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Unleashing the Power of Cummins for World Class HSE

Submitted by:
Cummins Inc.

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Unleashing the Power of Cummins for World Class HSE



Executive Summary:

Cummins Inc. (NYSE: CMI), a global power leader, is a corporation of complementary business units that design, manufacture, distribute and service diesel and natural gas engines and related technologies, including fuel systems, controls, air handling, filtration, emission solutions and electrical power generation systems. Headquartered in Columbus, Indiana, (USA) Cummins currently employs 48,000 people worldwide and serves customers in 190 countries and territories through a network of 600 company-owned and independent distributor locations and approximately 6,500 dealer locations.

Cummins has had strong financial performance in recent years, earning \$1.48 billion on sales of \$17.3 billion in 2013. Press releases can be found on the Web at www.cummins.com. Follow Cummins on Twitter at @Cummins and on YouTube at CumminsInc.

While Cummins has tripled in size over the last decade, the Company has also been able to significantly reduce its environmental footprint and improve the health and safety of its employees, much of which can be attributed to the company-wide focus to deliver on its mission, vision and values.

At Cummins, Health, Safety and Environment (HSE) is explicitly stated in the Company's Vision of "Making people's lives better by unleashing the power of Cummins;" in the Mission where Cummins demands that "everything we do leads to a cleaner, healthier, (and) safer environment;" and in the Cummins Code of Business Conduct, where the Company states, "As our global reach grows, so does our responsibility to ensure our actions around the world reflect a commitment to the environment and workplace safety."

Simply put, health, safety and the environment are ingrained in the company's DNA and how it approaches business, employees and their families and the communities where it operates.

Cummins leadership provides clear and visible support to meet the company's targets and demands that there is a sustainable system in place that promotes continual improvement and one where there is accountability at all levels in the organization.

At Cummins, HSE is driven and measured like any other area of our business. Ultimately, it goes beyond just doing the right thing; it is about strengthening our existing culture where employees are owners and make a personal commitment to HSE for themselves and their colleagues, regardless of their position within the company or where they work. On the job or off, Cummins expects its employees to be actively engaged in HSE. No matter how urgent or important the task, Cummins emphasizes that HSE is the first consideration.

Sound leadership and a strong HSE culture are necessary for successfully overcoming primary business challenges that include globalization, rapid growth (change management) and product life-cycle.

A key tool in Cummins' ability to achieve strong HSE performance is its robust integrated HSE Management System (HSEMS). Coupled with the organizational structure and the urgency placed on HSE by senior leaders, HSEMS assists Cummins in driving organizational alignment, strategic deployment, and continual improvement to achieve remarkable results.

The HSEMS is integrated in the business processes and resonates across borders, cultures and languages. This alignment allows the company to effectively deploy initiatives, communicate important information, manage change, assess and prioritize risks, motivate and engage employees/stakeholders and build workforce competency.

To complement the HSEMS, Cummins has made a strong commitment to developing a consistent system of aggressive measures, targets and goals across its global operations, and to holding itself accountable to the objectives set for the organization.

To accurately and precisely measure and monitor HSE performance on a global scale, Cummins uses numerous leading, lagging and predictive indicators. The company uses this information to develop a data-driven strategy to influence change and reduce its impact on the environment, while supporting its reputation and profitability.

In recent years, the company has enjoyed an outstanding health and safety record. In 2013, Cummins recorded a six percent improvement in Incidence Rate, an eight percent improvement in Severity Lost Work Day Rate, and a 16 percent improvement in Major Injuries Dangerous Occurrences (MIDO) Rate. Further MIDO analysis shows a 15 percent improvement in Major Injuries and a 58 percent improvement in Dangerous Occurrences.

2013 results were merely the continuation of a 10 year trend where incidents have dropped significantly. For example, Cummins Severity Case Rate Indicator has fallen from just over 0.96 in 2003 to 0.20 in 2013.

In its continual efforts to shrink the company's environmental footprint, Cummins has established a new action committee; the committee has developed a comprehensive plan that sets specific and aggressive goals for reducing energy and water usage and greenhouse gas emissions. The plan includes objectives for increasing the company's recycling rate and for reaching "Zero Disposal" status at 30 sites by 2020, where 100 percent of waste will be recycled in a useful manner.

Cummins' customers require reduced emissions and improved fuel economy. The company's business strategy includes offering the most reliable products to meet those demands. Cummins invests more than \$500 million annually to develop advanced technology for minimizing emissions while providing the power its customers require. Today, because of these historical investments, on-highway diesel engines in the U.S. emit 90 percent less particulate matter, or PM, and oxides of nitrogen, or NOx, compared to just over a decade ago. The company works with governments around the world to establish responsible environmental regulations.

Additionally, Cummins helped frame environmental regulations in the U.S. and was the first company to offer an engine certified by the Environmental Protection Agency to meet the regulations that went into effect in 2014. Cummins is now working with regulators in Brazil, China and India to establish responsible regulations for air pollutants.

By integrating HSE and business management systems, Cummins ensures alignment of organizational goals that lead to clarity and the ability to consistently deliver on common business objectives.

Part of Cummins' path forward is to work with peer companies with a similar HSE commitment to improve its processes and outcomes, while helping others begin their respective journeys. Cummins is committed to making every effort to ensure that everything it does is performed with concern for the welfare of its employees, contractors, visitors and the communities in which it operates.

Narrative Application:

Section I: Business Profile

Business description and organization chart: Cummins Inc. (NYSE: CMI), a global power leader, is a corporation of complementary business units that design, manufacture, distribute and service diesel and natural gas engines and related technologies, including fuel systems, controls, air handling, filtration, emission solutions and electrical power generation systems.

Headquartered in Columbus, Indiana, (USA) Cummins currently employs 48,000 people worldwide and serves customers in 190 countries and territories through a network of 600 company-owned and independent distributor locations and approximately 6,500 dealer locations.

The company is fortunate to have a solid foundation built over more than 90 years, beginning with financier W.G. Irwin and his chauffeur, Clessie Cummins. Later, while leading the National Council of Churches, visionary CEO J. Irwin Miller, who co-sponsored Martin Luther King, Jr.'s 1963 March on Washington, brought a global vision to the company and the conviction that Cummins has an obligation to all of its stakeholders: employees, shareholders, suppliers, regulators and people in the communities in which the company operates. Appendix A contains copies of some early marketing tools that demonstrate how HSE has always been an integral business process for Cummins.

The legacy of these leaders is still evident today in Cummins' commitment to product quality, customer service, the well-being of employees, community involvement, diversity, environmental stewardship and ethical behavior.

Cummins is perhaps best known for its diesel engines used in everything from pickup trucks to heavy-duty, on-highway tractor-trailers, boats and drilling equipment. The company has produced engines that run on natural gas for nearly 40 years, as well as engines that run on soy diesel and other alternative fuels to help its customers meet their power needs. The company also has a growing reputation for its power generation products, capable of powering everything from recreational vehicles to factories and data centers.

About half the company's 2013 revenues were generated by the sales of diesel and natural gas engines (ISIC D 343- Manufacture of parts and accessories for motor vehicles and their engines). Cummins distribution business (ISIC G 50 - Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel, sales of components; and ISIC D 343- Manufacture of parts and accessories for motor vehicles and their engines) and sales of power generation equipment (ISIC D 29 – Manufacture of machinery and equipment n.e.c.) each made up approximately one-third of Cummins remaining revenues.

Despite challenging global economic conditions, Cummins took quick actions to manage costs and recorded its second best year of financial performance in 2012. Cummins continued to enjoy strong financial performance in 2012, earning \$1.48 B on sales of \$17.3 B. Most importantly, the company helped meet its customers' needs in 2013 when employees in every business unit, area business organization and function helped deliver good financial performance for stakeholders and invest heavily in important profitable growth initiatives, and helped its customers succeed by launching products and executing key projects. Because of this work, Cummins is in a terrific position to emerge from the difficult conditions ahead of its competition and ready to grow and win in the markets where it operates.

Cummins also continued to distinguish itself with the following noteworthy business achievements in 2013:

- Named the 2013 "Newsmaker of the Year" from Diesel Progress North American magazine for introducing a broad range of on- and off-highway engines and power systems;

- Fitch Rating Services grades the company as “A” for Long-term Issuer Default and long-term debt ratings;
- For the sixth consecutive year, the company was named one of the world’s most ethical companies by The Ethisphere® Institute;
- Awarded a perfect score in the 2013 Corporate Equality Index by the Human Rights Campaign, as part of its “Best Places to Work” initiative;
- The first to receive certification from the Environmental Protection Agency (EPA), meeting both the 2013 regulations and the new greenhouse gas (GHG) and fuel-efficiency rules for 2014;
- Named to the Dow Jones Sustainability Index for the ninth consecutive year;
- Recognized by GreenBiz Group and Trucost as a “Natural Capital Decoupling Leader” within the Natural Capital Leaders Index (one of only 34 companies that increased revenue while decreasing natural capital impacts over the most recent five year period);
- Cummins Power Generation received EPA Tier 4 interim certification for the North American market three years ahead of the deadline;
- Named one of the top 25 supply chain companies by Gartner in 2013;
- Named one of the Top 50 Companies for Diversity by Diversity Inc., for the seventh consecutive year.

Continuing the award winning trend in 2014, Jamestown Engine Plant won the Applied Ergonomics Conference International Ergo Cup Competition for the “Ergonomics Program Improvement” category.

Cummins operates in a highly competitive business-to-business environment. Nine of the company’s top 10 customers make their own engines and related components. They buy from Cummins because the company’s products give them an advantage. To succeed in this environment, Cummins depends on the ingenuity of its employees. Their skill and dedication have helped the company safely produce the cleanest, most fuel efficient engines and power generation equipment in the world. As a growing number of countries adopt increasingly stringent emissions and GHG regulations, Cummins views its employees’ technical skills as a key competitive advantage. Therefore, a safe and healthy workforce is critical to Cummins’ sustainability and is the focus of its Health, Safety and Environment Management System (HSEMS), which has not only established best in class health and safety initiatives but has led industry-wide efforts to share best practices.

While every employee has a role in the company’s HSEMS, Appendix B depicts Cummins’ HSE organizational and functional leadership.

The information, processes and metrics described throughout this application reflect all of Cummins’ business globally, except where indicated.

HSE and business challenges: The following points are some of the key HSE and business challenges that Cummins faces:

- Globalization: Global reach is one of Cummins’ strategic strengths and provides the greatest opportunity for future growth. However, Cummins operates in approximately 190 countries and territories which presents a range of technical, business and cultural obstacles to overcome. More than 50 percent of Cummins employees live outside the United States, so all initiatives (including HSE) must resonate across borders, cultures and languages.

- **Change management:** The complex and global nature of the company's business presents a significant business and HSE challenge when it comes to change management. This is complicated by a broad customer base, wide geographical distribution, infrastructure growth, non-routine work and sometimes uncontrolled work environments (i.e., customer locations), particularly in emerging markets. For example, in 2013 Cummins announced plans to acquire 100 percent ownership of its joint venture North American distribution businesses over the next several years. With approximately 3.5 million engines in service in North America, and with Cummins making in-roads into new market segments, the Company sees strong advantages in taking greater ownership in its distribution network and driving consistent customer service across territories for a better customer experience. This is particularly important as Cummins' customers grow across geographies and require greater technical and business support from the company. Bringing fifteen independent businesses into Cummins is a major undertaking. To ensure a safe and smooth transition for employees, customers and other stakeholders, Cummins created a fully dedicated team to focus on the integration work; this integration will require careful coordination by the entire company to sustainably and safely meet growth demands, while maintaining business performance improvements.
- **Product Life-cycle:** Cummins faces many challenges in its pursuit of building the cleanest, most fuel efficient engines and related products in the world. Meeting increasingly stringent emissions regulations for the company's products in almost every part of the world is both a primary challenge as well as a key business opportunity. The company has long employed green practices such as its remanufacturing operations, which keep 50 million pounds of Cummins' product in use and out of landfills. Another example is the new Cummins Connect series of power generators that deploy technological advances so that a single base engine platform is used for twelve variations of standby generators (producing from 20 kilowatts to 60 kilowatts of power); this results in greater operational and product efficiency and sustainability.

