

## We Build Environments

2012 SUSTAINABILITY REPORT

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JM's 2012 Sustainability Report, *We Build Environments*, has been created in alignment with Global Reporting Initiative (GRI) G3.1 Guidelines at a C Application Level. For more about this report, see page 27.

### From JM Leadership

In New York City 155 years ago, this company was born from the concept that a better building material could be developed that would improve the way we live. Although the world looks a lot different today, the products that JM manufactures still make an essential contribution to a variety of environments.

The path to sustainability doesn't occur overnight. It requires engagement from employees at all levels and cultivating a culture of sustainability. After 34 years with JM, I can tell you that our culture of sustainability benefits the business and is a source of great pride for the company and our employees. We intend to capitalize on our



commitment to sustainability to ensure we are better prepared to both meet the opportunities and challenges of a dynamic world and that we continue to deliver safe products that fully satisfy our customers.

In 2012, we further strengthened our position as a leader in the building products and engineered materials industries by appointing Dr. Tim Swales as our first chief sustainability officer. Tim also oversees our Research & Development centers – combining innovation and sustainability into a powerful new platform for responsible growth.

JM has also been aggressive in implementing programs such as ISO 14001 for Environmental Management Systems at our facilities both domestically and abroad. Across the globe, JM's management and employees are working hard to more efficiently manage and measure energy use, enabling the company to realize higher levels of productivity while benefiting from cost savings and lower carbon intensity.

I am also pleased to announce that we established fiveyear targets for key social metrics in the following areas: performance management; people development; health, wellness and safety; human rights and ethical treatment in employment; and community investment. These commitments to our employees extend beyond JM to our customers, suppliers, communities and other stakeholders.

Despite our progress, we also experienced some challenges in 2012. Our teams continued to reduce waste streams by operating more efficiently; however, total waste intensity increased by almost 13 percent due to furnace rebuilds and unplanned maintenance activities. Waste intensity reduction remains a focus area for the company and some of our efforts are highlighted later in this report. I want to thank Warren Buffett for providing me the opportunity to lead the company as CEO. I also want to extend my gratitude to all of the dedicated JM employees who I've had the privilege to work with during my career and who continue to pave the way for the company's future success. As CEO, I remain committed to the continuous improvement of our products, our people and our processes. Together, we will continue to make a positive contribution – financially, environmentally and socially – as we build a sustainable future for JM.

### Mary Rhinehart

President & CEO

### A Message from Warren Buffett

In 2012, the economic landscape continued to evolve and the voice of the people dynamically shaped the geopolitical landscape. Mother Nature inflicted overwhelming challenges in the U.S. and abroad, and people's interest in protecting the environment continued to increase.

Change is inevitable and is often a catalyst for innovation. Companies who embrace uncertainty as fuel for innovation and sustainability create value for humanity and move us collectively forward. At JM, innovation and sustainability have become more closely intertwined, often with one serving as a driver for the other.

It is in this spirit that JM has positioned itself for a prosperous future. In a year of firsts, JM welcomed a new Chief Executive Officer, Mary Rhinehart, a JM veteran who is the first female CEO in the company's rich history. Additionally, the roles of Technology and Sustainability Leader were combined under the CSO title to better strengthen and widen the moat around JM's businesses, and employees still serve as the energizing force that takes sustainability beyond what is said to what is done.

Congratulations to JM on its second sustainability report and its dedication to serving customers responsibly and with integrity.



Warren E. Buffett Chairman of the Board Berkshire Hathaway Inc.



### Q&A with JM's Chief Sustainability Officer

In addition to his responsibilities as Vice President of Research & Development, Dr. Tim Swales was named Chief Sustainability Officer in 2012, enabling a stronger integration of sustainability and innovation across JM's businesses.



### 1. What is the relationship between sustainability and innovation at JM?

A lot of companies view the Chief Sustainability Officer role as a marketing or compliance function. At JM we see things a little differently. We realize that growing and serving our customers sustainably for another 155 years will require plenty of innovation.

More specifically, the linkage can be seen in the four ways JM approaches innovation. These are: (1) commercial innovation that finds new applications and business models for our current offerings; (2) operational innovation that creates step changes to our costs, materials usage and value delivery systems to better serve our stakeholders; (3) innovative new product development that protects and grows our current businesses and creates opportunities to enter new markets; and, (4) selectively building leading-edge core technology platforms. These four areas of focus create a strong foundation for a successful sustainable business.

### 2. How does sustainability create value for the organization?

Sustainability ensures our business and thought processes are focused on new dimensions of opportunity for future growth. Sustainability is becoming increasingly important to many of our key stakeholders (customers, suppliers, employees, communities) and companies can either choose to embrace this opportunity or ignore it. We've chosen to embrace it. A good example would be JM's increased use of bio-based materials, such as the new building insulation binder we introduced into the Canadian market in 2012. We plan to utilize this technology across our products in the future.

## 3. What are the biggest opportunities, risks and challenges for JM regarding sustainability performance and what areas could JM improve upon the most?

The best opportunities for us will continue to be in markets like construction and transportation, which are significantly impacted by increasing demands and regulations for energy efficiency. For the foreseeable future, insulation will remain the most cost-effective way to reduce a building's energy usage. Light weighting of vehicles will also continue to increase the demand for fiber glass reinforcements for plastic materials. In addition, sustainability will drive increased demand for recyclable plastic components.

From a sustainability risk and challenge perspective, the construction industry consumes a huge amount of raw materials. Some estimates suggest that more than half of all resources extracted from the earth are used in building materials. Many construction materials are very energy intensive to produce and a significant amount will end up in landfills. The pressure from regulators to address these waste issues will only get more intense. Today we use significant amounts of recycled glass in our insulation products, recycled newsprint in our coverboards and recycled polyester in our synthetic nonwovens. The increasing demand and potentially limited availability of pre-consumer and post-consumer recycled content will be a great challenge in the future.

Like a lot of companies, an area where we strive to improve is in data collection from our production facilities and suppliers' processes. Having accurate data helps us to not only limit our own environmental footprint but also develop LCAs (life cycle assessments) of our products for our customers.

## 4. What role do JM's products play in enhancing the sustainable efforts of its suppliers, customers and consumers?

A lot of JM's products drive improved energy efficiency for our customers and end users. The most well-known of these is our broad range of building and roofing insulation products. Other products, such as filtration media, enable our customers to provide solutions for improved air and liquid quality.

JM's global supply chain organization works closely with our suppliers to optimize resource consumption and reduce transportation impacts.

### 5. How does JM maintain consistent sustainable practices and performance across all regions?

JM's European and Asian Engineered Products businesses are well-established and afford us visibility to new sustainability trends emerging from this region. Additionally, our global councils on Innovation and Sustainability help us maintain consistent sustainable practices and performance across all regions. Two examples of global initiatives are JM's solid waste reduction efforts and our energy intensity reduction goals.

### 6. How do JM's employees contribute to achieving the company's sustainability goals?

Our employees are the human capital that drives all of our sustainability efforts. This stakeholder group is core to achieving our major goals. We see increasing employee interest with respect to the environment and JM's social performance, especially from the Millennial demographic.

