

# Lessons and Best Practices from the CHAA



## 2007 Corporate Health Achievement Award



Healthy Workers

Healthy Environments

Healthy Organizations

Co-Sponsored by:



GlaxoSmithKline



## *The Corporate Health Achievement Award*

The American College of Occupational and Environmental Medicine (ACOEM) established the Corporate Health Achievement Award (CHAA) in 1996 to recognize organizations that have demonstrated outstanding achievement in employee health, safety, environment and management. The purpose of the CHAA is:

- to foster awareness of quality occupational and environmental health programs
- to identify model programs and outstanding practices with measurable results, and
  - to encourage organizational self assessment and continuous improvement.

The award is open to any organization in North America with more than 500 employees, including manufacturing, service, government, for-profit, and non-profit organizations. Participating organizations submit a comprehensive application about their program and undergo a rigorous review by an expert panel to assess four key categories: Healthy People, Healthy Environment, Healthy Company, and Management and Leadership. Organizations have the opportunity to receive feedback on strengths and areas for improvement and gain recognition for best practices and model programs.

However, the CHAA does more than recognize the accomplishments of organizations. It tells the North American business community that comprehensive occupational health programs make good business sense. The CHAA reinforces the importance of measurable results and continuous improvement. It provides a forum in which participating organizations can exchange ideas and best practices on creating healthy and productive working environments. Finally, it helps foster an atmosphere that can attract and retain the talented people who help our organizations achieve even greater successes.



## 2007 CHAA Recipient

The American College of Occupational and Environmental Medicine and GlaxoSmithKline are proud to announce this year's award winner:

# CATERPILLAR INC.

Caterpillar's products and services make progress possible by raising standards of living in developing countries, providing resources during natural disasters and supporting efforts to sustain clean air and water. But their most important environmental initiatives happen every day in their facilities, where more than 90,000 men and women depend on their commitment to occupational health and safety.

In the manufacturing industry, environmental health and safety are not an afterthought. At Caterpillar, it is their top priority. They have thousands of people throughout the organization whose primary job responsibilities are to ensure that their working conditions are safe. Caterpillar is currently above average in their safety results when compared to their manufacturing peers, and their progress illustrates the commitment that their environmental and medical professionals have put into action through innovative programs and worldwide educational initiatives. They have set bold targets and challenged each of their business units to meet aggressive goals for the future. Caterpillar's objective is for every employee to go home from work as safe and healthy as when he or she arrived.

### The Company

Caterpillar has grown to be the largest maker of construction and mining equipment, diesel and natural gas engines, and industrial gas turbines in the world. Their products, services and technologies fall into three principal lines of business: Machinery, Engines and Financial Products. As a global, diverse technology leader, Caterpillar is committed to excellence in all that they do. Today they have more than ninety thousand employees in nearly three hundred operations in forty countries. They have a large production workforce, with many employees represented by various unions. They also employ thousands of individuals in office environments around the world.

Occupational and environmental health professionals are an integral part of the organization and work closely with management to develop and implement strategies to improve both the health and safety of employees. Personnel are selected based on professional training and experience. Caterpillar health professionals include: board certified occupational physicians, certified occupational health nurses, mental health professionals, dieticians, safety professionals, industrial hygienists, an ergonomist and environmental professionals.

### Leadership and Management

The executive office of Caterpillar has directed that resources be provided to establish and make clear its endorsement of the Health and Safety Management System. Company goals, policies and procedures covering all Caterpillar and subsidiary employees in all locations are established at the corporate level and are communicated to all facilities worldwide.

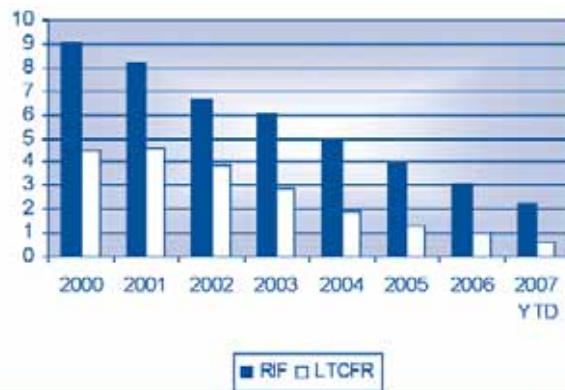
The Chairman of Caterpillar has stated that their people are a critical success factor in achieving the vision and goals of the company. The following quote illustrates his commitment to leadership:

***"Safety is the first thing we're going to worry about. Your health and well-being come first - period. None of the other goals matter if, in the course of achieving them, people are injured".***

—Jim Owens, CEO, November 30, 2005

Safety is recognized as a part of their value and culture. Caterpillar's recordable injury frequency has declined by 64% since 2000, well on the way to achieving the goal of 90% reduction in injuries by 2010.