Section II: Leadership

Organizational leadership: Leadership is a critical factor for success in any organization. At Cummins, this starts with the Board of Directors and the "Safety, Environment and Technology Committee," which receives regular reports on HSE performance from Cummins Leadership. The 2014 Cummins Leadership Team (CLT) Goal Tree, which includes an initiative to "Become World Class in Health, Safety and Environmental Sustainability," is included in Appendix C.

In operation since 2003, the HSE Council is one of the top governing forums at Cummins, and is chaired by Stan Woszczyński, the company's Vice President and Chief Manufacturing Officer. It is made up of representatives from Corporate Occupational Health, Safety and Environment, Business Unit HSE Functional Excellence Leaders (S/EFELs) and regional HSE leaders, including those from major markets such as India, China, Europe, the Middle East and the Americas. The Council also includes Business Unit Manufacturing Functional Excellence Leaders (MFELs), who represent top management from each of the respective business units. The HSE Council is attached to the Manufacturing Leadership Council, which is also chaired by Stan Woszczyński, but expands the reach and connectivity of the forum even deeper into the company structure. This combination of technical and senior leadership ensures that decision making is adequately resourced and strategically aligned with the business.

Much of the formal communication in this process takes place through the HSEMS, which is discussed in detail in Section III. Given the size and scope of the company, this structure allows for a manageable approach to staying current and working as a team to move forward on the journey to world class.

To support HSE performance improvements across all business functions, the HSE Council works alongside other internal stakeholder groups such as the Action Committee for Environmental Sustainability (ACES), Energy Efficiency Team, Supply Chain Environmental Sustainability Working Group, Product Safety Council,

Environmental Materials Council, Global Health Services and Facilities Council. This leverages the organization to deploy HSE improvements that are not contained within traditional factory walls and allows the company to build HSE improvements at the commencement of building and refurbishment, design and procurement of products and services, and throughout the supply chain.

In 2013, Cummins also formed the Environmental Strategy and Compliance (ES&C) Organization. The organization, whose vision is to “achieve business success through environmental leadership”, brings together the functional areas most directly responsible for environmental performance at Cummins: Environmental Sustainability (owner of the ACES), Facilities and Operations Environmental Management, Product Environmental Management and Emissions Compliance. Although ACES has been operating for several years, the formation of this organization means the Facilities and Operations Environmental Management Group, which is responsible for traditional environmental performance in Cummins facilities, has reporting lines into both ES&C and Manufacturing. The outcome is a broadened reach into the organization, improved alignment of high-impact environmental initiatives and a strengthening of Cummins’ environmental focus across the entire value chain while retaining the successful alignment of HSE with the Company’s manufacturing organization. Appendix D describes ACES and the six Environmental Stakeholder Areas.

Throughout the organization, all leaders are expected to have elements of HSE accountability included in annual work plans. These elements are often derived from the CLT Goal Tree, described above; however, a perception survey indicated that improving the perceived level of commitment to HSE by leadership was an opportunity for improvement. As a result, the “HSE: Live It. Lead It.” training was developed and implemented.

Live It. Lead It. Is generally presented by leadership and cascaded down through the operations manager or supervisor levels. The material is designed to drive enthusiasm and a sense of urgency about leading and modeling HSE excellence. The training provides leaders with a better understanding of their role in creating a stronger HSE culture and culminates in the creation of an action plan so that each leader can affect positive HSE change upon return to his or her job. See examples of Leadership HSE communications in Appendix E, and excerpts from the “HSE: Live It. Lead It.” materials in the link in Appendix F. An all-employee version of Live It. Lead It. is now in development and is slated for release in late 2014.

At Cummins, effective HSE leadership starts with living its global Mission, Vision and Values. The Cummins global Mission elements can be found in Appendix G. A key element of Cummins mission demands that “everything we do leads to a cleaner, healthier and safer environment.” This is a strong statement because in a very real sense Cummins’ business is the environment, making it central to the company vision: As Cummins’ global reach grows, so does its responsibility to ensure that its actions around the world reflect a commitment to people and the environment. That commitment takes on several forms, including driving the pursuit of world class HSE. Cummins recognizes its unique opportunity to make a real and positive impact due to the volume and breadth of its products used around the world. Cummins employees not only care about the environment, but they are spending an increasing amount of their own time to address some of the most significant environmental challenges facing the world (illustrated in the “Citizenship” text).

Commitment to HSE goals: As previously mentioned, the Cummins Leadership Team (CLT) develops an annual goal tree (see Appendix C) which is aligned with the longer term strategy and defines the company’s key business objectives and drivers. The business objectives and strategic principles come together in the CLT Goal Tree to branch into high priority initiatives and then specific programs and projects required to support the initiatives. From the CLT Goal Tree, functional, regional and business unit goal trees are developed. Site level goal trees are then aligned with the applicable functional, regional or business unit specific goal trees, and are adjusted based on the site’s particular situation or anticipated challenges. This allows the company to focus its work and establish coordinated priorities across the business from top to bottom, giving employees a clear understanding of the relationship between their work and the objectives, strategies and initiatives of the

business. Direct correlation measures, or “line-of-sight” measures, exist through all levels of the organization because what gets measured gets done.

Progress against goal tree objectives is monitored by the HSE Council through the HSEMS Management Review process (the HSEMS is discussed in more detail in Section III), as well as routine review of goals with Cummins leaders and members of the CLT (as seen on the CLT goal tree tracker in Appendix C). Site HSEMS coordinators conduct management reviews with their site level leadership team to understand if their HSEMS is suitable, adequate and effective in improving HSE performance. Each site then participates in a business unit performance review which focuses on objectives and targets, key performance indicators (KPI) and learnings and opportunities for improvement. The results of the business unit reviews are consolidated to provide a corporate-level view of how HSEMS is performing. Subsequently, the results are reported to the HSE Council where action can be taken to improve systemic performance in the forthcoming year’s work plan. Examples of the Health & Safety and Environmental functional goal trees can be found in Appendices H1 and H2. A detailed discussion of HSE KPI is available in Section IV.

At the individual level, Goal Tree objectives are translated to each employee’s specific, measureable, achievable, realistic and time-bound (SMART) work plan objectives. These SMART objectives are tracked and measured through a performance management system (OnTrack) and are reviewed regularly with the employee and his or her manager.

Cummins has publicly committed to a 2020 Environmental Sustainability Plan that calls for:

- Reducing energy by 25 percent and GHG emissions by 27 percent, adjusted for sales, by 2015;
- Reducing global direct water use by 33 percent, adjusted for hours worked, by 2020;
- Achieving “water neutrality” at 15 high risk manufacturing sites by off-setting water use with community improvements that either conserve water or make new water sources available;
- Increasing the company’s recycling rate to 95 percent by 2020; and
- Achieving “zero disposal” status at 30 sites by 2020, where 100 percent of waste will be recycled in a useful manner.

Cummins has made a strong commitment to developing a consistent system of aggressive goals and measures across its global operations, and to ensuring that each employee is held accountable. This consistent approach allows the company to leverage common and consistent approaches to meeting its business objectives. For example, the goal tree objective “Become World Class in Health, Safety and Environment” follows the same development and deployment methodology as a financial-related goal tree objective. Appendix BB contains a communication from Tom Linebarger, Chief Executive Officer, about the company’s goal tree process.

Organizational climate/culture: The Cummins Operating System (COS) describes 10 defining practices for all operations. While aspects of HSE can be found in all 10 COS practices, the purpose of the COS is to continuously improve the company’s products and services by eliminating operational inefficiency and reducing variation in its processes. Business leadership is responsible for the successful application of COS to achieve business results. This common approach is critical to the achievement of Cummins’ aggressive growth plans and is the foundation for cross-business unit and cross-functional coordination.

COS allows Cummins to detect and quickly resolve problems, thereby enabling the company to continuously improve toward defect-free processes that satisfy customers’ needs, and to achieve desired business results. A fundamental principle of COS is that processes (how the company operates) drive results: To assure superior results, Cummins must have excellence in its processes. COS drives:

- Common Measures and Initiatives
- Common Functional Excellence Framework
- Common Practices
- Common Business Processes

The COS Model includes focus on the basics of HSE, quality, delivery, cost and inventory turns. The 10 Practices of COS are:

1. Put the customer first, and provide real value.
2. Synchronize flows (material, physical and information).
3. Design quality in every step of the process.
4. Involve people and promote teamwork.
5. Ensure equipment and tools are available and capable.
6. Create functional excellence.
7. Establish the right environment.
8. Treat preferred suppliers as partners.
9. Follow common problem solving techniques.
10. Use Six Sigma as the primary process improvement method.

Appendix I is a graphical representation of the 10 COS practices used on signage, posters and other internal communications materials.

Operations Excellence describes how Cummins uses the 10 COS practices to sharpen the focus on the identification and elimination of operational inefficiency within the value stream. The Manufacturing Leaders Council (MLC) is the process owner for Operations Excellence and monitors the progress of all sites toward achievement of best-in-class capability. Both the MLC and its subset HSE Council are led by Stan Woszczyński, Vice President and Chief Manufacturing Officer. All of the business unit MFELs and Corporate HSE are members of each council, ensuring close alignment.

The Cummins Operations Excellence Guide is a self-assessment process and measurement system. Each site leader must assess his or her operation bi-annually, develop a plan to address identified gaps and pursue operations improvement. The guide outlines 31 key processes that are critical to achieving excellence in all Cummins manufacturing plants, warehouses and distribution centers. All are industry or Cummins standard practices that define “best in class” manufacturing. The integration of these key processes into a production system is the objective; ongoing performance improvement is the goal. Appendix J is a snapshot of part of the Operations Excellence Scorecard, which is reviewed quarterly by the MLC.

Although HSE is integrated in all 10 COS practices, COS Practice 7 - Establish the Right Environment - is most closely associated with HSE. The objective of COS Practice 7 is deployment of a culture where all employees live the Cummins Core Values and are engaged, motivated and improvement focused.

The “Right Environment” creates a great place to work, with the following characteristics:

- All employees are treated with dignity and respect
- People act like owners working together

- Diversity and inclusion are ingrained in the culture
- The physical site is safe, clean, healthy and environmentally compliant
- A “kaizen consciousness” permeates the organization
- There is open, two-way communication
- The Cummins Brand is clearly evident in signage, uniforms and product displays.

The Cummins Operations Excellence Key Processes related to Practice 7 include:

- Continuous Improvement Culture
- Goal Tree and Performance Measures, including HSE KPIs
- “Go, See, Act” Management
- Communication
- HSEMS
- 6S (Sort, Set in Order, Shine, Standardize, Sustain, Safety)
- Visual Management

Through these COS practices, Cummins strives to create and maintain the “Right Environment,” in which everyone feels responsible for HSE and actively pursues it on a daily basis. While “Creating the Right Environment” is well ingrained throughout Cummins, 2014 brings continued HSE awareness increases among leadership through the previously mentioned “HSE: Live It. Lead It.” program.

To help leaders “Lead It.”, Cummins launched a renewed health and safety vision statement in 2013 with the “HSE: Live It. Lead It.” program: “Injury Free Living – It’s Our Responsibility” The vision statement reflects the HSE philosophy that injury free living extends beyond the confines of the company and is encouraged off the job as well. It is every employee’s responsibility to actively ensure this incident-free state, which requires an interdependent safety culture. With this increasing HSE awareness and the company’s strategy of creating the right environment for success, Cummins demonstrates that taking care of its people is a value: People are the company’s most important asset and have the basic right to leave work in at least the same condition that they arrived.

All Cummins HSE expectations extend throughout the supply chain, including contractors, as demonstrated in the “Operational HSE Programs” section.

Citizenship: One of Cummins’ six Core Values is Corporate Responsibility: serve and improve the communities in which we live. The company’s commitment to the communities where it operates goes back to its founding more than 90 years ago. Cummins leaders understand now, as they did then, that the company is only as strong as the communities where it does business.