### Dimensions of Sustainability: JM's Key Areas of Focus

In 2011 JM established sustainability goals focused on reducing our environmental footprint while making a positive contribution to society. JM updated its goals in 2012 (see Looking Ahead, page 27) that retain these key areas of focus:

- 1. Reducing the energy and carbon intensity of our operations.
- 2. Developing long-term recycled materials targets.
- 3. Eliminating and/or reducing CMRs (carcinogens, mutagens and reproductive toxins) in finished products.
- 4. Reducing solid waste intensity.
- 5. Developing long-term life cycle assessment programs on all major product lines.
- 6. Using social sustainability metrics and targets to drive improvement.

### 2012 Performance Summary

### **Energy and Carbon Intensity**

- Total energy usage increased by 0.9 percent
- Total production decreased by 0.4 percent
- GHG intensity increased by 0.6 percent
- Projects to reduce energy use and carbon intensity range from transportation initiatives to lighting retrofits at plants

### **Recycled Materials**

- Fiber glass insulation average recycled content up 19 percent from 2011
- European businesses' amount of recycled content was reduced one percent

### CMRs

- Eliminated antimony trioxide (IARC Category 2B carcinogen) from one product coating formulation
- Plans were developed for next phase of CMR (carcinogens, mutagens and reproductive toxins) eliminations and reductions

### Solid Waste

- Waste intensity increased by 12.6 percent
- A methodology was developed to evaluate and prioritize waste-reduction projects across the business units

### Life Cycle Assessments (LCA)

- Five product platform LCAs were completed
- An LCA program plan was established

### **Social Sustainability**

- Established targets in key areas. By the end of 2016:
  - Double employee volunteerism
  - 10 percent year-over-year reduction in safety incident rates
  - 100 percent of salaried employees will receive performance reviews and have development plans in place
  - 100 percent of salaried employees will have written and approved goals
  - Increase participation in wellness plans to 65 percent in the U.S.
  - Ensure all employees participate in training other than compliance, at a minimum every three years
- Healthcare benefits were extended to domestic partners beginning in 2013

The remainder of this report describes how JM is creating societal value while reducing the environmental impact throughout the value chains in which we operate.

### JM Foundation

### **Fundamental Priorities**

At Johns Manville, our core values guide our words, actions and the way we interact with customers and the communities we serve. Along with our core values, JM is guided by six fundamental priorities that define the company and shape the way we do business today and in the future. An unwavering commitment to the fundamental priorities strengthens the foundation built by our core values.

#### **Customer Satisfaction**

We do what we say we are going to do and we meet our commitments.

#### **Employee Commitment**

We provide employees with the resources and support necessary to be successful.

#### **Financial Strength**

JM is a financially sound company and a wholly owned subsidiary of Berkshire Hathaway.

#### **Environmental Respect**

The company is committed to protecting the world's natural resources and the environment for the benefit of future generations.

#### Integrity

JM employees act with integrity at all times.

#### **Operational Excellence**

The company and its employees instill excellence into every facet of the operation.

### **Core Values**

#### People - Our Differentiator

JM engages its employees, customers and stakeholders across the globe with mutual trust, integrity, respect and a personal interest in building the future together.

#### Passion - Our Motivation

The company is committed to providing employees and customers with high-quality experiences and innovative solutions.

### Performance - Our Engine

JM accepts ownership and accountability for achieving outstanding results by doing things the right way.

#### Protection – Our Responsibility

The company cares about the health and safety of employees, customers and the communities it serves and keeps its impact on the environment in mind at all times.

### **Organizational Profile**

Johns Manville (JM), a Berkshire Hathaway (NYSE: BRK.A; BRK.B) company, is a leading manufacturer and marketer of premium-quality products for building insulation, mechanical insulation, commercial roofing and roof insulation, as well as fibers and nonwovens for commercial, industrial and residential applications.

Our company serves markets that include aerospace, automotive and transportation, air handling, appliance, HVAC, pipe and equipment, filtration, waterproofing, building, flooring, interiors and wind energy. JM conducts business through four strategic business units: Engineered Products Americas; Engineered Products Europe/Asia; Insulation Systems; and Roofing Systems.

In business since 1858, JM holds leadership positions in all of the key markets that it serves. Operating in 45 manufacturing facilities located in the United States, Canada, Sweden, Germany, Slovakia and China, the company achieved sales of approximately \$2.5 billion in 2012.<sup>1</sup> JM completed conversion of an existing building into a new commercial roofing single ply membrane manufacturing facility in Milan, Ohio, and acquired the remaining interest in Industrial Insulation Group, LLC (IIG), which supplies mineral wool, calcium silicate and perlite insulation products to the commercial and industrial insulation markets.<sup>2</sup> The purchase includes five manufacturing plants located in Georgia, Louisiana, Colorado, Alabama and Texas. IIG products provide protection in high-temperature processes and fireproofing in the refining, petrochemical, power generation, pulp and paper, and metals manufacturing sectors. Aggregate employee wages worldwide totaled nearly \$430 million in 2012 and the cost of employee benefits totaled just over \$175 million.<sup>3</sup> Fifty-two percent of our global workforce is represented under a collective bargaining agreement. JM has implemented positive management practices, and has a goal to provide a workplace where employees feel they can work with management to find mutual solutions that meet the needs of employees and the business in a fair and constructive manner, regardless of whether they are represented by a third party. Where employees have chosen or are required by law to be represented by a third party, we recognize the third party's right to represent employees and deal with elected representatives in an open, honest, respectful and business-like manner.

JM is governed by a board of directors consisting of its President & CEO; CFO; and General Counsel. The procedures for overseeing JM's sustainability goals and strategies are embodied in the work of the JM Sustainability Council, which is led by the company's Chief Sustainability Officer and includes members of the company's senior leadership team.

### **Revenues by Business**



### By Geographic Region



Workforce: 70% hourly; 30% salaried 70% North America 28% Europe 2% Asia

1 As a wholly owned subsidiary of Berkshire Hathaway JM does not publicly disclose detailed financial information.

2 Data collection does not include IIG.

<sup>3</sup> Benefits include health and other insurance, pension, 401(k) and other miscellaneous benefits.

### **Operations Map**

#### North America



#### **Insulation Systems**

Phenix City, AL\* Tucson, AZ Willows, CA Innisfail, Canada Denver, CO Fruita, CO\* Brunswick, GA\* Winder, GA Richmond, IN McPherson, KS Grambling, LA\* Belgrade, MT Edison, NJ Penbryn, NJ Defiance, OH Cleburne, TX Houston, TX\* Richmond, VA

> Engineered Products Europe / Asia

### Technical Centers

China Qingpu, Shanghai, China Berlin, Germany Bobingen, Germany Littleton, CO Waterville, OH

Bobingen, Germany

Luoyang, Henan,

Karlstein, Germany Steinach, Germany Wertheim, Germany Trnava, Slovakia Helsingborg, Sweden

Wertheim, Germany Trnava, Slovakia

Europe



Asia



Roofing Systems	Scottsboro, AL South Gate, CA Cornwall, Canada Jacksonville, FL Macon, GA Rockdale, IL Bromen, IN	Lewiston, ME Fernley, NV Plattsburgh, NY Milan, OH Oklahoma City, OK Hazle Township, PA
Engineered Products Americas	Bremen, IN Richland, MS Waterville, OH Spartanburg, SC	Etowah, TN Cleburne, TX



### Performing Life Cycle Assessments

JM continues to pursue life cycle assessments (LCAs) as a tool to gain a clear understanding of the environmental impacts of products over their lifespan – including sourcing of raw materials, and production, distribution, use and end-oflife considerations. JM is also active in assisting customers with understanding the environmental implications of their products by providing life cycle impact assessment (LCIA) information to companies and trade associations. Because of the interconnections surrounding LCAs, JM often partners with various stakeholder groups in the building and specialty material industries to conduct these studies.