### Recordable Injury Frequency and Lost Time Case Frequency Ratio



Health and Safety reports and trends are generated using standard metrics to ensure consistency among facilities. The review of aggregate data from their systems helps establish their priorities, highlights successful programs and opportunities to improve existing practices.

All employees are responsible for understanding and following health and safety related procedures that apply to their job duties. Required training is provided to employees, and employees are expected to report violations of health and safety laws or Caterpillar policies. Daily safety communication is a component of their corporate safety strategy (Vision Zero). Involving multiple departments in safety planning is a corporate health and safety standard.



Caterpillar's focus on safety and medical management has resulted in decreasing workers compensation costs for temporary total disability, permanent partial disability and health care providers. For the sixth consecutive year, Caterpillar INC. has been selected as a member of the Dow Jones Sustainability World Index (DJSI World). DJSI uses a best-in-class approach designed to identify best practices across the economic, social and environmental dimensions of corporate sustainability; this year Caterpillar was named 'industry leader' by DJSI.

## Healthy Workers

The health of Caterpillar's workforce is assessed through a variety of programs, each of which is outlined in their Corporate Medical Policy and Procedure Manual. Medical evaluations are performed on a pre-placement basis at the time of hire, for acute work related illness or injury, upon return to work from disability, for determination of fitness for duty, for medical surveillance and for general health screening.

Caterpillar tracks injury and illness rates and designs programs to respond to changes in these rates. At the facility level, injury trends are reviewed to determine if program modifications are needed to address injury or illness. All large production facilities have organized emergency response teams who are linked to around the clock central communication systems. More advanced medical care is provided either by in-plant medical teams or through local emergency departments. For less severe injuries and illness they provide in-plant medical facilities at their large production facilities.

Where an occupational injury or illness interferes with an employee's ability to perform his or her regular job duties, the physicians will assign medical restrictions. Each plant has a local team with a process to facilitate the accommodation of restrictions through placement in transitional jobs. These transitional jobs may be traditional labor jobs, which are simply less physically demanding, or they may be non-traditional placements in an office environment. The teams, which have formed in large part over the past two to three years, have significantly reduced their Lost Time Case Frequency Ratio (LTCFR). The success of these teams stems from the commitment of the top management and the participation of medical, safety, labor relations, and operations on the teams.

Caterpillar's safety results show strong steady improvement since 2000 with 87% reduction (through February 2007) in lost days per 100 employees, a 75% decline in lost-time cases per 100 employees, and a 75% reduction in the recordable injury frequency through February 2007. Targets are set for continuing safety improvements as one of their strategic goals in their Vision 2020 Corporate Strategy.

Caterpillar's health screening examination program is based on the US Preventive Services Task Force recommendations regarding clinical preventive services. Physicals are offered every five years beginning at age 35, and every year for those aged 50 or older. Results of blood testing, urinalysis, fecal occult blood and the questionnaire are reviewed with the employee, and a general physical exam is completed with emphasis on the employee's specific risk factors. Free cancer screening includes mammography, pap smears, prostate examination/PSA, and colonoscopy. Employees are counseled on any findings from their examination and on methods to reduce or eliminate risk factors. Physicals are provided by Caterpillar medical personnel in their large facilities, and by private physicians for employees in smaller facilities. Employees may be referred to their personal physician if further care or evaluation is needed.

Over 70% of employees choose to participate in the program – the most common reason for not participating is that the employee is currently seeing or prefers to see their personal physician. Employees are encouraged to share their data from this program with Caterpillar's formal health promotion program in order to enable each participating employee to receive targeted messages based on their risk factors.

## Healthy Environment

### *Workplace Health Hazard Evaluations, Inspection and Abatement*

Each Caterpillar Inc. facility is expected to develop, maintain and implement written policies and procedures, which meet all of the requirements spelled out in their Environmental, Health, and Safety Standards, as well as being fully compliant with local, state and federal (OSHA/EPA) requirements.