Today, Cummins has an extensive Corporate Responsibility program (see www.cummins.com for publicly available information about the company’s Corporate Responsibility initiative) with representatives working all over the world to help build stronger communities. They work with the company’s more than 200 employee-led Community Involvement Teams (CITs), as well as Cummins leaders, to accomplish that goal. The CITs coordinate activities, and serve as a primary contact point for community and employee involvement. The teams are responsible for working in partnership with site management and site HSE teams to plan and organize community involvement activities.

One way to get all employees involved in Corporate Responsibility is the Every Employee Every Community

(EEEEC) program. With this program, the company pays for employees to work on EEEEC projects for at least four hours per calendar year. In 2013 more than 42,374 employees donated 308,783 hours to community involvement projects. To have the greatest impact possible, the company suggests community involvement activities focus on three areas where Cummins has expertise and the ability to make a difference: education, the environment and social justice/equality of opportunity. Continuing in 2014, employees participating in the emotional wellness pillar of the company's wellness program can also earn HealthMiles (see Impact of HSE on workforce on and off the job) by participating in EEEEC projects.

Based on employee interest to commemorate Cummins' 90th anniversary and to further promote community involvement, the Cummins Environmental Challenge was launched in 2009. Today it continues to be a collaborative employee-led program, involving employees from all areas of Cummins on a variety of environmental issues. Since 2009, nearly 43,500 Cummins employees globally have donated more than 265,000 community service hours to make a positive environmental impact in their communities. More than 480 projects have been launched in areas such as alternative energy, sustainable building, water conservation and energy efficiency. In 2013 alone, Cummins reduced the amount of GHG by 19,000 tons, more than quadruple the results from the previous year. This is the equivalent to taking 3,950 vehicles off the road for a year and conserving more than two million gallons of gasoline. About 10,000 trees were either planted or saved from deforestation, and more than 12,000 tons of garbage was diverted from landfills in 2013. Since the inception of the Cummins Environmental Challenge, employees have reduced more than 28,100 tons of GHG. Several examples of EEEEC and Cummins Environmental Challenge projects can be found in Appendix K.

SECTION III: Integrated HSE Management System

Policies, goals & objectives: The Cummins HSEMS is a centrally managed system with a common set of corporate policies and procedures, which sets expectations for its sites worldwide. The company's HSE standards, initiatives and supporting toolkits exceed both regulatory compliance and conformance with ISO 14001 and OSHAS 18001 standards, therefore driving Cummins toward world class HSE performance. The core HSEMS is supported by:

- A customized HSE audit tool with quantifiable scoring;
- The Enterprise Certification process (risk based and regularly monitored);
- IT systems;
- Site level HSE program and toolkit deployment;
- Active leadership and employee engagement; and
- Working partnerships with local communities, regulators, customers, contractors and suppliers.

This system is governed by an overarching HSE policy, endorsed by the HSE Council during the annual Corporate Management Review. Cummins Corporate HSE procedures support achievement of the HSE policy and establish minimum expectations for its sites worldwide. Further, the company has defined an objective for all sites defined as "in-scope" to be registered to a Corporate HSEMS Enterprise by an independent third-party registrar. This centrally managed approach to third-party registration has allowed Cummins to secure over \$4.3 million avoidance savings to date since the third-party registrar audits each site every three years instead of annually. The third-party registrar determines which sites should be audited based on the date of the previous third-party audit, the site's HSE performance results, internal audit results and HSE risk level. The Cummins HSEMS Enterprise is also audited at the corporate level every year by the independent third-party.

"In-scope" sites are defined according to business risk from an HSE perspective, but sites that are not in-

scope may also opt to be certified by the third-party registrar. Regardless of certification status, all sites are expected to achieve conformance with corporate policy and procedures. Key facts about Cummins HSEMS are:

- **Commitment:** Cummins HSE commitment extends to the board room with a Mission that includes “Demanding that everything we do leads to a cleaner, healthier, safer environment”.
- **Flexibility:** Cummins’ HSEMS provides commonality to its HSE initiatives while allowing the site flexibility to address business, regional and cultural risks, opportunities and other priorities. For example: Due to the recognition of scarcity and risk associated with lack of water resources, Cummins facilities in India focused heavily on, and embraced, water conservation issues prior to the company developing a water management strategy (which is now being applied across the enterprise).
- **Strategic Enterprise Expansion:** Cummins strategically drives certification to recognized HSE standards. Since 2003 the company has focused on its manufacturing locations with 94 percent certified to ISO14001 and 92 percent certified to OHSAS 18001. At the end of 2013, the Enterprise included 89 entities, representing 202 sites. By 2015, Cummins expects the HSEMS Enterprise to consist of dual-certified sites, representing 100 percent of its manufacturing and distribution locations. In addition, ISO 50001 requirements have been fully integrated into the HSEMS. In 2013, three sites achieved ISO 50001 certification and an additional 10 sites (targeted because they represent two-thirds of the company’s GHG emission footprint) are working toward certification in 2014.
- **Footprint:** Cummins expects all sites to comply with HSEMS policy, procedures and initiatives independent of certification status, and extends goal setting to its entire organizational footprint.
- **All-Inclusive:** Cummins policies apply to its employees, contingent workers, suppliers, contractors and even clients working at its facilities. The company’s expectations extend beyond its physical boundaries, encompassing maintenance and support services that often occur at customers’ locations or even remote areas where its products are used.
- **Accountability:** Although HSE leadership starts at the top, Cummins promotes local accountability with system driven accountability down through the site’s business leader for all HSE performance requirements.
- **Cross Functional:** In almost every instance, Cummins policies and procedures either strongly support, or require execution of work, through cross-functional teams. These teams routinely include representation from purchasing, facilities, manufacturing, human resources, security and other functions that are key HSE stakeholders. By including these functions in its processes, Cummins strengthens the understanding and awareness of HSE’s impact throughout the organization.

Organizational communications: Cummins’ perspective is that very little can be achieved effectively without the use of a concerted communication method that reflects the needs of users. The Cummins HSE Communication Strategy offers a process to effectively communicate and measure communication success at an individual and organizational level. The strategy is structured around the following four core objectives:

1. Establish clear roles and responsibilities for everyone involved in the HSE communication process;
2. Ensure that communication systems and processes are effective, robust and transparent and reflect the Corporate HSE Vision;
3. Provide the tools for the implementation and achievement of the above; and,
4. Provide a process to assure the quality, effectiveness and continuous improvement of the strategy.

As part of the strategy, several channels are established to successfully manage communication. The following is an overview of a few primary channels of communications utilized in HSE:

- Cummins Connect is an intranet site where users can access HSE news, articles, announcements, leadership messages (video podcasts, state of the union updates, etc.), newsletters and surveys. The intranet space also acts as a single source for accessing relevant HSE Operational and Functional Excellence information such as policies, procedures, work instructions, best practices, initiative toolkits and more. New wiki and blog features allow users to post comments and ask questions.
- Outreach is a quarterly health and safety electronic newsletter that is published internally to inform and update employees. The newsletter also includes a special section with “Off-the-Job” health and safety information to help keep employees, contractors and their families proactively engaged and committed to improve safety not only at work but also at home and in their communities. GloballyInvolved has the same concept, but it is focused on the environment and sustainability.
- ‘Fast Track’ is an electronic incident sharing tool used globally to communicate learnings from incidents (including near hits). The Fast Track must, at a minimum, contain a detailed description of the incident, a five “whys” analysis leading to the root cause and actions planned or taken.
- Major Injuries and Dangerous Occurrences (MIDO) communication is designed to ensure Cummins senior leaders, including the Chief Executive Officer, are informed via a call tree process of an incident or dangerous occurrence within hours of it taking place. MIDOs are reviewed quarterly with a cross-functional leadership team, and lessons learned are shared globally.
- Cummins also uses a variety of virtual and face-to-face meeting techniques to communicate and exchange ideas. Meetings are held in various time zones to accommodate global input into key projects. Cummins has invested in video conferencing equipment at several plants. This is an ongoing initiative to facilitate face-to-face exchanges without the travel interruption, costs and carbon emissions. Periodically, the company holds a global HSE workshop during which HSE leaders from around the world gather to collect and discuss the very best ideas (internally as well as externally), refresh strategy and recognize outstanding performance and projects.
- Printed materials such as pamphlets, booklets, signs and posters are created when needed to communicate HSE information. Bulletin boards, visual information displays and monitors are strategically placed to allow easy access to information.
- Digital signage is used to quickly deploy key HSE messages to employees across the globe and allows elimination of a large volume of printed materials, ultimately saving ink cartridges and paper.

Audits and continuous improvement: In 2011, Cummins launched a web-based HSE audit tool designed to deliver quantitative results that can be used to measure improvement over time, monitor for conformance against standards and identify individual sites that are considered best-in-class within the company. The audit tool also serves as a knowledge management repository that allows sites with low-performance audit scores to search for and contact sites with best practices in the area where improvement is needed; this facilitates global networking and cross-fertilization of best practice ideas.

The tool also provides flexibility for the audit team to select an appropriate scope for the audit. The tool can deliver an integrated HSE audit, or audits focused solely on health, safety or the environment, and also deliver a performance score against the defined scope. The performance score is used to support the HSE awards program and to develop prioritized audit scheduling, which allows critical resources to be focused where need is greatest.

The audit tool leverages an existing business tool (Enablon® – see section IV) and was designed around seven main elements related to the ISO 1400 and OHSAS 18001 standards:

1. Strategy, Standardization and Documentation
2. Management Leadership and Employment Engagement
3. HSE Hazard/Risk Identification and Analysis
4. HSE Hazard/Risk Prevention and Control
5. HSE Training – Competence and Awareness
6. Performance Measurement, Monitoring and Control
7. HSE Operational Controls

Each of the seven main elements is split into sub-elements, sections and questions, leading to over 900 comprehensive questions (see Audit Tool overview in Appendix L).

Although the Cummins HSE audit program dates back to 2003, the electronic audit tool was first used in 2011 for both site self-assessment and internal audits. All sites are required to perform an annual self-assessment covering the full 900 questions. The quality of site self-assessments is reviewed and validated by the business unit functional excellence leaders. Each site with a total score of 70 percent or below is required to implement a HSEMS performance plan to drive continuous improvement.

The audit tool is also used to perform the annual surveillance audit of sites that are part of the HSEMS Enterprise. The tool allows for the identification and sharing of best practices, adaptation of the audit scope based on the site HSEMS maturity and support for sites moving to the “beyond conformance” level by auditing them on criteria considered to be world class HSE.

Separate from the HSE audit tool, but a critical component of the HSEMS Enterprise, is an annual, site-wide compliance evaluation mandated by Cummins. The evaluation is accomplished by using a third-party auditor or the site’s regional HSE leader whose key responsibility is to keep abreast of new and changing legislation in his or her respective region. For example, in Europe, the Middle East and Africa (EMEA) regions, a single, third-party vendor that services all sites is used. This program was established in response to significant variation across multiple vendors and to improve compliance against strengthening legislation in various regions. All compliance results are fed to the business unit leader and reported during the semi-annual management reviews discussed earlier. Regional HSE leaders look for compliance themes across the results, and develop toolkits or training to fortify site level understanding and compliance.

To support these extensive auditing activities, Cummins operates an Auditor Certification Program. The minimum qualification required to participate in the program is successful completion of an HSE lead auditor course. Auditors are then required to co-audit at least twice, and successfully lead an audit under observation by a Cummins certified lead auditor. They are assessed against ISO 19011 auditing criteria as well as their knowledge and ability to consult on Cummins HSE procedural requirements. In a global pool of 271 auditors participating in the program in 2013, 81 were HSEMS certified Lead Auditors and four were EMS-only certified Lead Auditors. Once certified, all auditors are expected, at a minimum, to participate in one audit per year, in order to keep their skills current and to share the auditing load.