For example, JM, a leader in polyisocyanurate insulation manufacturing, helped the polyiso insulation industry conduct a cradle-to-grave LCA on polyiso roof insulation and wall sheathing to better understand the environmental impacts of the insulation over its life cycle.<sup>1</sup> The study followed the International Standards Organization (ISO) 14040 series of standards and industry best practices. Polyiso insulation is a durable rigid board insulation product with versatility for use in most commercial roofs as well as a sheathing product to improve the overall thermal efficiency of walls.

In Europe, JM participated in a cradle-to-gate life cycle inventory and life cycle impact assessment of continuous

filament glass fiber products including direct and assembled rovings, plus wet and dry chopped strands.<sup>2</sup> This study also followed the ISO 14040 series of standards and industry best practices. JM manufactures continuous filament glass fiber (CFGF) products in Europe, which are mainly used in the reinforcement of thermosetting and thermoplastic resins. The report concluded that most of the energy consumption, depletion of non-renewable resources, increase of greenhouse gas emissions, and acidification come from the glass melting stage. By contrast, downstream process stages, where CFGF products are adapted for customer specifications (coating by chemicals and chopping), play only a limited role in the LCA results.

JM's European business also has participated in an LCA study of intermediate materials for light-weight composites widely used in cars, trucks, electrical equipment and building materials. For more than 45 years, JM's Slovakia operation has manufactured glass fibers that reinforce these materials. The 2012 report concluded that light-weight composites are not only recyclable but also have a significantly lower carbon footprint than traditional materials used in similar applications (e.g., steel and aluminum).<sup>3</sup>

Finally, JM participated in a cradle-to-gate life cycle inventory of light-weight composites manufactured in the U.S. to help understand and explain the sustainable attributes of these materials. The study evaluated the environmental impacts from utilizing different processes to manufacture fiber glass reinforced polymer composites.<sup>4</sup>

<sup>1&</sup>quot;Life Cycle Assessment of Polyiso Insulation," Polyisocyanurate Insulation Manufacturers Association, 2011.

<sup>2&</sup>quot;Life Cycle Assessment of Continuous Filament Glass Fiber Products, GlassFibreEurope, 2012.

<sup>3&</sup>quot;Life Cycle Analysis Study for SMC/BMC," European Alliance for SMC/BMC, 2012.

<sup>4 &</sup>quot;Life Cycle inventory Data for U.S. Composites," American Composites Manufacturing Association, Life Cycle Inventory Project, 2012.



### We Build Energy Efficiency

JM's insulation helps customers reduce energy use and, as a result, emission of air pollution. In fact, the benefits from insulation far outweigh the cost to produce it. In its first year alone, a typical pound of insulation saves up to 12 times the energy needed to produce it.<sup>1</sup> Reduced energy consumption means lower emissions of greenhouse gases and other pollutants. JM provides a full range of roofing and building insulation solutions that help optimize energy usage, a critical step for improving both energy efficiency and operating costs over the life of the building.

### Insulation Systems

JM partnered with visionaries in green building and sustainable living when insulating the VISION House® Los Angeles, which was designed and built to meet the strict energy-saving requirements of the California Green Building Standards Code (CALGreen) and ENERGY STAR.

Products used to meet design requirements included JM Spider<sup>®</sup> custom insulation, which is formaldehyde-free and made of 98 percent fiber glass. An average of 25 percent of the fiber glass is made of recycled glass content. JM Corbond MCS<sup>™</sup> (Multi-Climate Solution) insulation acts as a barrier to keep the indoors from the outside climate, creating thermal, air and moisture isolation. Because it will not shrink or settle, its thermal and acoustical performance lasts the life of a structure.

### **Aerospace Insulation**

JM worked with a key customer to design an insulation package for a new commercial airplane slated for completion in 2013. JM completed the first phase of the project by conducting sound transmission tests on product prototypes in the hemi-anechoic chamber at the Johns Manville Technical Center in Littleton, Colorado. The final package included specially designed light-weight and water-repellent fiber glass



**VISION Home** 

"Incorporating JM insulation products into the VISION House added huge value to the overall project. We were able to use JM Corbond MCS spray foam insulation in the roof rafters, rim joists and gable ends. This created a conditioned attic space, improving the comfort level and ability to work in the attic as well as the overall energy efficiency of the duct systems. Further, by spraying the rim joists and areas behind tubs and fireplaces, we were able to achieve the tightest thermal envelope of any project we've constructed to date. JM Spider insulation in all exterior walls and unfaced acoustic batts in interior walls made for a complete and excellent system."

Mark Sapiro, Co-Founder, Structure Homes, Woodland Hills, CA

<sup>1</sup> Green and Competitive: The Energy, Environmental and Economic Benefits of Fiber Glass and Mineral Wood Insulation Products. Energy Conservation Management, Inc.; The Alliance to Save Energy; Barakat and Chamberlin, Inc. June 1996.

insulation that provides excellent acoustical and thermal properties without increasing weight, thereby allowing aircraft manufacturers to build quiet, comfortable and fuel-efficient equipment.

### **Roofing Systems**

JM is a founding member of CEIR (Center for Environmental Innovation in Roofing), a recognized industry leader dedicated to promoting the development and use of environmentally responsible, high-performance roof systems. CEIR's RoofPoint<sup>™</sup> is the first comprehensive roof-rating system for the assessment and selection of sustainable roof systems (www.roofingcenter.org).

The Effingham Career Academy in Savannah, Georgia is one of several JM projects submitted to CEIR for the RoofPoint<sup>™</sup> Pilot Program. Effingham Career Academy is a great example of achieving sustainability goals with products brought to the market by JM. The JM products installed included a highly reflective roofing membrane and an innovative solar power solution. Both were chosen because they contribute to the increased energy efficiency of the building envelope.

### Built to Last

Durability and longevity are important factors in building materials for sustainable environments. Materials with longservice lives require replacement less often, thus requiring fewer raw materials and creating less waste over their lifetime.