Their strategy for assessing and managing occupational exposures, (to chemical, physical and biological agents) is based on the Similar Exposure Group (SEG) methodology. This seven step process provides a company wide methodology that ensures proper risk assessment through use of proper control measures, consistent and high quality data collection and usage, and provides corporate and facility level performance metrics, while supporting data privacy issues. The SEG process requires continuous self-inspection of work processes for occupational health risk.

Safety is integrated in Caterpillar business processes such as Caterpillar Production Systems, Lean, Performance Management, and Purchasing to ensure that safety is considered in everything they do. Root cause analysis is an essential tool of injury/illness/near-miss investigations, and is a required element of Vision Zero, a standardized safety process



mandated by the Executive Office. Each facility is given freedom to determine which root cause analysis methods work best for their particular plant culture. New equipment, processes, and chemicals are introduced into a workplace only after an environmental health and safety (EH&S) specific pre-approval process, which assesses operating noise level limits, hazardous materials, ergonomic guidelines, enclosures, exhaust, ventilation systems etc. is completed. The “outcome measures” are reviewed at various levels: departmental, facility, business unit, division, and corporate level. In most cases, compliance audits at each of these levels take place on a regular basis and basic compliance is a part of the shop floor supervisor’s daily responsibilities.

### *Education Regarding Worksite Hazards*

Caterpillar’s HAZCOM programs can be found on the corporate intranet. Each facility is required to have a written program meeting both OSHA and Caterpillar requirements. Training on hazardous materials is achieved using a combination of at least 3 elements: the HM100 system (A Caterpillar developed mainframe training system), eMSDS (Caterpillar’s internal MSDS database and Caterpillar e-learning on hazardous materials, which is part of the Cat University “Safety” curriculum. Training is required on an annual basis and the training is recorded automatically by the HM100 system. The system also has the capability of providing reports which detail when each employee is due for refresher training or past due on training.

The program contains clean and accurate data on the health hazards posed by products as well as their requirements for limiting exposure through controls and/or PPE. The SEG program previously mentioned also documents all specific hazardous agents, whether they are chemical, physical or biological as well as the controls in the place to limit or eliminate exposure.

Global teleconferences are scheduled monthly with health, safety, and ergonomic professionals across the enterprise on industrial and office issues impacting the organization. Facility EH&S staff, along with medical staff provide recommendations on workspace design, job rotation, length of shift and other measure to help control or eliminate employee risk through engineering and administrative practices.

Corporate and facility EH&S staff are actively involved with professional organizations and are continuously updated on any regulatory changes which may impact Caterpillar’s programs. This information is communicated accurately and rapidly throughout the enterprise via various communications vehicles.

In cases where production requirements are in conflict with health and safety requirements, short-term corrective actions are implemented until long-term solutions can be implemented. In cases where this is not possible, production stops until the work can be done in a safe manner.

Caterpillar has corporate standards for PPE, Noise and Hearing Conservation and Respiratory protection. These standards require that hazard assessments be completed to identify where, when, and what types of PPE are required by their employees. Caterpillar facilities regularly conduct “PPE audits” as components of their EH&S programs. The results of these audits are routinely reported to facility management, line supervisors, and hourly employees. The audits are used as tools to help with communication and compliance.

In all cases, Caterpillar uses the basic OSHA “hierarchy of controls” plan for reducing or eliminating employee risk. The Caterpillar standard requires that all PPE meet industry standards for product quality and level of protection, such as ANSI standards, NIOSH recommendations and OSHA requirements.

### *Environmental Protection Programs*

Caterpillar has established the Environmental Excellence (E2) Award Program to promote pollution prevention awareness and environmental excellence as a business strategy. This program rewards Caterpillar facilities for outstanding and innovative performance for those projects that integrate the goals of business excellence with goals of environmental excellence including pollution prevention.

Caterpillar provides and maintains the EHS software package called EPOCH for facilities to use to track hazardous materials that are purchased by the facility. Each facility matches their chemical inventory against any regulatory list such as the Toxic Release Inventory, Extremely Hazardous Substances, and Chemical Inventory Report. This process helps in determining compliance on daily or monthly basis.

The Caterpillar Sustainability Report is published annually to help Caterpillar employees and other stakeholders understand the business case for, and the implications of, Caterpillar’s pursuit of sustainable development. It defines what sustainable development means for their business. GHG Intensity, Percent (%) recycled, waste, recycled waste and hazardous waste (pounds generated) per millions of dollars of normalized revenue, and water (gallons used) per million dollars of normalized revenue are published inside Caterpillar’s “Sustainability Report”.