Hazard recognition and risk recognition: All sites are required to follow the Cummins Risk Assessment methodology for health and safety risks, and Cummins Aspect and Impacts identification methodology for environmental risks, which is defined in corporate procedures with accompanying toolkits. These processes drive identification of safety hazards and environmental impacts that could affect people (employees,

contingent workers, contractors and any members of the community interacting with the site) or the environment. Hazards originating outside of the workplace, which are capable of adversely affecting the health and safety of persons under the control of the organization, must be included in the assessment. Health and safety hazards and environmental impacts are then assessed using a quantitative methodology that identifies the base risk without any controls in place, and then scores the adequacy of physical and administrative controls to determine residual risk. Finally, sites are responsible for communicating these risks and hazards to suppliers, contractors and site visitors. Since sites are access controlled, site entry is not permitted until such information has been conveyed.

The individual assessment result is rolled up into a dashboard tool, which facilitates prioritization of risk and identification of areas or activities for the site to focus on in its annual work plan, in an effort of continuous improvement. Additional detailed risk assessments are conducted based on the results of the original assessment, using tools or methodologies more specific to the hazard identified (noise or vibrations measurements, ergonomics assessments, assessment of non-routine work for service and maintenance, etc.).

Health and safety risk and environmental aspect assessments are revisited post-incident, near-hit, based on hazard hunting or behavior based program findings (e.g. "Find it Fix it" program and STOP audits) and from shared lessons learned (from incidents at other sites). Once risk mitigation has been completed, the site is required to re-score the risk assessment to identify if moving further up the control hierarchy is necessary.

Because it is data driven, the risk assessment process supports the use of the company's Six-Sigma problem solving tools for driving improvement, which further helps optimize long term hazard control.

To address facility risks, Cummins property insurance program encompasses 480 facilities globally, representing \$16.5 billion in insurable assets. With such a complex program, the company affects insurance through a panel of more than 25 insurers. For many years Cummins has partnered with XL GAPS to provide independent loss prevention engineering services and to support the company's assertion that it is a Highly Protected Risk (HPR) account. XL GAPS visits more than 100 of Cummins' largest value/business critical sites to conduct detailed risk surveys, and Infrared Testing Inc. provides surveys at 50 sites annually. Risk scores are assigned based on standard criteria, including sprinkler protection, management systems, surveillance, impairment and hot work practices.

Prevention through design and engineering: Cummins has a Value Package Introduction (VPI) process to introduce high-quality products, support and information. The VPI process ties together many processes and functional areas to ensure a smooth product introduction. One example of such a process is within product safety: The Corporate Product Safety Council is a group of safety champions who are responsible for addressing product safety-related issues that have a company-wide impact, and for making appropriate policy recommendations. Product Safety Committees exist for each business unit and include representatives from engineering, HSE, manufacturing, marketing, service, quality, purchasing and legal. The committee ensures that product safety issues are considered during the design process, and is responsible for evaluating, monitoring and resolving current product safety-related issues. See Appendix M for an organizational chart of the Corporate Product Safety Council.

Because the Corporate Product Safety Council is also represented in the HSE Council (see Section II), it is able to address product design considerations impacting HSE that are encountered by employees during the manufacture and service of Cummins' products. Fast Track communications (see Section III) are shared with the product safety teams for rapid identification of injury or illness reports that were attributed to any aspect of product design.

When facility construction or renovation is necessary, Cummins requires that every employee be afforded

a healthy, safe and productive work environment. All Cummins buildings, whether owned or leased, are expected to deliver upon this requirement. The Cummins Global Building Standards and New Plant Startup Process are two ways in which the company does this.

Within the Cummins Global Building Standards, the highest priority is creating the “Right Environment” (see COS practices in Section II). Cummins has clearly defined stringent requirements globally for five major criteria: accessibility, life safety, employee amenities, workspace conditions and resource conservation. An example of one of the “Right Environment” requirements is the Nursing Mothers Room Standard developed in conjunction with the Women’s Affinity Group. It requires dual-purpose nursing accommodation rooms in all Cummins facilities, or a dedicated room when there are 25 or more female employees. The availability of these rooms helps new mothers transition back into the workplace and supports workplace diversity, emotional wellbeing of the employee and nutritional health of her infant. See Appendix N for a snapshot of the Cummins Global Building Standards.

Cummins follows the most stringent locally applicable codes, green building certifications and ASHRAE 189.1 as the design basis for any new construction. By using a whole building and regional approach with Cummins Global Building Standards, the company expects to improve its new construction energy impact by 21 percent through 2015 over what it would have if it merely accepted meeting the local building code. In an effort to further improve the building standards, Cummins is currently running a fit-for-market pilot for warehouses. If successful, the fit-for-market standard will be expanded to include all global regions, climate zones and building types to better address facility design where regional or climate risks (such as water availability constraints or high energy costs associated with weather extremes) exist.

When constructing a new building following the New Plant Startup Process, clear requirements for HSE are laid out in a step-by-step process, supplemented by standardized tools and checklists, and are monitored by the Global Facilities team. HSE is a significant consideration throughout the design process: Plans and layouts must address visibility, egress, accessibility, vehicular traffic safety and arc flash risk. All design projects are reviewed for these aspects as well as for compliance with the building standards throughout the design process by Cummins functional experts and coordinated peer reviews. See Appendix O for the Facility Swim Lane of the New Plant Startup Process.

Contractor safety is of paramount importance; it is communicated broadly and monitored during all construction activities. A visible best practice example is the use of a “Heart and Hands” board on several construction sites in India. Workers place photos of their family on a large board containing several statements relating the need for safe work practices and the expectations for returning home safely, posted near the site entry. This visible element is integrated with three levels of Safety Observation Team (SOT) audits to establish an environment of safe practices on each site. Performance within this SOT process is always the first thing discussed during visits by global facility leadership, and consistent communication of successes and opportunities occurs at every level.

Additionally, Cummins strives to improve existing buildings to new construction standards, especially in terms of “Right Environment” and its five major criteria. The company continues to invest in facility improvement projects through two central funds: The Energy Efficiency Fund (EEF), dedicated solely to energy efficiency projects, and the Central Maintenance Fund (CMF), dedicated to upgrading important but obsolete equipment and to HSE projects that are low financial return and which may not get funding through the normal capital improvement process when competing with revenue-generating projects. For 2014, the EEF is investing \$20 million (doubling the 2013 investment) in energy related projects, including increased control and measuring capability with Building Management Systems upgrades, meters and controls at major manufacturing facilities. The CMF is allocating about \$8M across 34 projects, most of which have HSE aspects as part of the project.

The Cummins ergonomics program is an important consideration throughout the design process for buildings, processes and products, incorporating the ergonomics mission of making “the work fit the worker” instead of “the worker fitting the work.” Cummins believes that ergonomics not only achieves greater comfort and convenience for employees, but that it also helps reduce the physical stresses of work, which results in better work performance and fewer work-related injuries. The company promotes its ergonomics program through a combination of workplace training, evaluation and the implementation of ergonomic control strategies. Cummins’ ergonomics program includes:

- Tools for ergonomic risk analysis in the manufacturing, office and service environments: Despite the focus, ergonomic related injuries still contribute about 25 percent of all Cummins injuries; therefore in 2014 the company is investing in a new partner to standardize its approach to ergonomic assessments globally. In planning since 2013, The Humantech System for ergonomic risk assessment will be deployed to more than 12 sites in 2014, with a plan to transition all sites to the new tool in 2015.
- Training programs, including the proprietary Ergonomics in Action training, delivered to Manufacturing and Mechanical Engineers: This intense three-day training is geared to equip engineers with the knowledge and tools necessary to properly design workstations that are efficient, comfortable and safe. New for 2014 is an ergonomic work methods training called Power Zone, which is for all employees and is designed to raise awareness of ergonomic risks using real Cummins examples to demonstrate the concepts.
- Trainer certification and ergonomic risk assessor validation programs, to ensure consistent transfer of skills and knowledge.
- University collaboration, in which Cummins partners with university students to address real-world manufacturing problems.
- Early problem reporting and management methodology, in conjunction with health services.
- Recognition and sharing of “Best Practices” through the internal Cummins Ergo Cup competition.
- Participation in the Lucien Brouha Work Physiology Symposium.

Cummins biggest opportunity to expand its product stewardship beyond the upfront design is in working with customers to improve the efficiency of our products in use. In 2014, the company took this approach a step further when it worked with two other suppliers to help a customer that operates a big fleet of large mining equipment, reduce its fuel costs. The companies put aside competitive pressures to find ways their equipment could work better individually and collectively, saving the customer seven percent on fuel costs and saving 17 million liters of fuel (which translates to \$18 million in savings annually for the customer). The improvement also equates to a reduction of 46,000 metric tons of carbon dioxide.

Cummins has a long tradition of innovation and efficient use of fuel and raw materials. Recently, the Cummins-Peterbilt “SuperTruck” received praise from U.S. President, Barack Obama for achieving a 75 percent improvement in fuel economy as compared to a typical on-highway truck. Cummins’ new G-series engine is another example of a sustainable product since it achieved increases in the engine’s power-to-weight ratio because its design included significant overall weight reductions.

Operational HSE programs: While Cummins’ minimum expectation is to be compliant with all local and regional laws and regulations, the company has established common global, corporate procedures, toolkits and standards that often exceed HSE regulations. As mentioned previously, Cummins mandates an annual compliance assessment for all sites.

The Cummins Global Electrical Safe Work program is a typical example of how the company initiative development results in procedures and company-wide standards that resonate across cultures and push beyond regulatory compliance. Electrical safety standards and practices vary widely across the globe.

Through a cross functional and regionally diverse working team, Cummins adopted NFPA 70E as the baseline set of safety rules (NFPA has a global reputation for being technically sound and procedurally fair). NFPA 70E addresses electrical safety requirements in workplaces for the practical safeguarding of employees. The standard covers the installation, safe work practices and procedures and safety-related maintenance requirements, as well as safety installation and work practices for special electrical equipment. NFPA 70E exceeds any other national or international standard in many ways.

Cummins Global Electrical Safe Work Policy was introduced by an internal team of cross-functional experts following an almost year-long effort to develop the minimum corporate level safety rules on electrical safety. In order to ensure accuracy and consistency in the application of these rules, Cummins involved external expertise as well as its own employees' knowledge and experience to ensure that the requirements were correctly interpreted and have addressed the span of its products and services. A corporate global Electrical Safety Council, with representatives from all businesses and regions across the globe, was formed to support the toolkit introduction and to help with interpretation of the policy for practical use.

Cummins HSE expectations also extend to its supply chain. For example, the Global Contractor Safety Management Process mandates active involvement of Cummins personnel and the contractors at each stage of implementation and maintenance. To augment the program and to provide a progressive opportunity for contractors to enhance their safety capabilities, Cummins introduced a contractor pre-qualification process. A third-party global vendor manages the process and follows Cummins standards and stringent selection criteria. The process not only brings in safe and competent contractors, but it also verifies that the company's supply chain is both safe and sustainable. The third-party vendor partners with contractors by providing individualized customer service to help them fill gaps and complete the pre-qualification.

Also related to supply chain, the Cummins Global Packaging Standard exists with the mission of standardizing packaging and reducing waste, and improving safety, quality and sustainability while providing parts at the lowest total cost. The packaging standard sets the foundation for suppliers to develop their packaging and ensure that all incoming material(s) are adequately and safely presented at the lowest total cost while utilizing the most sustainable method.

To manage other external exposures, Cummins Global Security function leads the Crisis Action Management Program (CAMP). In partnership with a third-party supplier, the CAMP team monitors and develops regional briefings that identify geopolitical instability, crime, terrorism, natural disasters and other characteristics that might impact Cummins employees, sites or supply chains around the world. CAMP provides a mechanism for rapid communication of, and response to, emerging issues.

Management of change: Cummins has defined global procedures for changes to existing products and processes, as well as for introduction of new products and processes. All change management procedures require involvement of cross functional teams to ensure no HSE hazards are introduced by the change. All changes must conform to a set of standards covering buildings, equipment and processes. HSE personnel are engaged in the earliest stages of planning a new operation, facility or process, to evaluate potential risks and ensure safe start-up.