### **Engineered Products**

Glass fiber-reinforced composites compare favorably with traditional materials such as steel, aluminum, and concrete, in regards to durability and strength-to-weight ratio. These materials are used in a wide variety of applications including the automotive and transport sectors, electrical and electronics industry, and the construction industry. Other markets include pipes and tanks, agricultural equipment, industrial machinery and wind-turbine blades, in addition to sports, leisure and marine sectors. Weight-reduction initiatives using composite materials have become common in the transportation industry. In addition to providing fuel savings by reducing the vehicle's weight, the composite materials are also resistant to corrosion and rust thereby requiring less repair and replacement. Recent LCA studies have revealed that the environmental impacts of glassfiber-reinforced composite parts and structures are lower than their steel and aluminum counterparts.

JM rovings, used in sheet molding compounds (SMC), provide strength, excellent corrosion resistance, and design freedom with a bonus of 40-to-50 percent lower CO<sub>2</sub> emissions for



Reducing vehicle weight is one of the most straightforward ways to reduce the energy consumption and  $\rm CO_2$  emissions of a car.

stationary functions throughout the life cycle (cradle-to-grave).<sup>1</sup> In addition, maintenance is much lower than for solutions based on traditional materials. For example, the equivalent part made in steel would require new layers of coatings every 5-to-10 years.

In transportation markets, JM's engineered products also provide fuel savings due to being strong yet light-weight, adding to the sustainable benefits. Reducing vehicle weight is one of the most straightforward ways to reduce the energy consumption and, as a result, the CO<sub>2</sub> emissions of a vehicle. A weight reduction of 100 kg results in 8 g/km lower CO<sub>2</sub> emissions.<sup>1</sup>

### **Roofing Systems**

Durability is fundamental to sustainability. Sustainably designed roofs accommodate not only the safe occupancy of people within a building but also provide long-term performance and watertight attributes.

Furthering its commitment to the roofing industry, with over \$125 million invested in our commercial roofing business over the past five years, in June 2012 JM opened its newest roofing manufacturing plant in Milan, Ohio. This plant is dedicated to ethylene propylene diene monomer (EDPM) single-ply roofing membranes. JM announced the project in 2011 and began shipping EPDM membranes from the new plant shortly after it opened. EPDM, the second-largest commercial roofing membrane (by volume in 2012), is an elastomeric synthetic rubber material known for its durability and superior weathering characteristics. Approximately 80 percent of the EPDM market is located within 500 miles of the new plant, thereby reducing transportation impacts.

JM's roofing systems are built to last and are ideal for hospitals, educational facilities, office buildings, and recreational and sports complexes. In addition to durability, many of JM's roofing systems contribute to LEED<sup>®</sup> certification and Roofpoint<sup>™</sup> credits.

<sup>1 &</sup>quot;Life Cycle Analysis Study for SMC/BMC," European Alliance for SMC/BMC, 2012



### Built for Life

Buildings are critical support systems and the materials used to construct them are essential to the form and function of spaces in which we live and work. That's why JM is committed to designing and manufacturing products that provide a sustainable benefit to the built environment.

### Insulation Systems

JM led the industry by offering the first complete line of Formaldehyde-free<sup>™</sup> fiber glass building insulation in 2002; more recently, the company developed the first fiber glass-based office partition on the market made without formaldehyde. Working with a longstanding partner,



JM's product development team spent nearly two years perfecting a thin rigid insulation board with a water-based acrylic binder that met the standards for durability and acoustics required by a global manufacturer of workplace products and services. Our partnership combined the knowledge, disciplines and technologies to satisfy the customer's need to provide an office partition that improves indoor air quality while controlling sound.

#### **Engineered Products**

For years JM has focused on innovation in processes, products and business models. For example, JM collaborated with Pleatco to develop a superior filtration media for water purification. This medium protects consumers by providing the cleanest water possible for swimming pools and spas. The companies capitalized on their respective research labs to develop a durable, engineered spunbond nonwoven for cartridge filtration. The fiber mat formation, coupled with other complex design factors, created a nonwoven that enables the customer's filtration system to rapidly clean water and quickly remove fine particles, all while using less energy and maintaining good water flow. That's co-innovation at work.



In Europe, JM teamed up with a customer to develop a revolutionary new high-pressure laminate exterior facade panel, m.look by FunderMax, which offers architects design freedom while achieving A2 fire classification on high-rise buildings. The joint team was charged with developing a cost-effective product based on JM's glass-fiber nonwovens that fulfills the highest safety requirements, while providing unlimited décor opportunities for the building owner. FunderMax introduced its m.look product during BAU 2013, in Munich, Germany, the world's leading trade fair for architecture, materials and systems.

### **Roofing Systems**

Integrated roofing systems uniquely protect structures from nature's heat, cold, wind, rain and snow as well as from human foot traffic. Many aspects that impact a roof are difficult to predict and vary geographically. JM applies extensive capabilities in structural, chemical, mechanical and thermal analyses in its product design to address the complex set of elements that impact a roof.



### **Building Environmental Respect**

### Enhancing Environmental Focus & Energy Efficiency

JM is committed to conducting business in ways that facilitate environmental respect - one of the company's six fundamental priorities. In North America, JM introduced a corporate ISO 14001 Environmental Management System (EMS) that provides a systematic approach to evaluating environmental risks and implementing controls. Three facilities, located in Scottsboro, Alabama; Etowah, Tennessee; and Tucson, Arizona implemented the EMS in 2012 and are undergoing registration audits in the first guarter 2013. Six additional facilities will implement the EMS in 2013. In 2012, JM continued environmentally responsible efforts by delivering products that reduce energy use, and by working toward implementation of operational energy efficiency improvements throughout the company. These initiatives continue to play a critical role in managing JM's overall level of sustainability and minimizing the company's environmental footprint.

In an effort to better understand energy consumption, make strategic energy-related decisions, and continually improve energy management, JM's European nonwovens business implemented energy management systems guided by the International Organization for Standardization (ISO) in all five German manufacturing sites. The facilities obtained ISO 50001 certification in November 2012, enabling better incorporation of energy management practices that have led to greater environmental management endeavors. In addition to the ISO initiatives, JM collaborated with thirdparty organizations such as Modular Process Controls (MPC) to develop extensive energy models at the Defiance, Ohio and Cleburne, Texas plants. The goal of the program is to decrease energy costs by reducing energy intensity. JM has been active in thoroughly auditing facilities, such as the Innisfail, Alberta, Canada fiber glass insulation plant, via energy mapping, in order to understand the heat inputs and outputs and how to capture and reincorporate energy into the manufacturing process. Finally, plant-by-plant lighting audits and retrofits have been conducted to achieve savings from energy-reduction opportunities. For example, at JM's McPherson, Kansas plant, nearly 2,500 lighting fixtures were either replaced or retrofitted with efficient fluorescent lighting technology and occupancy sensors yielding a power reduction of 297 kW and an energy reduction estimated at 3M kWh.

Originally introduced in 2011, JM's European locations have expanded the implementation of natural-gas motors for electricity generation and heating. These innovative motors recover energy from natural gas combustion exhaust, making the motors significantly more energy efficient (90 percent in total) than utility electrical generation alone (about 40 percent). By capturing the excess heat, these cogeneration processes utilize resources that would otherwise be wasted.

