study proves that certification isn't just a meaningless label or PR ploy. Companies that pursue ISO 14001 certification *will* likely see attitudinal, managerial and operational changes that ultimately benefit the company's bottom line.

INSIDER SOURCE:

"Panacea, Common Sense, or Just a Label? The Value of ISO 14001 Environmental Management Systems," Rondinelli and Vastag, *European Management Journal*, Oct. 2000.

Stimulation of Workers

Bonus

Praise

Promotion

Salary



Proving the ROI of Safety Incentive Programs

In an ideal world, you wouldn't have to keep reminding your workers to follow company safety policies and procedures. The desire to prevent injuries and illnesses—to themselves and co-workers—would be incentive enough to ensure safe behaviour and compliance with the rules. But in case you haven't noticed, we don't live in an ideal world. In our world, workers *don't* automatically engage in safe behaviour, even though it's in their own self-interest to do so. Thus, it's often necessary to coerce and coax workers to work safely and in accordance with the rules.

To coax workers, companies often offer incentives, such as prizes, vacation days or

cash, for safe behaviour. But do incentive programs really work? And how do you persuade senior management that spending money on an incentive program will pay off for the company?

The National Steel Case Study

National Steel is a large steel manufacturer with divisions throughout the US. The company was experiencing abnormally high incident frequency and severity rates and the related, increased costs were threatening its competitive position. The company's safety committee informed senior management that, over a two-year period, the extra costs due to workplace incidents incurred by just one division had

been around \$400,000 to \$500,000.

Understandably, the committee and management considered the situation unacceptable and resolved to do something about it. So management instructed the safety coordinator to meet with the managers and workers in the plants in question to identify the causes of the problem. The safety coordinator also worked with an HR team to analyze the costs and types of incidents the company was experiencing. The team's findings:

- Workers weren't focusing enough on safety hazards;
- Training wasn't the issue in the sense

that workers already knew and understood the company's safety guidelines and practices;

- A significant number of incidents and incident-related costs involved what were characterized as questionable injuries;
- Some type of monetary incentive would likely influence workers' behaviour; and
- Peer pressure also had the potential to help workers focus more on safety.

Based on these findings, the team concluded that a group-based safety incentive program might be effective. Under the program, each worker in the plant got a cash award of \$75 (after taxes) every time the entire plant went six months without "a medical treatment case"—that is, an injury that couldn't be treated by plant first aid and required a doctor's attention. When and if a medical treatment case occurred, the "clock" was reset and a new six-month period started. The team believed that it was important to encourage a team effort at each plant because the actions of one worker could impact the safety of another. And it felt that peer pressure was necessary to keep workers focused. So that's why the team opted for a program that rewarded workers based on the *group's* safety record rather than one that rewarded workers based on their individual safety records.



The Program's Results

After the incentive program had been in place for two years, the HR team analyzed two sets of costs and compared them to the costs the company had incurred in the two-year period before it implemented the program:

Incentive program's costs.

Because the workers were rewarded with \$75 after taxes, it actually cost the company approximately \$97.50 per worker in rewards for each six-month period without a medical treatment case. Over the two years, the company made \$138,743 in incentive payments to workers. The program had minimal administrative costs because the data used to analyze safety performance, such as number of medical treatment cases, lost-time incidents and lost-time days, was already being collected

for other purposes. No additional staff was needed nor was it necessary to pay existing staff overtime to administer the program. But a conservative figure of \$1,600 per year for administrative costs was used to calculate the program's total costs. The team also included a needs assessment cost of \$2,400 to cover the team's time and travel expenses incurred while researching and setting up the program.

Total average annual cost of the incentive program: \$72,172.

Incident costs. In the two years before the incentive program was implemented, the plants' total incident costs were \$1,046,488. But in the two years *after* the program was in place, incident frequency was reduced by 68%, while

disabling incident frequency was reduced by 74%. Total incident costs dropped to \$37,401—an average total decrease of \$504,543 per year! And even when the team factored in the incentive program's costs, the company still saved money.

Total average annual savings: \$432,372.

These impressive results demonstrated that the incentive program had a positive impact on the business. It resulted in a new safety awareness for workers and a safer workplace with fewer incidents and even fewer disabling incidents. And clearly the benefits the incentive program provided outweighed the costs of implementing it. In fact, the team concluded that the incentive program's ROI was 379%.

What it Means

Safety coordinators can learn several lessons from the National Steel case study:

- Under the right circumstances, an incentive program *can* improve a company's safety culture, foster greater safety awareness among workers and create a safer workplace;
- An incentive program doesn't need to cost a lot to be effective. After all,

National Steel only paid workers \$75 for every six months without a medical treatment case. So it's not like you have to offer workers cars or expensive vacations to motivate them; and

- The benefits of an incentive program can far outweigh its costs.

How should you apply these lessons? First, you should review your workers' safety compliance track record and consider implementing an incentive program if their compliance is lacking. But note that incentive programs only work in certain circumstances. For example, if workers aren't complying with your safety measures because they don't understand them or even know they exist, your problem is training, not lack of motivation.

And an incentive program doesn't take the place of having adequate safety measures in place. So you'll need to determine what kinds of incidents occur most and why. If lack of motivation or focus by workers seems to be the issue, like it was at National Steel, then an incentive program might be just the ticket. Make sure that the incentive program you choose for your workers focuses on the types of behaviour you want to change or improve.

BOTTOM LINE:

A safety incentive program can be an inexpensive yet effective way to improve safety performance at your workplace.

INSIDERSOURCE:

"Safety Incentive Program: National Steel," by Ron D. Stone; Canadian Society for Training and Development

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