Since the mid 1980's, Cummins has maintained corporate policies and procedures on materials and chemicals in the workplace and in its products. In many cases, these policies surpass applicable regulations by banning the use of certain materials and restricting the use of others in the company's operations. Safety data sheets for all substances used in the processes are maintained in an electronic database, which is available to all employees via the entry page of the company intranet, and allows downloading and printing of the sheets. Any requests for deviation must be submitted via the electronic database for review and approval by the Corporate Industrial Hygienist and Senior HSE leadership.

Communication of these requirements outside the company, such as with suppliers, is done via Cummins Engineering Standards and Cummins' Safety Data Sheet system located on the external website, Cummins.com. Compliance to these standards is mandatory for all suppliers who provide any product or service to Cummins organizations.

When changes involve leadership personnel, the interview process includes HSE leadership abilities and previous HSE performance. Interview panels for site level and business unit level HSE leaders must include either the business unit health and safety or environment functional excellence leader, or a member of the corporate HSE staff.

Workforce empowerment, involvement and motivation: Becoming a world class HSE organization is challenging, especially with a company as diverse and complex as Cummins. The journey requires robust management systems, operational controls and significant technical resources, but it also requires the complete engagement of leadership and employees to facilitate the step change to world class.

Cummins believes that people are its most important asset, which includes everyone working on behalf of Cummins, whether it's an employee, contractor or supplier. As a result, many sites have programs that engage employees and contractors in HSE. These programs compel employees and partners to act like owners and be engaged in the solution process through programs like Wellness Champions, Environmental Energy Champions and Safety Committees. In addition, employees and many of Cummins' partners are empowered with the authority to stop or question any process that may be unsafe or may have an impact on the environment.

Other examples are programs that make HSE fun for employees, such as the formation of HSE Sports Leagues, where teams are formed that align to locally important professional sports. Points are awarded for activities such as conducting audits or making HSE improvement suggestions.

Since sites are encouraged to adopt an approach that fits with local social and cultural needs, programs designed to encourage employees and contractor involvement in identification and correction of HSE problems are known by many names; the Engine Business Unit's "Find It, Fix It", Cummins Emission Solutions' "S.A.L.U.T.E.", and Cummins Power Generation's "Lens of Awareness" are examples of such programs.

In order to celebrate the many successes and achievements accomplished each year, the company has internal programs to recognize and share exceptional work, significant milestones and performance at Cummins. For example, each year corporate HSE and quality functions partner to host an event acknowledging outstanding HSE performance and implementation of innovative and engaging best practices in HSE and quality. Winning projects are presented to the Board of Directors and shared broadly throughout the company. In addition, business units, regions and sites have HSE recognition processes driven by their respective leadership.

In 2012, the company developed an internal Ergo Cup Competition, in which all sites were encouraged to share innovative ergonomic solutions. Since its inception, more than 150 projects, representing over \$5 million in savings, were submitted for consideration. The top award winner, and each of the regional finalists, were submitted for entry in the external Applied Ergonomics Conference International Ergo Cup Competition. In 2014, three of those projects were accepted by the external selection committee to represent Cummins, with Jamestown Engine Plant winning in the "Ergonomics Program Improvement" category.

An HSE Milestones Recognition program keeps enthusiasm high throughout the year by recognizing certain "milestone" achievements on a monthly basis. All of Cummins' recognition programs encourage employees to think of themselves as owners and HSE leaders.

Workforce training and competency building: The recruiting and hiring process ensures that employees are considered only for positions for which they have valid, appropriate qualifications, experience level and capability. Once hired, employees participate in an extensive OnBoarding process aimed at ensuring new employees immediately have the tools and resources needed to safely and effectively adapt to their new job. The OnBoarding process includes one full week of classroom training followed by specific on-the-job training, including HSE. The training is reinforced during regular conversations with the supervisor over the first weeks and months of employment. Human resources monitors and ensures hiring manager accountability for timely completion of the OnBoarding checklist. See Appendix P for an overview of the Global OnBoarding process.

Training matrices that describe whether a particular position requires awareness-level, user-level or expert-level skills are developed for each location. Trainees must demonstrate task competence in order to successfully master each level. The company also has a formal, semi-annual performance feedback process. SkillTrack® evaluation is one component of that process which assists in identifying gaps between current skills, knowledge and abilities (SKA's) and required SKA's. Employees then work with supervisors to create an Individual Development Plan to close skills gaps or for continuing education. Cummins believes investing in skill building helps us better prepare to serve its customers safely and efficiently.

Health and safety training hours are measured as a leading indicator (explained in more detail in Section IV). All theoretical and practical training hours that develop SKA's aimed at preventing an injury or illness are captured. Training hours can include short-time sessions that develop SKA's (i.e. 5 minute talks, toolbox talks, safety meetings with training content, etc.). This effort has resulted in additional training efforts on key initiatives: electrical safety, crane safety, forklift safety, emergency preparedness, etc. The utilization of a training platform called Saba® has facilitated training management and delivery on the global scale – see Appendix Q Saba® snapshot.

Impact of HSE on workforce on and off the job: Cummins considers off-the-job HSE as a major, strategic area of improvement in its progression to world class. The company is leveraging this component in every new initiative and toolkit it develops in an effort to continuously drive a “24/7 HSE” mindset. In addition, Cummins has found this to be a key recruiting element for new employees because one of the top factors in decision-making is the company's impact on the environment.

As previously mentioned, the company has a robust Community Involvement program, and often CIT projects are tied to off-the-job HSE initiatives. For example, in India, sites distributed childproof plugs for electrical outlets; in China, sites provided helmets to commuters using two-wheeled vehicles; in Canada, sites distributed fire extinguishers and in Africa, sites partnered with community resources to encourage HIV awareness and testing for employees and their families. During the North American Occupational Safety and Health week, Cummins Western Canada employee's children submitted drawings of how their family member stays safe at work. The site then created and distributed a 2014 health and safety calendar from the drawings.

In order to extend employee health and safety to CIT activities (see Citizenship section) which are outside the company's four walls, CIT HSE Guidelines have been implemented. The guidelines create a standard for sites to reference while selecting and completing projects. An integral component of the guidelines is utilization of the experience of the site HSE leaders and the CIT leaders to design safer projects. The tools are designed to foster effective communication and detail considerations that sites need to evaluate prior to the start of a project.

Following the CIT HSE Guidelines, the site's initial responsibility is to form and train a cooperative team consisting of employees with HSE experience and community involvement. This team determines which activities are within acceptable limits by evaluating each activity against the guideline's negotiable (activities that employees will participate in but receive special consideration due to increased hazards) and non-

negotiable (activities that employees will not participate in because of the hazards present) list. An initial risk assessment is completed to assess hazards associated with the event and then controls to mitigate each identified hazard are put in place during this initial assessment. On the day of the event, a Job Safety Analysis is completed to assess and mitigate hazards that have arisen since project selection.

As part of the Off-the-Job Safety initiative, Cummins is involved in the National Safety Council's Safe Communities program. The company has begun working with the Kentucky Safety and Prevention Alignment Network (KSPAN) in its endeavor to create a Safe Community in Louisville, Ky. Safe Communities is a designation created by the National Safety Council to recognize communities that have put an infrastructure in place to decrease injuries. Safe Communities focuses on a holistic approach to evaluate the needs of a community. These communities have a 10 percent lower fatal injury rate for unintentional and intentional injuries. Benefits to the community include a higher standard of living, reduction of healthcare costs and information sharing with other communities.

Cummins plans to utilize the knowledge it is gaining by working with KSPAN in Louisville to begin the process of creating Safe Communities in the communities in which the company works, starting with its corporate headquarters community in Columbus, Ind.

To address health concerns on and off the job, Cummins encourages employees and their families to lead healthy lifestyles and provides incentives for completing health improvement activities. The company's Health Champions program provides a grassroots constituency by adding health-related activities such as coordinating on-site initiatives into employee job descriptions. Cummins has two full-time Health Educators who serve employees at the local level. Cummins employees in Indiana also have access to a full-time onsite registered pharmacist who provides education and counseling to both groups and individuals. A full complement of health benefits supports employee health successes, such as employee assistance programs, which are available for all Cummins employees. One-on-one coaching is available to help employees with issues including management of chronic conditions, tobacco cessation, weight loss and stress reduction.

Over the last five years, Cummins has learned that its employees and their families want to pursue healthy lifestyles; they simply need the right support to help them do so. The company's Health Tracks programs and incentives provide this support by giving employees HealthMiles for participating in various health-related activities. Health accomplishments can be tracked by employees when they log onto the Virgin Pulse (formerly known as Virgin HealthMiles) portal. In addition to tracking health activity, the portal provides a platform for employees and their families to participate in health challenges and contests, as well as retrieve helpful activity tips and network with others who have similar health goals or challenges. Employees are also rewarded with HealthMiles for completing an annual confidential health risk assessment and biometric screening. Once enough HealthMiles are accumulated, they are used to offset medical plan contributions or redeemed for HealthCash. Both bargained and non-bargained employees and their families are eligible for wellness incentives. Employees and their families who are not enrolled in the company health plan also participate in wellness activities and earn HealthCash. From the testimonials and feedback Cummins has collected, it knows that most employees are eager to participate in HealthMiles programs. The company has learned that programs that help employees lead healthy lifestyles are not "set it and forget it" endeavors. See Appendix R for one example of an employee's HealthMiles success story.

In addition to the existing Occupational Health Center, Cummins has begun construction on the new Cummins LiveWell Center™, set to open in early 2016. The new center will put high-quality healthcare first and foremost, with a particular focus on total lifestyle care. For most employees, this center will be an entirely new way to experience healthcare, with everything focused on the patient – this focus includes everything from wait times, to the design of the center, to ways to communicate with the healthcare team.

Section IV: Performance Measurements and Information Management

Systemic use of key leading and lagging HSE indicators: Cummins tracks numerous metrics and indicators essential to monitoring HSE performance at all organizational levels. Each global location monitors their indicators and inputs them into the company's electronic database, Enablon®, where they are verified and validated. Health and safety reports are generated monthly, while environmental data is analyzed quarterly.

Health and safety lagging measurements include Incidence Rate (IR), Severity Lost Work Case and Day Rates (SCR and SLWDR), Days Away Restricted and Transferred (DART) Case and Day rates and Contractor IR. The calculation of these indicators follows the United States OSHA and Bureau of Labor Statistics guidelines and is consistently applied globally. Cummins also monitors "Major Injuries and Dangerous Occurrences" (MIDO) rate as an indicative measure. MIDO's follow an adapted criteria of "Reporting of Injuries, Diseases and Dangerous Occurrences Regulations" (RIDDOR) from the United Kingdom. Additionally, average days per recordable (similar to Mean Time between Failures) is tracked as an overall diagnostic of performance improvement.

Examples of preventive leading indicators include health and safety training hours and behavioral observations processes (See Appendix S and Data Snapshot). The percentage of training hours is calculated from the ratio of Health and safety training hours and worked hours; it provides an indication of how sites and business units are influencing skills, knowledge and abilities (SKA's) of employees. Predictive leading indicators include the average worked hours per employee, percentage of new employees, self-assessment scorecard and road safety risk profiling. Health, safety and quality concerns arise when employees surpass a certain level of worked hours. This indicator triggers preventive actions (e.g. overtime restrictions, additional rest periods, etc.) when a certain level is reached. Similarly, the percentage of new employees is monitored on a monthly basis and when this indicator reaches a pre-defined level, preventive actions are triggered (e.g. diligent safety induction training, supervisor awareness, etc.). New predictive and preventive leading indicators for 2014 include Live It. Lead It. percent completed, number of hits on Cummins Connect and health self assessment scores.

Leading indicators that encompass health, safety and environment include HSEMS Enterprise participation, the number of audits completed, corrective action status and certified lead auditor growth.

Cummins regularly analyzes the effectiveness of the H&S leading indicators by calculating the correlation coefficient for each indicator. Those that demonstrate the highest statistical correlation are further promoted (for example, by setting aggressive targets) while those with little correlation may be replaced with new indicators. This regular review ensures an atmosphere of continuous improvement for the leading indicators.