With regards to other environmental aspects, JM had one reported spill in 2012. An oil spill of approximately 500 liters that reached a surface water body was discovered at a nonoperational plant in Oskarström, Sweden, and immediately cleaned up in collaboration with the local regulatory agency.

#### Total Direct and Indirect Energy Consumption<sup>6</sup>

In gigajoules<sup>1</sup>

Direct:	<b>2010</b> <sup>2</sup>	<b>2011</b> <sup>2</sup>	<b>2012</b> <sup>4</sup>
Liquefied Petroleu	ım		
Gas (LPG)	277,191	163,834	488,734
Natural Gas	8,842,444	9,248,937	9,072,684
Indirect:	<b>2010</b> <sup>2</sup>	<b>2011</b> <sup>2</sup>	<b>2012</b> <sup>4</sup>
Electricity	5,100,512	5,152,176	5,132,743
TOTAL	14,220,148	14,564,947	14,694,162

#### **Direct vs. Indirect Energy**

Consumption by Primary Energy Source



### Carbon Footprint

Operational excellence is one of the company's fundamental priorities and an engine for enhancing productivity. JM's ability to translate energy and fuel consumption more efficiently into product output is not only better for the environment, but more profitable as well. As a manufacturer of insulation, roofing and engineered product solutions, JM acknowledges that converting raw materials such as silica into the beneficial products we produce requires significant amounts of energy. Although challenges may arise from year to year, our long-term objective of measuring and reducing our carbon footprint remains the same. Therefore, JM is continually exploring and implementing initiatives to monitor and reduce emissions so that we can make our business more profitable, innovative, and better positioned for the future.

In 2011 (the most recent data available), JM experienced a 6.3 percent increase in air emissions compared to 2010.<sup>5</sup> The primary drivers of this increase included an increase in JM manufacturing in 2011, compared to 2010, and improved emissions measurement and monitoring at our Trnava, Slovakia and Cleburne, Texas facilities. Revising emission

3 2011 Air Emissions and HAP data is the latest available. 2012 data will be reported in the 2013 JM Sustainability Report. Other environmental data reflects the past year (2012).

- 4 Numbers are qualified as JM's best estimate based on available information at time of publication.
- 5 Air emissions include emissions reported to regulatory agencies as required by permit.

6 GHG, Direct and Indirect Energy (electric) calculations based on EPA's Emissions & Generation Resource Integrated Database (eGRID) default emission factors. eGRID uses primary fuel mixtures by region. calculations to reflect the best available information is part of our ongoing commitment to continually improve the accuracy and reliability of our air emissions tracking systems. Two significant highlights are the reduction in lead emissions and reductions in seven of the 13 hazardous air pollutant categories JM currently monitors. Improved lead emission measurements at our Cleburne, Texas facility, the startup of a lower-emitting furnace at our Defiance, Ohio facility and the discontinued use and replacement of a highly volatile adhesive used at our Lewiston, Maine facility all significantly contributed to emission reductions.

JM's efforts to quantify and reduce our carbon footprint extend beyond our manufacturing facilities. JM's Hazle Township, Pennsylvania plant is the only facility with its own truck fleet consisting of eight vehicles. The JM fleet was recently certified by the Environmental Protection Agency (EPA) as a SmartWay carrier. The SmartWay program works to reduce transportation-related emissions, while incentivizing improvements in supply chain fuel efficiency. JM ships more than 70 percent of its freight through SmartWay carriers, and the Hazle Township fleet has increased truck average mileage by 20 percent, reducing annual fuel costs by \$80,000.

### **Total Direct and Indirect Greenhouse Gas Emissions**<sup>6</sup> Tonnes (metric) CO<sub>2</sub>e

Source	<b>2010</b> <sup>2</sup>	<b>2011</b> <sup>2</sup>	<b>2012</b> <sup>4</sup>
Direct	513,071	524,268	537,120
Indirect	1,011,916	1,027,734	1,018,430
TOTAL	1,524,987	1,552,002	1,555,550

Note: CO2e stands for carbon dioxide equivalents.

### Production, Energy Usage, GHG Intensity

Percent change from 2011 to 2012

Production	-	0.4	%
Energy Usage	+	0.9	%
GHG Intensity	+	0.6	%

#### 2011<sup>3</sup> JM Air Emissions by Pollutant Category



<sup>1</sup> One gigajoule is equal to approximately 278 kilowatt hours of electricity or 26 cubic meters of natural gas.

<sup>2</sup> Data provided in earlier reports may differ from 2012 report due to the implementation of more accurate measurement methodology.

#### Total Significant Air Emissions<sup>1</sup>

Air Emissions (2011) in Kg

Criteria Pollutants	<b>2010</b> <sup>2</sup>	<b>2011</b> <sup>3</sup>
Carbon Monoxide	3,237,379	3,538,872
Particulate Matter	1,538,046	1,557,921
Volatile Organic Compounds	1,002,888	983,641
Nitrogen Oxides	809,084	863,650
Sulfur Dioxide	176,975	220,679
TOTAL CRITERIA POLLUTANT EMISSIONS	6,764,373	7,164,762

Hazardous Air Pollutants (HAP)	<b>2010</b> <sup>2</sup>	<b>2011</b> <sup>3</sup>
Formaldehyde	86,043	59,125
Phenol	23,142	25,333
Methanol	12,446	7,700
Acetaldehyde	3,592	3,683
Hexane	1,838	646
Toluene	859	726
Hydrogen Fluoride	258	354
Xylenes	167	69
Benzene	42	4
Lead Compounds <sup>4</sup>	33	24
Chromium Compounds	36	137
Cobalt Compounds	21	25
Naphthalene	2	2
TOTAL HAP EMISSIONS	128,480	97,827
TOTAL AIR EMISSIONS	6,892,853	7,262,590

1 2011 Air Emissions and HAP data is the latest available. 2012 data will be reported in the 2013 JM Sustainability Report. Other environmental data reflects the past year (2012).

2 Data provided in earlier reports may differ from 2012 report due to the implementation of more accurate measurement methodology.

3 Numbers are qualified as JM's best estimate based on available information at time of publication. 4 Includes elemental lead.

## Waste Reduction, Recycled & Renewable Content

In 2012, JM teams continued to work to reduce waste streams by operating more efficiently and seeking out improvements in material utilization. Each business group has waste intensity reduction goals to reduce their overall environmental footprint. Two of JM's four business units (Insulation Systems and Roofing Systems) achieved significant reductions in their waste intensities in 2012. This was particularly gratifying given a major process upset in Insulation Systems early in the year and the startup of our new EPDM roofing facility in Milan, Ohio in June. The reductions were offset by an increase in waste intensity in our other two businesses, primarily due to a major furnace rebuild in the European Engineered Products business unit and unplanned major maintenance activities in the U.S. Engineered Products business, which resulted in JM's company-wide waste intensity increasing by 12.6 percent. JM remains fully committed to reducing our overall waste intensity and thus reducing our environmental footprint. Here are some examples of what JM employees are doing around the world.