Caterpillar has established an Environmental Policy that is implemented through the Caterpillar Environmental Protection Program (EPP). The EPP contains the written environmental policy, the Environmental Management System (EMS) and associated environmental standards. The EPP provides policy, procedure, and compliance guidelines for Caterpillar's worldwide operations in alignment with ISO 14001 standards. Each subsidiary and Caterpillar Facility must implement its own documented EMS that is consistent with Caterpillar's EPP. The EPP provides guidance to all facilities to help manage and reduce future risk throughout their respective operations.

Caterpillar utilizes renewable resources such as hydroelectric or wind power in several of its facilities around the world. Caterpillar subsidiary Solar® has developed several gas turbines that can operate on renewable fuels (landfill gas and digester gas). Additionally, Solar® is investing in combustion technology to enable its gas turbines to run on waste gases from oil production, coke oven gas used in steel production, and coal-derived methane often present in underground mines. Caterpillar products are designed and manufactured to be rebuilt. Thus, to ensure that they develop components that can be economically reused at the end of their useful life, "design for re-manufacturability" is part of Caterpillar's new product introduction (NPI) process.

## Health Promotion

The health promotion program is comprehensive and innovative and has the support of the CEO. The goal of the program is to provide Caterpillar employees, spouses and retirees with the information they need to make wise lifestyle and healthcare decisions. They focus on identifying modifiable health risks and providing lifestyle recommendations that decrease risk. The program extensively utilizes the transtheoretical model of behavioral change ("readiness to change").

Programs are available to help employees manage chronic conditions such as diabetes and depression. The employee may be referred to the health promotion team or to EAP as part of their ongoing care. Caterpillar also implemented plans to improve the quality of care provided to their employees by inviting community physicians to seminars with nationally recognized speakers, to monthly journal clubs, to medical presentation and facility tours, and by sharing recent articles in the medical literature.

## Health Benefits Management

Being self-insured and having full access to individual medical and drug claims data along with self-reported medical information, Caterpillar has continually led successful initiatives to reduce and control their healthcare costs. The goal is to **limit medical cost increases to no more than the CPI rate** while maintaining or improving the quality of medical services purchased.

Caterpillar's medical strategy is based on the following principles:

- People are their most important asset
- Long-term benefits accrue by focusing on the quality of medical care delivered
- Refusal to sacrifice quality for short-term cost savings
- Belief and demonstration that the company can successfully influence both the supply and demand for medical care including the maintenance of health, disease prevention, acute and chronic disease management, and end-of-life care.

## Disease Management

Caterpillar follows various trends including but not limited to, the costs and use of medications, adherence to national guidelines for selected medical conditions, utilization of EAP, and lost days due to the occupational and non-occupational conditions.

Caterpillar is developing a second major research program using artificial intelligence software to more robustly predict those at risk for future disease, combing the extensive Caterpillar data with national databases to risk stratify their population according to their risk for diabetes, coronary artery disease, stroke and cancer. This will lead to a better understanding of which health promotion techniques to apply to different populations. Their current project aims to better understand how to maximize the potential for affecting behavior change, and thereby improve the health and productivity of the workforce.

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## *Corporate Health Achievement Award Recipients*

### 2007 Recipients

**Caterpillar, Inc.  
ALCOA, Model Program Award**

### 2006 Recipient

**Olin Corporation, Model Program Award**

### 2005 Recipients

**DiamlerChrysler Corporation  
Quad/Graphics**

### 2004 Recipients

**Cianbro**

### 2003 Recipients

**BAE SYSTEMS  
Marathon Oil Corporation  
Union Pacific Railroad**

### 2002 Recipients

**Bristol-Meyers Squibb Company  
Eli Lilly and Company  
International Business Machines (IBM)  
Kerr-McGee Corporation  
Vanderbilt University**

### 2001 Recipient

**The National Security Agency/Central Security Service (NSA/CSS)**

### 2000 Recipients

**Dow Chemical Company  
GE Power Systems  
Sherman Health Systems**

### 1999 Recipients

**Allied Signal Inc.  
City of Indianapolis and Marion County Sheriff's Department  
Baltimore Gas and Electric Company  
GlaxoWellcome, Inc.**

### 1998 Recipients

**International Business Machines (IBM)  
The Boeing Company  
Johnson & Johnson  
First Chicago NBD**