Cummins monitors a robust set of environmental data, including more than 100 parameters (see Appendix T). This allows for detailed analysis of the company's processes, helping to ensure that the company's environmental programs are both effective and sustainable in the future. Energy, Waste and Water scorecards are used to track progress in key environmental stewardship areas based on an amalgam of both leading and lagging indicators, and are attached in the Data Snapshot. Leading environmental indicators include environmental stewardship program recognition and participation, and use of Six Sigma processes and tools for environment.

Once data calculations and measurements have been verified and analyzed, they are compiled into a robust scorecard and shared throughout the company via a report that is distributed to site managers, HSE leaders, business unit and regional leaders and executive leadership (see Appendix S).

Quality and appropriateness of measurements and data collection: As mentioned earlier, Cummins utilizes a web-based HSE management system, Enablon, to collect data and leverage technology to ensure data accuracy. All data required to calculate HSE indicators is collected and centrally archived via this system. The

Enablon tool automatically calculates previously mentioned rates, provides customized reports and generates various graphs for analysis. This process of data collection and measurement has many checks and balances to ensure data accuracy, efficient data management, prompt information analysis and, more importantly, instant information availability to all site, business unit, regional and corporate leaders (see Appendix U: Enablon® Snapshot).

Calculated measurements are validated by each business unit health and safety functional excellence leader before being incorporated into the company's global analysis. Additionally, to ensure accuracy, consistency checks that flag values based on logical simple calculations are built into Enablon.

Data analysis and evaluation: Through Enablon, Cummins has the capability of generating quantitative and qualitative reports for the analysis of indicators from both a performance and predictive perspective, sliced by organizational level or geography. A quarterly comprehensive in-depth analysis is performed for incidents by utilizing pre-defined categories such as injury type, body part, source and circumstance (see Appendix S). For areas of particular concern, such as "Contractor Incidence Rate" and "Ergonomic Incidence Rate", a deeper evaluation and analysis of incidents is performed monthly.

Data is analyzed by utilizing statistical methods (such as control charts, pareto charts, correlation, fitted-line plots, data-contrasting tables and balanced scorecards). 6S is a common business process and culture deeply embedded in Cummins operations, and this methodology continues to provide guidance on the analysis of complex issues through the systematic utilization of tools such as Failure Mode Effect analysis (FMEA), KJ, Analysis of Variance and Regression.

In order to validate effectiveness of leading indicators, Cummins further analyzed them by calculating correlation coefficients and regression charts between performance measures like incidence rate. For example, a significant correlation of -0.80 was found between the percentage of safety training hours and incidence rate. See Appendix V for the leading indicators correlation analysis.

Accessibility and use of information generated from performance data: KPI information and all HSE data are communicated to employees and stakeholders by the following means: monthly corporate health and safety report, annual sustainability report, quarterly HSE Outreach newsletter, health and safety website, environmental website and instant accessibility to Enablon. This information is shared with a wide range of business leaders on a monthly basis, with the Cummins Board of Directors on a quarterly basis and with external stakeholders on an annual basis (through the annual sustainability report). Any reasonable request for information and benchmarking is honored. At the site level, information is made available to employees on both traditional and electronic bulletin boards.

HSE data and reports are used in a variety of ways, such as to measure performance to plan, monitor strategic initiatives and to develop new countermeasures and tactical initiatives. Moreover, aggressive long-term targets have been established for the KPI's in an effort to reinforce continual improvement, drive the long-term functional strategy and align with the five-year Cummins business plan (see Appendix W for an example).

An example of data analysis in action: In 2012, regional charts on SLWDR identified that lost work days were out of proportion in the Mexico region. Four sites alone accounted for more than 30 percent of lost work days compared to the global value. This data finding prompted a rapid problem solving team to address the issue, and to develop a strategy and countermeasures to resolve it. Similarly, in 2013, a detailed data analysis indicating that about 25 percent of all injuries were musculoskeletal disorders led to a significant investment in new ergonomic training and assessment tools (see Section III for more detailed information).

Comparability: Annually, Cummins analyzes and benchmarks data, such as IR and SCR, with companies inside and outside its industry class (see Data Snapshot). As an example, IR at Cummins at 2013 year end

was 0.65, which is 85 percent less than the corresponding industry average of 4.3 (reference Bureau of Labor Statistics 2012 NAICS Code: 336). Similarly, SCR was 0.20, which is 82 percent less than the applicable industry average of 1.1 (reference Bureau of Labor Statistics 2012 NAICS Code: 336). Note that the equivalent ISICs codes are supplied in Section I.

Cummins also seeks and shares the very best practices and lessons learned both internally and externally, even with direct competitors. In order to frequently benchmark its results and practices with industry cohorts, Cummins participates in a number of forums such as National Association of Manufacturers, Campbell Institute, Lucien Brouha Work Physiology Symposium, ASSE, National Business Group on Health and Corporate Executive Board, to name a few.

Section V: HSE Results

Demonstration of continuous HSE performance improvement: Cummins doesn't just talk about health and safety and environmental stewardship, it puts its words into action.

Health Results: Through the company's health and wellness programs, Cummins reach extends to its employees and their families. Ongoing measurement and management of health initiatives helps us deliver superior programs for employees and their families. For example, we have created dashboards to track the results of employees' biometric screenings - data is aggregated, trends are tracked and results are shared with leadership. A snapshot of a biometric screening dashboard from Cummins Power Generation Plant in Fridley, Minn. is available in Appendix X, and examples of the previously described HealthMiles program data analysis is available in Appendix Y.

Cummins has codified the business case for these and other initiatives for senior management by measuring the Return on Investment (ROI) and outcomes. While the rising costs of health care burdened many employers and employees over the last several years, Cummins' health plan costs per employee, per year rose at a slower rate than the Fortune 500 company benchmark and is lower by nearly \$2,500 per employee - this indicates that Cummins and its employees are experiencing better health results rather than merely passing costs to plan participants (see health plan data in Appendix Z).

Cummins is also recognized for health results externally. Several Cummins U.S. locations have been named as American Heart Association Fit Friendly sites, while multiple U.K. locations were recognized by the National Health Service's "Better Health at Work" award.

The company continues to strongly endorse and incentivize health-related programs and activities, realizing the tangible benefits to the well-being of its employees and their families, and to the bottom line of the company.

Safety Results: Cummins leaders are constantly working to reduce injuries and illnesses in a way that promotes learning, continuous improvement and sustainability. By leveraging the OHSAS 18001 conformant Safety Management System (SMS), the company identifies potential health and safety hazards, sets key health and safety objectives and monitors health and safety performance. Despite narrowly missing its very aggressive internal improvement targets in 2013, the company has enjoyed an outstanding health and safety record in recent years. However, it believes that safety is never a completed job.

Sixty-six percent of Cummins facilities had a Severity Lost Work Day rate of zero in 2013, and 51 percent of sites recorded IRs of zero. Also in 2013, Cummins reported a company-wide IR of 0.65 and a contractor IR of 0.47, (new record lows for the company). From 2012 to 2013 the company experienced a six percent reduction in IR coupled with a 25 percent reduction in contractor IR.

Cummins has experienced remarkable improvement over time (see Appendix AA), and continues to set more challenging targets year after year. IR levels have been reduced from 1.30 in 2007 to 0.65 in 2013, a reduction of 50 percent, with a 68 percent reduction in SCR.

Environmental Results: Cummins was named to the Dow Jones World Sustainability Index in 2013 for the ninth consecutive year and was included in the North American Index for the seventh straight year. The World Index recognizes the top 10 percent of the world's largest public companies for their economic, social and environmental performance. The company finished in the 80th percentile in total scores and 83rd percentile in overall environmental initiatives. The GreenBiz Group and Trucost also recognized Cummins as a Natural Capital Decoupling Leader within the Natural Capital Leaders Index as one of only 34 companies that increased revenue while decreasing natural capital impacts over the most recent five year period.

Energy /Air: In 2006, the company set its first formal GHG reduction goal: a 25 percent GHG intensity reduction between 2005 and 2010 based on Cummins' comprehensive GHG emissions foot print. The focus on energy and GHG represented the first company-wide initiative of its kind targeting a specific set of environmental impacts around the globe. A 28 percent reduction was achieved against the initial goal; however, the company subsequently sold some of the sites who were key contributors and it is planning additional energy efficiency savings to meet its new 2015 target.

Cummins is a partner in the U.S. Department of Energy's (DOE) Better Buildings, Better Plants Challenge, which is the industrial component of the Better Buildings Challenge. The challenge is a national leadership initiative that calls on chief executive officers, university presidents and state and local leaders to significantly reduce energy use and share the results of their energy reduction strategies. The goal of the Better Buildings Challenge is to make American commercial and industrial buildings at least 20 percent more energy efficient by 2020. As a partner, Cummins has committed to a 25 percent energy efficiency intensity reduction from 2005 to 2015, which equates to a 27 percent GHG reduction.

In 2013, Cummins was recognized by the DOE for early achievement of the goal (34 percent reduction through 2013) and maintaining the performance for two years. Cummins shared its energy best practices publically through the DOE website, including details on its Energy Champion program and its showcase plant in Jamestown, NY. More information on Cummins' participation in the Better Plants Program can be found at: <http://www4.eere.energy.gov/challenge/partners/better-buildings-better-plants/cummins-inc>

Cummins continues to partner with the DOE by participating in the "Superior Energy Performance (SEP) Program". Launched by the DOE in 2013, the SEP goes beyond ISO 50001 in terms of energy performance improvement requirements; one goal of Cummins SEP Accelerator Program is to develop an Enterprise approach for conformance with the SEP Standard. Using the maturity of Cummins' Enterprise HSEMS, the company has fully integrated the ISO 50001 requirements into existing documentation and rolled out training sessions across the regions. As a result, three sites achieved ISO 50001 certification in 2013 (one of them was also SEP certified). An additional 10 sites, targeted because they represent two-thirds of the company's GHG emission footprint, are working toward ISO 50001 certification and three more are participating in the DOE SEP Accelerator Program in 2014.

Cummins has a comprehensive investment plan designed to achieve the company's 2015 energy and GHG intensity goals. It is focusing its efforts in four areas: 1) Improve existing facilities; 2) Recover test energy; 3) New construction; and 4) Energy management. Several elements of the company's energy efficiency program have been recognized as innovations: the establishment of an energy efficiency team, a capital fund that made available dedicated, annual funding for energy efficiency improvements and the "Unplugged Challenge," which started in 2008 to keep energy use to a minimum over site holiday shutdowns.

Smart capital expenditures on energy efficiency projects have yielded excellent returns, but in a tough economic climate, Cummins has excelled in creating a culture of energy champions to do low-cost or no-cost energy improvements. The innovative Energy Champions program, designed to equip a selected leader at every Cummins site with the skills and methods for driving energy efficiency improvement, is a four-day, 12 module course. Since the first class of Energy Champions graduated in 2009, participants from U.S., U.K., India, Mexico, Germany and Romania have become trained Energy Champions and deputies. Each Energy Champion returns to his or her site as chief coach and mentor to local area “Energy Leaders” to teach them how to seek operational improvements and sustain them as an ongoing best practice. While difficult to quantify the exact benefits of the program, the initial launch helped reduce energy consumption by 5-10 percent at participating sites through a combination of facility and equipment upgrades, enhanced management practices and improvements identified through efforts such as energy treasure hunts, compressed leak audits, Kaizen and 6S projects.

Water: Water continues to be an urgent global priority for both environmental and social sustainability since water is vital to food production, sanitation, power generation, raw materials processing, manufacturing, transportation systems and more. Cummins continues to develop programs that navigate the complexities and challenges unique to water management. It puts a priority on measurement tools and analyzing metrics that help the company make data-based decisions. The company is using a 2010 baseline (the 2008 baseline excluded some sites) that includes all business units and JVs which participate in its enterprise EMS.

Cummins is also emphasizing water scarcity risk mitigation in its operations and supply chain. The company has developed an internal tool that uses a variety of external data and internal factors that influence water use to help the site make decisions regarding specific water management practices.