JM employees at the Tucson, Arizona facility have made a significant waste reduction impact by focusing on any material that can be reused or recycled. Currently all metal scrap from production is sent to a local metal refiner to process for reuse. The Tucson plant has additional waste reduction projects in place and reduced the amount of waste sent to the landfill by 50 percent from 2011 to 2012. These projects include:

- Scrap wood and broken pallet recycling
- Greater employee involvement in recycling by making available larger recycling containers

JM employees at the South Gate, California and Scottsboro, Alabama roofing operations made progress toward achieving goals to produce less waste at the source by reducing their waste intensity by more than 70 percent. This significant accomplishment was realized by installing and utilizing bulk silos, which in turn reduced the amount of plastic packaging required for material shipments. Partnerships were also established with material suppliers to develop a process to reuse packaging items such as cardboard cores and wooden pallets. In addition, collaboration with a local plastics recycler allowed an expanded number of waste streams available for recycling.

At the Winder, Georgia; Defiance, Ohio; and Cleburne, Texas insulation plants, employees are reclaiming and sending scrap material to a customer for use as a raw material in commercial construction. This practice both reduces waste streams to landfills and uses fewer virgin natural resources, reducing the impact from extraction and processing of these resources. In addition, reusing material that would otherwise be scrapped allows our customers to offer products that contribute to LEED credits for using recycled materials.

Employee teams at many other JM sites are continuing efforts to reduce waste through projects that:

- Increase first pass yields
- Send spent refractory from glass melters back to our supplier for reuse into new refractory
- Send scrap material from packaging to recyclers for reuse
- Retrieve plastic packaging from customers for reuse by JM

#### **Recycled & Renewable Content**

During our manufacturing process, JM incorporates an average of 25 percent recycled content into our fiber glass building insulation across North America. That content (as certified by Scientific Certification Systems and Underwriters Laboratory Environment) includes an average of 20 percent postconsumer and the balance post-industrial recycled glass.

JM Roofing Systems' Fesco product line on average contains 34 percent recycled paper. In 2012, UL Environment certified the 34 percent sourced recycled paper at 81 percent preconsumer and 19 percent post-consumer.

In late 2012, JM introduced the Canadian market to a new bio-based binder version of its well-respected Formaldehydefree™ building insulation. The binder is made primarily from rapidly renewable plant-based materials, demonstrating JM's commitment to meeting the demand for more agriculturally sourced materials. Feedback from field trials throughout Canada confirms that installers find the new bio-based binder product to offer additional benefits including improved handling, easier cutting and less dust. The integration of rapidly renewable materials, like those used in JM's bio-based binder product, also benefit specifiers and building owners looking to acquire credits toward LEED certification.

JM's European Engineered Products business demonstrated through an internal life cycle assessment that increased utilization of a renewable binder component (starch) in its roofing mat products reduces energy and photochemical ozone creation potential while reducing greenhouse gas emissions compared with its previous formulation. These positive environmental impacts more than offset the negative aspects of increased eutrophication and acidification.



JM introduced building insulation using a bio-based binder in 2012

### **Promoting Product Safety**

According to the U.S. Green Building Council (USGBC), up-to-90 percent of our time is spent indoors – making it imperative that our homes, commercial buildings and surroundings are healthy places to live and work. As a manufacturer of products used to create the built environment, JM is committed to promoting product safety not only during end-use, but also during manufacturing and installation.

### Eliminating Carcinogens, Mutagens and Reproductive Toxins

JM has set a corporate goal to eliminate CMRs (carcinogens, mutagens and reproductive toxins) in finished products, and where CMR elimination is not feasible, JM will work to reduce a CMR to the lowest level possible. Every year, JM conducts a thorough audit to evaluate, rate and prioritize removal of CMRs from products aligned to the desires of customers and consumers, as well as the scientific and regulatory community. JM's annual CMR audit informs and drives research and development teams to deliver solutions that continually make progress toward the corporate goal. The company's efforts toward CMR removal resulted in the development of the industry's first full line of Formaldehyde-free™ building insulation products in 2002, and 50 percent of JM insulation products for HVAC applications are now free of formaldehyde. JM also completed the removal of decabromo diphenyl ether, a fire retardant, from fiber glass pipe and equipment insulation while maintaining compliance with performance and fire safety standards. Removal of CMRs and Volatile Organic Compounds (VOCs) has allowed JM to remain ahead of the regulatory curve, particularly in states such as Oregon where use of CMRs such as decabromo diphenyl ether have been banned.

JM continues to play an instrumental role in shaping safety standards to maintain the highest level of protection for installers of JM building products. For instance, JM is an active member of the Center for the Polyurethane Industry's (CPI) Product Stewardship Committee. The committee launched an online health and safety training program for spray foam installers, the successful completion of which results in installer certification. The training provides information on safe work practices and protective equipment during product installation. The CPI Product Stewardship Committee has also developed installation guides and safe work checklists, all at no cost to installers. Since its inception, over 4,400 installers have participated in the CPI training and have become certified to safely install spray foam insulation.

### Product Stewardship

One of JM's core beliefs is that materials matter. The company's focus on the performance of materials inspires its research, design and manufacturing teams to consistently deliver quality products that promote more comfortable, healthy and energy-efficient environments.



As a corporate member of the USGBC, JM recognizes that building materials play a major role in helping customers create cost-efficient and energy-saving green buildings. That's why JM designs and manufactures building materials and engineered products that are changing the way buildings and communities are designed, built, and operated today. The focus is on how well the material will perform over its life cycle plus how it protects human health and the environment. As a global manufacturing company, JM is a major consumer of raw materials, requiring efficient sourcing and production methods. For example, fiber glass utilized in a number of the company's products is made from sand, a common material used in the built environment. Industrial sand deposits are made of quartz, one of the most abundant minerals in the Earth's crust. JM processes this raw material into products that play an essential role in protecting indoor environments and increasing the energy efficiency of buildings.



JM's commitment to product stewardship includes providing customers with information regarding the safe use and disposal of products supplied to them. JM meets customers' needs by providing products that perform as expected, not only by optimizing beneficial impacts in the building's operation, but by minimizing the long-term environmental effects as well.

JM continually reviews and communicates the potential risks of building materials to its workforce, customers and other appropriate parties. The company's health and safety evaluations are routinely followed with recommendations for risk reduction including work practices and engineering controls. For example, under the umbrella of the JM Roofing Institute<sup>™</sup>, and the Better Understanding of Roofing Systems Institute (BURSI<sup>®</sup>), architects, consultants, roofing contractors and building owners have been educated on the latest roofing system materials, technologies and design. In over 35 years of operation, more than 60,000 roofing professionals have been educated using the BURSI curriculum.

#### **Product Impact Information**

Sourcing of components	×
Content that might produce environmental impact	✓
Safe use of product	<
Disposal of products and impacts	~

JM provides accessible and thorough information on the environmental impacts of 100 percent of our products.

# Water Conservation & Supply Chain Management

Water conservation is an important aspect of protecting natural resources, especially in geographic regions experiencing water distress. With employees and facilities in locations that have experienced drought conditions over the past few years, JM understands the importance of water scarcity and use.