In 2013, the company reduced both total water use and water use normalized to labor hours by approximately 10 percent and 10.5 percent respectively. Cummins’ total water use reduction is approximately 15 percent on an absolute basis, or 30 percent normalized to labor hours since 2010. Cummins four pronged water management strategy is achieving results that address: 1) water conservation, 2) operational risk, 3) community alignment and 4) supply chain risk.

Waste: Cummins recycles 89 percent of its total generated waste. Three of its large manufacturing facilities are at “zero landfill” status with several additional facilities ready to move toward the same. The approach used by these zero landfill sites helped Cummins comprehensively characterize and evaluate its global waste footprint, which in turn led to the development of a formal waste minimization strategy.

Using 2010 as a base year, Cummins’ total waste disposed decreased by about 12 percent in absolute terms, while experiencing a 28 percent reduction in disposal intensity, normalized to labor hours over the same period. Cummins has reduced process hazardous waste generation in the United States by approximately 14 percent on an absolute basis since 2010. In 2013, Cummins reduced labor-normalized process derived hazardous waste by 41 percent from 2010 levels. This substantial reduction was achieved through a multi-faceted effort that included product substitutions, improved waste segregation, improved inventory management and increased efficiency in painting operations.

Cummins has successfully completed multiple projects related to manufacturing process redesign, improved waste segregation, increased employee engagement and proactive supplier partnerships. It continues to make capital investments in equipment that facilitates waste reduction and increases the company’s ability to recycle. These efforts have helped Cummins reduce raw materials consumption, energy and water use and operating costs. Product substitutions have had an enormous impact on the company’s reduction of hazardous waste generation. Several facilities have successfully replaced solvent-based paints with water-based paints. For example, the Jamestown Engine Plant did so and reduced VOCs emitted per engine by

56 percent, with a 77 percent decrease in hazardous waste per engine and 42 tons of evaporated solvent avoidance over the course of one year's production. In addition, the effort saved the company more than \$300,000 in the first year alone. The Columbus Midrange Engine Plant took the effort to the next level by producing engines with no paint, using a rust preventive coating instead. They reduced hazardous waste per engine by 80 percent, saving \$200,000 per year.

Cummins reduces waste from the entire supply chain by considering product and packaging design and materials, resulting in significant savings. For example, Cummins Power Generation facility in Kent, U.K. collaborated with the Engine Business to save \$772,000 by replacing 483,000 pounds of traditional wood pallets with returnable packaging. The project, which paid for itself within six months, also reduced GHG by an estimated 170,000 pounds.

Section VI: Linkage Between HSE and Business Performance

Integration of HSE and business management systems: Cummins has structured its business management systems to manage change and direct focus on common objectives. By integrating HSE and business management systems, the company ensures alignment of organizational goals that lead to clarity and the ability to consistently deliver on common business objectives.

Utilizing formal management systems such as ISO 9001, 14001, 50001, and OHSAS 18001, Cummins drives organizational alignment, policy, strategic deployment and continual improvement. In addition, the company synergizes its established management systems with common business processes such as 6S, Lean Manufacturing and the COS. To ensure the company applies the same amount of rigor and consistency to the challenges it faces, it uses the same common business practices to solve business problems (ex: the use of 6S). The evolution of the 5S manufacturing initiative to include a sixth 'S' (for safety) leverages lean manufacturing process mapping principles to improve the company's risk assessment methodology. Many HSE toolkits were initially developed as 6S projects. As previously mentioned, HSE initiatives, standards and guidance can be found throughout all 10 of the COS Practices.

Evidence of added value or cost reduction: At Cummins, HSE is valued and the "right thing to do". It is recognized that great HSE results go hand-in-hand with many intangible business benefits, such as:

- Improved efficiency and quality are often realized when HSE improvements are implemented;
- Improved employee loyalty and retention because the company is known as a caring employer;
- Enhanced reputation as best in class for health and safety among industry peers, customers and suppliers;
- Access to global markets as a responsible company that can positively influence socio-economic conditions;
- Compliance with regulations and solid relationships with regulatory authorities; and
- Ability to meet customer demands for safety of their suppliers.

A sustainable company must be financially successful. Without financial success, it's more difficult to invest in building stronger communities, reducing a company's environmental footprint or in the research and development necessary to ensure the company's future financial success. Here are samples of some of the many ways Cummins demonstrates the quantifiable financial benefits of HSE:

- Taking a centrally-managed Enterprise approach to HSEMS implementation has allowed the company to secure over \$4.3 million avoidance savings with the third-party registrar.
- In 2013 alone, Cummins reduced more than 19,000 tons of GHG which represents nearly a four-fold increase from the previous year and 40-fold compared to the first year of the Environmental Challenge. In total, Cummins employees have reduced nearly 29,000 tons of GHG, which is the equivalent of conserving three million gallons of gasoline.

- During 2013, Cummins completed 97 capital projects with a total investment of \$17 million. These capital investments resulted in annual savings of \$3.6 million.
- Cummins joint ventures (JVs) are also engaging in energy efficiency actions. Tata Cummins Limited (TCL) in Phaltan, India has taken an active part in supporting Cummins' global actions on energy-saving and GHG emissions reduction. As a result, the site was awarded with the company's annual energy efficiency award. In 2013, TCL completed a comprehensive carbon footprint reduction project that identified numerous energy savings opportunities through optimization of equipment, processes and operating practices. The JV achieved a 26 percent reduction in plant GHG emissions, 21 percent reduction in electricity consumption per engine produced and savings of \$233,000 per year in energy costs.
- By using Cummins Global Building Standards, the company expects to improve its new construction energy impact through 2015 by 21 percent over what it would have if it merely accepted meeting the local building code. For 2014, the Energy Efficiency Fund is investing \$20 million in energy related projects, including increased control and measuring with BMS upgrades, meters and controls at major manufacturing facilities. The CMF is allocating about \$8 million across 34 projects, most of which have HSE aspects as part of the project.
- In the two years of Cummins Ergo Cup Competition, more than 150 projects totaled over \$5 million in cost avoidance and productivity gains.
- The health plan Financial Index (FI) is a measure of the relative financial efficiency of the health plan versus all plans in the Hewitt Health Value Index database. The financial index can be thought of as the amount an average employer would pay to offer \$1 of Cummins benefits to the company's demographic in its geography. An FI score greater than 100 percent indicates the plan is providing greater value per dollar spent than other plans in the database. Cummins' 2014 Financial Index value was 105.6 percent.

Continuous and systematic HSE and business performance improvement: 2013 continued more than a decade of transformation for Cummins. Over the past ten years the company has transformed the financial and HSE performance, its product and technology leadership and its global position and partnerships. The company positioned itself to grow more in the next decade than it did in the last. Just as importantly, Cummins is positioned to accomplish this goal in a healthy, safe and responsible way.

Over the last decade, profitability has improved from nearly breaking even to over 14 percent EBIT, and Cummins has tripled the size of its company while drastically reducing its employee and environmental impact. For example, the company has increased its market capitalization by more than 20 times in the last 10 years while reducing the number of work-related injuries by 73 percent during the same time period. As of 2013, Cummins achieved absolute reduction in water use (15 percent) and U.S. process hazardous waste (14 percent) from the baseline while the 2005 adjusted net sales grew by 13 percent. In 2013, Cummins kept the absolute energy usage the same as 2005 levels (6 percent) and the GHG emissions increased by only three percent over the same period as the 2005 adjusted sales increased by 51 percent (between 2005 and 2013).

Over the past 10 years, Cummins has realized the following improvements in safety key performance indicators:

- Incidence Rate – 73 percent reduction
- Severity Case Rate – 72 percent reduction
- Severity Lost Work Day Rate – 58 percent reduction

Cummins, like other businesses, has experienced extremes in the economic cycle. In 2007-2008, the company saw record sales and profits each year as economies continued to grow around the world. When the global economy moved into a severe recession affecting every region of the world beginning in the fourth quarter of 2008, Cummins sales dropped 25 percent by 2009. The company's performance during this time,

however, was very different from previous recessions and different from many other companies in the same industry. Cummins remained highly profitable – generating over \$700 million in EBIT, which equates to 7 percent of sales. During this period, the company moved quickly to align its cost structure, but at the same time it continued to invest in new products and technologies around the world. In addition, Cummins put a countermeasure strategy in place to maintain and continuously improve HSE, and shared this best practice at the 2012 National Safety Council Congress & Expo.

Cummins continues to be poised for long-term global growth. In order to ensure that the company can achieve growth and financial targets it must continue to focus on people, health, safety, the environment and aligning its business objectives. The health and safety vision, “Injury Free Living – It’s Our Responsibility” reflects Cummins overall goal of zero incidents on the path to world class HSE performance.

Demonstration of improvement in operational performance through HSE: HSE at Cummins is centered on active engagement and participation by employees and leadership in the management system. Highly engaged employees contribute to competitive advantage and sustainability by outperforming their disengaged colleagues and industry cohorts. For example, through its Operations Excellence scorecard Cummins has been able to draw a positive correlation between its locations that are operationally excellent in business/productivity measures and functionally excellent in HSE measures. This conclusion was drawn by comparing and contrasting sites with outstanding HSE results with sites that were struggling, and evaluating what was different between the sites. This study allows the company to quantify the elements of high performers, and to share these with other sites to use as improvement opportunities. Cummins learned that operational excellence extends beyond HSE and pervades other aspects of the business, such as cost, quality, service and efficiency. Cummins attributes these gains to active engagement at all levels, focusing on the right things and having an open dialogue or line of communication that leads to creating the right environment.

The company has also learned that engagement leads to sustainability. Engaged employees not only strive to meet their business objectives, but also often choose to participate in community involvement activities, improving the environment and improving on and off the job health and safety. Cummins thinks of engagement beyond compliance and more about creating opportunities for employees to have an impact on their own lives (personal health and safety and “eco-efficiency” at home), the lives of those they work with and the communities in which they live.

As mentioned, Cummins has been able to leverage several common business processes to achieve extraordinary gains in HSE. With 6S tools and processes now firmly embedded within Cummins culture, these processes have been applied to HSE-related projects, yielding significant savings each year. The tools and disciplines inherent to 6S are an excellent fit with HSE, facilitating continual improvement in the functions, reducing injuries and reducing the company’s environmental footprint - all contributing to the bottom line. Energy efficiency projects alone have resulted in \$20 million in annual savings with a 50 percent aggregate return on investment through more than 380 capital projects with a total investment of \$40 million.

HSE is thoroughly synergized with the business to dramatically enhance operational excellence and performance through the COS; in fact, three of Cummins’ five health and safety leadership tenants are centered on this principle. Cummins truly believes that HSE generates gains in motivation, communication and engagement which create real, tangible benefits in the profitability and reputation of the company. Simply put, Cummins views outstanding HSE performance as an indicator of operational excellence, not a competing priority to other aspects of the business.

Section VII: Lessons Learned and Path Forward

Lessons learned: Sharing lessons learned is a basic expectation at Cummins and this is particularly true of

HSE. There is no room to miss an opportunity to learn, grow and continuously improve. Many forums for sharing best practices are available, including a database of 6S projects, Fast Track communications on incidents or near hits, database of audit 'strengths', and a 'best practice' formal recognition.

As mentioned previously, some of the key HSE and business challenges for Cummins are globalization, change management and product life-cycle. Here are some lessons learned for overcoming these challenges:

- **Globalization:** Initiatives and toolkits must resonate across borders, cultures and languages. To ensure this, project teams are carefully chosen cross functionally and across regions. Each initiative must undergo a thorough review by key stakeholders to ensure key elements and messages aren't lost "in the translation". Cummins must ensure it understands and embraces the local operating culture while imposing the company's expectations for HSE. It is critical to go beyond the minimum of compliance with HSE regulations to achieve a safe and healthy working environment, but this cannot be successfully accomplished while ignoring local norms and culture. For example, consider the case of mandating the use of safety shoes for a site in which the local norm is to use sandals or bare feet. The use of safety shoes is clearly a necessary component of the site's health and safety program, but the approach for making the shoes available and training must be tailored so it makes sense to the local culture.
- **Change management:** To maintain a competitive advantage, Cummins must embrace improvements in technology and processes. These changes must be carefully and systematically introduced and monitored. Management of change is fully integrated into the Cummins Value Package Introduction, New Plant Start Up and Hazard and Impact Risk Assessment processes. The Cummins HSE Communication Strategy ensures that key messages are communicated timely and through the most effective channels.
- **Product Life-cycle:** Being a global leader in protecting the environment also provides Cummins with a competitive advantage. As an engineering company that invests in developing products, the company is uniquely positioned to extend its knowledge and skills to producing the safest, cleanest products from cradle to cradle (second use), and employees are willing to embrace such opportunities with enthusiasm.