JM manufacturing operations typically use water to cool equipment operating at high temperatures. The majority of the company's manufacturing plants deploy closed-circuit systems that optimize water recovery and reuse. The systems re-circulate process water within the plant so there is no discharge into community water systems. In addition, these closed-circuit systems reduce water consumption, which provides for lower operating costs at the manufacturing facilities. Many of our plants are subject to zero wastewater discharge regulations.

Protection is a core value and responsibility of JM – protection of its employees, customers and the environment. Protection also applies directly to its supply chain because effectively managing the supply chain creates value and drives competitiveness for JM.

JM procures over 50,000 materials and technical products from nearly 10,000 suppliers worldwide. The company also transports nearly 12,000 products to about 4,200 customers throughout its global footprint. In its entirety, JM's supply chain is a complex system to source raw materials, energy and services used in manufacturing our products. JM manages its supply chain with a focus on quality, efficiency, integrity, safety and compliance. JM requires that its suppliers adhere to the highest ethical standards in the business, including following JM in complying with all applicable environmental, health and safety standards as well as laws related to child or forced labor and conflict minerals.<sup>1</sup> It is our policy not to use any raw materials or services for any of our products that directly or indirectly contribute to armed conflict or human rights abuses. This includes the sustainable and ethical sourcing of materials and insistence that suppliers do not employ children or use forced or bonded laborers. In order to fulfill our responsibilities to all our stakeholders, we rely on suppliers to comply with these standards.

JM provides training on human trafficking, conflict minerals and slavery (particularly with respect to mitigating risks within the supply chains of our products) to those company employees who have direct responsibility for supply chain management. Further, we require all JM salaried employees to complete our annual Code of Conduct training and certification, and we have an internal process for enforcement of misconduct. Doing all this allows JM to enhance business value by building positive brand awareness, minimizing risks, increasing operating efficiencies, and enhancing social responsibility.

Although JM does not currently have a formal policy to give preference to local suppliers, it does obtain competitive bids when appropriate within a plant's geographic area. The company focuses on the total cost of sourcing when making material supplier selection decisions. The geographic location of a supplier is taken into consideration in terms of logistics from a cost and time-to-deliver perspective. For services, the focus is both on suppliers' capability to perform the scope of work in question and the total cost. Other factors that are considered include cost competitiveness, supplier quality, delivery performance, new supplier qualification costs, available capacity and ability to supply said goods/services, safety, environmental compliance, ongoing maintenance and local stocking options (supplier or JM warehouse), in addition to other factors that JM deems relevant.

The majority of JM procurement is managed by our Global Supply Chain Team; however, individual operating locations have discretion on a portion of their indirect spend to purchase locally. Using the definition of "in country as based on the ordering from an address for the vendor" as local, in North America JM sourced 93 percent of its spend locally in 2012.



### Health and Safety

# In all, JM employees participated in over 83,000 hours of safety and environmental training in 2012.

The success JM has experienced for over a century and a half is due to the innovation, leadership and dedication of our employees around the world. When our employees wake up each day to go to work it is with the expectation that they will return home safely at the end of the workday. It is at the very foundation of our company that we uphold our promise to protect the wellbeing of employees while also promoting and supporting a healthy way of life.

Workplace safety has and always will be a top priority at JM. We believe that the only acceptable number of workplace injuries is zero – and we keep that focus throughout the year. Employee safety is a commitment that each JM employee is responsible for upholding. Safety training is provided to all employees across the globe in areas such as basic first aid, fire prevention and firefighting, hazardous chemical management, hearing conservation and other focus areas. As a condition of employment, every JM employee is expected to work safely in accordance with the training they've received, and no employee is permitted to perform a job prior to demonstrating that he or she understands the job and can perform it safely. Ensuring the safety of employees requires the attention of the entire organization. Management and employees are expected to actively observe and participate in the JM safety process to encourage others to maintain high levels of safety performance.

JM believes that workplace injuries are one hundred percent preventable and has been proactive in removing hazards and implementing policies and procedures that have proven effective in protecting workers. This is evidenced by the fact that JM had zero citations for violation of health and safety regulations in 2012 and zero work-related employee fatalities. We reduced our Total Case Incident Rate to 1.38 and our Days Away from Work Rate to 0.18, a year-over-year reduction of 13 percent and 31 percent, respectively. Unfortunately, in 2012 JM had one incident where an employee collapsed at a plant and later died. Based on the information available to JM, we classified this incident as not work related.<sup>1</sup>

When accidents do occur, we are confident that our people are equipped to respond in a timely and appropriate manner.

<sup>1</sup> In 2013, but before this publication was finalized, OSHA cited JM, alleging this incident was work related. As of publication, JM is contesting that citation.



### JM Total OSHA<sup>1</sup> Incident Rates (vs. National Rates)

1 Occupational Safety and Health Administration, a U.S. agency charged with the enforcement of safety and health legislation.

2 U.S. Bureau of Labor Statistics National Rates, 2012 data not available

### JM U.S. Plants Awarded OSHA VPP Status as of Year-End 2012

Plant Name	Year First Awarded
Fernley, NV	2010
Jacksonville, FL	2008
Lewiston, ME	2012
Macon, GA	2007
McPherson, KS	2007
Richland, MS	2010
Tucson, AZ	2007
Willows, CA	2008

Since 2007, eight JM plants have been recognized by the OSHA Voluntary Protection Program (VPP). OSHA VPP recognizes participants that promote effective safety and health management, and include a select group of facilities that have displayed outstanding results, programs, and a healthy partnership with their facility employees in which the focus is on keeping employees safe. These plants have maintained "Star" status, the highest level of achievement under the VPP program. In 2012, JM's Lewiston, Maine plant was awarded Star certification for the first time, and the Willows, California plant was re-certified under the program.

#### Lost Time Rates<sup>3</sup>



3 Lost Time Rate: Rate of incidents involving workdays beyond the day of injury or onset of illness, the employee was away from work because of an occupational injury or illness, per 200,000 work hours.

In alignment with our 2011 goal to develop criteria to track noise exposure issues, establish accountability and make progress on reducing noise exposure to workers, JM's Health and Safety leadership team established meaningful metrics and noise reduction measures company-wide. In 2012, JM embarked on an array of hearing conservation projects including updating employee exposure dosimetry, conducting in-depth noise source surveys and implementing engineering controls to reduce noise. Fifty hearing conservation projects were completed in 2012. Ninety-five percent of all JM employees in the Hearing Conservation Program have an established personal attenuation rate (PAR) and participated in hearing protection device (HPD) training.<sup>4</sup> As a result of JM's efforts to promote hearing conservation in 2012, the company received the 2013 Safe-in-Sound Award™ for Innovation in Hearing Loss Prevention by The National Hearing Conservation Association.

At JM, we realize that a healthy employee is a productive employee – which is why encouraging a healthy lifestyle is one of JM's social goals. In 2012, 46 percent of U.S. employees participated in a company-sponsored wellness program. JM's Employee Assistance Programs are provided to all U.S. employees and their families free of charge and offer resources, tools and treatment for stress management in addition to financial, legal and family counseling.