At Cummins, a problem or challenge is seen only as an opportunity. By embracing the company's global diversity, carefully adhering to its business standards and processes and recognizing its employees' unique talents and skills, Cummins is able to rise above challenges and often emerge with an advantage.

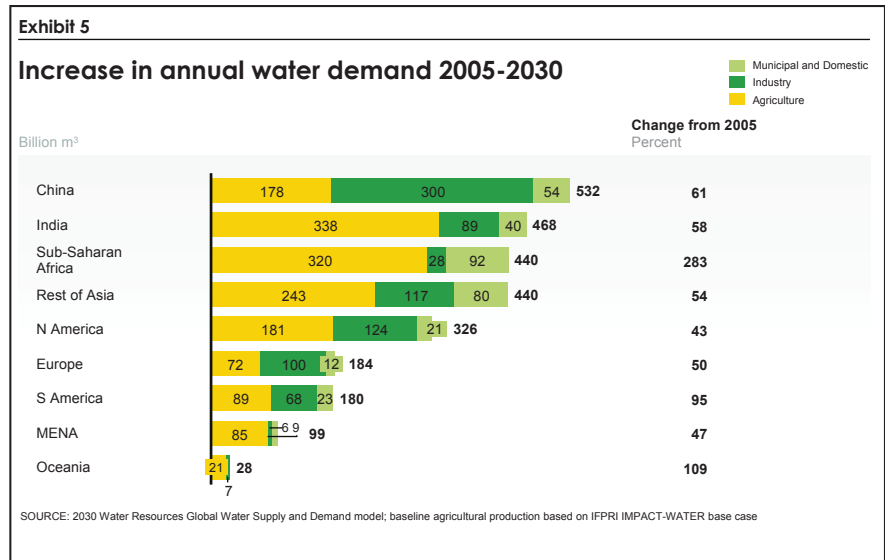
Path forward: By analyzing both the company's successes and failures, Cummins has demonstrated sustained improvements in HSE performance trends. The HSEMS, integrated with core business management tools such as COS, has proven effective. The company will continue to establish aggressive performance improvement targets, and it will support achievement of those targets through execution of its long-term HSE strategy, adjusting in the short-term annual goal tree planning process where data or changing circumstances dictate.

Cummins will continue to invest in and leverage technology to enhance its ability to communicate efficiently, to enhance its ability to look for opportunities in HSE data and to drive healthier and safer processes.

World class health, safety and environment is an overall culture in which HSE is an organizational value. Actively engaged and personally invested leaders and employees at all levels work together to sustain and continuously improve HSE work methods, behaviors and conditions, beyond the expectations of legal regulations, industry targets and best-in-class indicators for excellence. These defined, scalable and repeatable processes result in measurable improvement to the standard of living for Cummins employees, contractors, stakeholders, families, communities and environment.

Example HSE Challenge:

State of Problem: The United Nations estimates that by 2025, 1.8 billion people will be in countries or regions with absolute water scarcity and two-thirds of the world population could be under water stressed conditions. Many of the most pressing issues are present in high growth emerging markets, such as India and China, where Cummins has a significant and growing footprint. For Cummins, water is a critical resource for its core operations including manufacturing and testing. Therefore, water scarcity not only threatens the security of the communities where we live and work, but also the company's ability to do business.



Based on the magnitude of Cummins' operations and the severity of water scarcity issues, India represents a priority focus area for the company. While Cummins has not yet experienced water supply related business interruption, it has experienced increasing water supply interruptions that convey a risk exposure. Additionally, in parts of India, rising competition for shared water resources has caused conflicts manifested through plant shut downs in certain high water use industries, threatened legal actions over water supply allocation and civil protests. The above conditions are driving Cummins' proactive actions to manage the associated risk exposures in this and other water scarce regions.

Description of Actions: To create a holistic approach to water sustainability, Cummins' water strategy, launched in 2011, prompts action in four areas: 1) water conservation, 2) operational risk reduction, 3) community alignment and 4) supply chain. The first three action areas speak directly to managing conditions in India and the company has undertaken actions in each area to minimize risk.

Water Conservation is the foundational expectation that promotes:

1. Reduced direct costs;
2. Reduced demand and competition for shared local water resources; and
3. Improved ability to respond to supply interruptions.

Actions implemented to deliver the strategy include:

- Water Score Card – combines leading metrics (administrative and engineering controls) and lagging metrics (water use data) to drive and monitor site performance.
- Corporate Objectives and Targets – establishes performance expectations based upon site risk and efficiency profiles.
- Water Audits – educates site practitioners on complex water topics and identifies water management improvement opportunities. Assessments have been conducted at over 20 of the highest priority facilities, including a majority of the sites in India.

Operations Risk Management focuses on reducing production related water dependency. The "HSE Swim Lane" in the New Plant Start-up process is a key tool driving improvement. A recent success includes the installation of a closed loop, air cooled chiller system at Cummins new QSK plant in Phaltan, India. This substitution represents almost complete elimination of water dependency for cooling operations and off-sets of

between 10 and 25 million gallons of water use per year depending on test utilization.

Community Alignment is critical to Cummins' water management strategy. These efforts align with the company's philosophy of building stronger communities, but they also promote effective utilization and access to shared natural resources to retain support for its presence and license to operate.

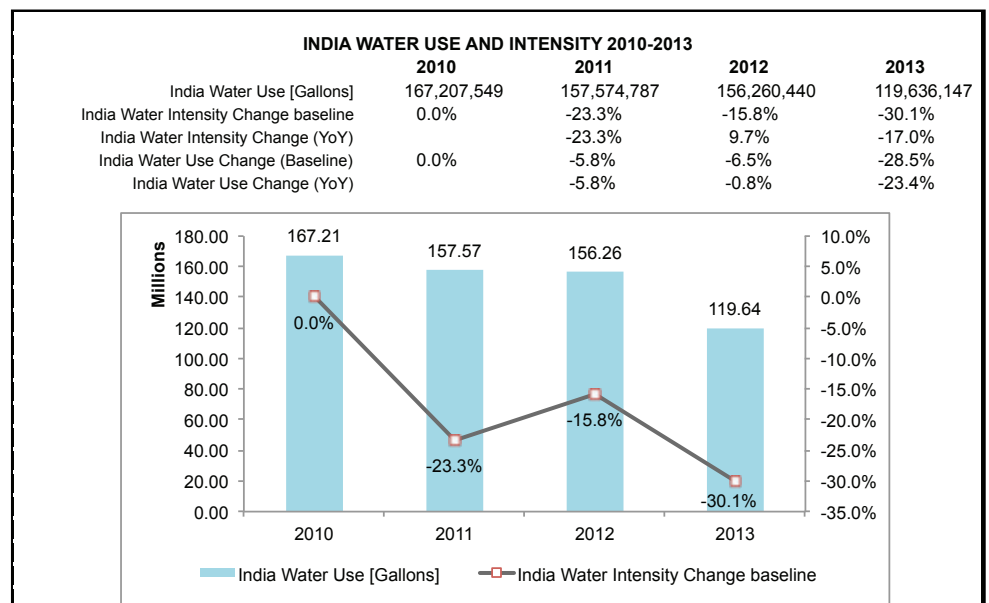
Nandal Village, located near Cummins Paltan, India MegaSite, consists of over 750 households with approximately 2,900 residents whose main sustenance is derived from agricultural activities. Water scarcity and lack of adequate water storage have represented an ongoing barrier to improving quality of life in the village. Through its corporate responsibility efforts, Cummins employees volunteered their time and talents to make the following improvements in the village:

- Constructed check dam, creating a 3.6 million liter reservoir capturing rainwater and supporting groundwater recharge.
- Aided village in securing government assistance to clean and de-silt a percolation area.
- Created six model farmers who agreed to:
 - Participate in Cummins' organized agriculture training events;
 - Conduct soil tests and adopt cropping pattern based on soil conditions and water availability;
 - Adopt water conservation programs; and
 - Prepare and use organic fertilizers.
- Implemented drip irrigation with two model farmers as a benchmark irrigation practice.
- Worked with village to install 80 toilets to promote sanitation and water quality protection.

Other projects conducted around India include a similar model village project (Manjarsumbha Village Water Management Project) focused on water availability near Cummins Ahmednagar facility and a reservoir expansion project (Khadakwasla Dam) near the Cummins India Limited facility in Pune, India.

Analysis of Observed Results: Cummins water strategy drives a holistic approach to water management that extends beyond traditional approaches that rely solely on conservation solutions. While conservation efforts remain critical, the shared nature of this constrained resource demands that Cummins recognize the implications of water scarcity issues beyond direct operations.

Since 2008, Cummins has collected water use data in its facilities. As part of the 2020 Sustainability Plan, Cummins is moving to a 2010 reference baseline company-wide. Driven by the activities discussed above, Cummins India facilities have reduced direct water use by over 28 percent and labor normalized water use by over 30 percent. This represents a direct water use reduction of over 47 million gallons in the company's most water scarce regions. Company-wide results over the same period trend similarly, with



reductions exceeding 15 percent and 30 percent on an absolute and labor normalized basis, respectively. As noted, two key benefits are reduced cost and demand on shared water resources. Equally important, reduced consumption improves business continuity by reducing water dependency in production operations and increasing the ability of on-site storage systems to handle longer duration water supply interruptions.

Outside of Cummins, the community water action results are even more impactful.

Nandal Village:

- Estimated groundwater recharge of over 43 million liters;
- Eliminated trucking operations to supply drinking water since community drinking water wells became fully charged;
- Increased economic independence with 34 hectares of additional property under cultivation; and
- Improved crop yields including ability to harvest multiple crops due to extended duration of water availability.

Khadakwasla Dam:

- Provided project management services for de-siltation of shoreline that increased capacity by an estimated 150 to 500 million liters;
- Reduced soil erosion through Cummins efforts to plant over 1,000 oak and bamboo trees; and
- Stabilized embankments using Cummins volunteers to place rip-rap along restoration area.

Manjursumba Village:

- Constructed check dam that created over one million liters of water storage and supported groundwater recharge;
- Created farm pond that supplies over 1.5 million liters of water for agricultural use;
- Increased infiltration pond volume by 10 million liters, resulting in all wells within one kilometer having water available;
- Eliminated daily travel of over four kilometers by village women to obtain water; and
- Increased village per capita income threefold.

In addition to providing a balanced approach to water management, this work reflects effective use of Cummins' resources. As plant operations become increasingly efficient, further conservation gains substantially increase in cost, whereas, the same resources put to work in neighboring communities creates significantly higher benefit.

Reflection on Continuous Improvement: Moving forward, Cummins will sustain and advance these results through goals established as part of the company's 2020 Sustainability Plan. Goals specifically related to water are:

- Achieve a 33 percent water use reduction globally on a labor normalized basis and
- Achieve water neutrality in 15 facilities in priority countries (India, China, South Africa and Mexico).

The goals ensure that Cummins continues to drive improvements in its operations while recognizing that creating a net positive community impact is also a priority where water resources are constrained. The concept of water neutrality is that the company will do work in its communities to off-set the footprint of its operations. This approach drives a balanced perspective that is effective at advancing Cummins holistic water management strategy.

Most notably, this approach offers the following comprehensive benefits:

- Reduced cost
- Reduced risk exposure
- Strengthened community sustainability
- Effective allocate of resources
- Enhanced community support for Cummins license to operate
- Strengthened brand image