#### JM Safety Metrics - 2012

JM EE = JM employee case rate TP = Temporary employee case rate

	Tot		HA Recor se Rate	dable	Οςςι		nal Disea e Rate	ses	Los	st Day	Case Ra	te	Fa	tality	Case Rat	te
	Ma JM EE	TP	Fem JM EE	ale TP	Ma JM EE	le TP	Fem JM EE	ale TP	Ma JM EE	le TP	Fem <b>JM EE</b>	ale TP	Ma JM EE	e TP	Ferr JM EE	nale TP
USA	1.2	0.1	0.2	0	0.3	0	0	0	0.1	0	0	0	0	0	0	0
Canada	2.9	0	0.6	0	0.6	0	0	0	0.6	0	0	0	0	0	0	0
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Germany	0.8	0.1	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0
Slovakia	0.9	0	0.3	0	0	0	0	0	0	0	0.1	0	0	0	0	0
China	0	0.9	0.9	0	0	0	0	0	0	0	0.9	0	0	0	0	0

4 PAR is a measure of the individualized noise reduction an employee obtains from his or her hearing protection.

### Assistance Programs

	Education/ Training	Counseling	Prevention/ Risk Control	Treatment
Workers	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>
Workers' families	×	<b>~</b>	×	~
Community members	×	×	×	×

### Making a Difference

In 2012, JM continued its contribution to positive outcomes in the communities where employees live, work, play and learn. For example, JM partnered with World Vision to channel excess building products from U.S. plants to World Vision storehouses for distribution to under-resourced communities and victims of natural disasters in the United States. Using our own supply chain, material was shipped to Joplin, Missouri; Tuscaloosa, Alabama; and other areas devastated by tornadoes, flooding, and other natural disasters. JM-donated insulation material is keeping hundreds of affected families warmer in the winter and cooler in the summer.

In September 2012, 23 employee volunteers from JM's Waterville, Ohio complex joined in the 16th Annual "Clean Your Streams Day" community activity. Volunteers collected 108 bags of trash and 13 tires, weighing a total of 1,924 pounds. Event totals for all of the teams included 903 bags of trash and 274 tires, equaling 18,822 pounds of refuse. A total of 1,100 volunteers participated in the event, and JM took second place in the corporate challenge.

JM's McPherson, Kansas facility supplied roof and wall insulation for the new McPherson Museum and Arts Foundation building to advance the foundation's vision of constructing a LEED-certified building that incorporates energy conservation elements. JM has been an integral part of the McPherson community and contributed to local economic, cultural and social needs for the past 35 years.

In June JM started up a plant in a renovated brownfield site in Milan, Ohio. This established a thriving new business, and created approximately 65 new jobs in a local economy negatively impacted by the earlier closure of the facility, which generated new economic development in the community. Previously JM sourced from overseas the roofing product now made in this new state-of-the art facility. JM's Milan employees are already making a difference – shortly after opening, the plant donated roofing materials for the historic Milan Township Hall.



The company supports the needs of the community through in-kind and financial donations as well as support through local employee volunteer programs. JM employees volunteer on numerous projects that improve their communities and the examples noted here are just a few of the many projects that take place annually. Corporate-wide, JM donated approximately \$320,000 globally in 2012, including over \$118,000 to the Mile High United Way and a \$25,000 donation to the American Red Cross for disaster relief associated with 2012 wildfires.

Our European business donated over \$20,000 to organizations in Germany and Slovakia that provide services associated with homelessness, poverty, foster homes, fire and rescue, children's welfare, education and healthcare.

Number of volunteers	1,450
Volunteer hours	9,005
Scholarships <sup>1</sup>	\$ 23,125
Financial contributions	\$ 320,000

# Respectful and Supportive Environments

JM is committed to ensuring that all employees thrive in a workplace that respects and values integrity and diversity. We strive to ensure that our employees have opportunities to enrich themselves and JM throughout their careers and feel it is important that each employee represent and uphold JM's

<sup>1</sup> Provided by the JM Fund: \$1,000 each to 11 new recipients in 2012 and \$1,000 each in secondyear scholarships to qualified 2011 recipients, plus program administrative fees.

reputation for conducting work ethically throughout our global operations. The company has policies and practices designed to support workplace ethics and employee development as components to the company's long-term success. This includes a practice to hire locally where possible. One hundred percent of JM's senior management, defined as the CEO's 10 direct reports, were hired locally.

JM has a comprehensive Corporate Compliance and Ethics program that manages risks across the company, including fraud, antitrust and corruption. JM conducts rigorous legal, ethical and risk-based assessments as part of our program. Our procedures and policies on gifts, entertainment, conflicts of interests and hiring of third parties govern how we engage with anyone who potentially could provide access or influence in helping us secure work. As part of our risk management process, we engage with each of our business units to keep them aware of the risks of corruption in jurisdictions where they work. This process includes training and providing easy access to advice and counsel. For those business units that transact business in countries known for high corruption risk, we perform specialized training and periodic audits. We routinely engage with our business units about the risk of corruption, how to recognize red flags that might be evidence of possible corrupt business activities, and what to do when employees become aware of corruption risk. We provide training on issues raised in the US Foreign Corrupt Practices Act, the United Kingdom's Bribery Act, and other similar anticorruption mandates from jurisdictions where we do business. All management and non-management salaried employees receive training focused specifically on corruption, conflicts of interest, and ethics and compliance in general. The company also offers employees a toll-free telephone and web-based hotline to report corruption-related allegations or unethical business practices.

The company recognizes the ten principles of the United Nations Global Compact by supporting and respecting the protection of internationally proclaimed human rights; denouncing human rights abuses; eliminating discrimination in employment and occupation; and working against corruption in all forms. JM fully complies with laws and regulations prohibiting child labor, and it is our policy not to purchase materials that have been produced with slave, forced or child labor or labor resulting from human trafficking. JM engages in verification of its supply chain via internal supplier audits of existing or potential future suppliers that may be considered at risk of any of these practices as outlined under the California Transparency in Supply Chain Act of 2010 (SB 657).

JM provides employees with the resources and support necessary to fully meet their career goals and the company's business goals. In 2012 alone, JM employees worldwide received over 141,000 hours of training in areas such as leadership/management; personal development; languages; legal, regulatory and compliance; product knowledge; production equipment and other technical skills-based or job-specific training. Additional support, such as coaching and mentoring, develops our employees for future roles within the company and to meet the changing complexities in the marketplace. For example, JM sponsors its Denver-based employees for participation in training and development events through the Women's Vision Foundation. Additionally, mentoring circles provide mentoring and coaching from senior executives and peers to build employee leadership skills. The company also provides ongoing workshops and seminars for current managers, leaders and identified emerging leaders in the company. Additionally, JM makes available technical and skillsbased training for employees in all functions and at all levels. In addition to company-provided training and development, employees may participate in university courses by utilizing JM's tuition reimbursement program.

Our employees are aligned with the company's strategies through a robust internal goal setting and performance management program that includes annual performance evaluations. In 2012, 92 percent of JM's employees had written and approved goals. Additionally, 92 percent of salaried employees (96 percent of females and 89 percent of male employees) received documented individual performance reviews and had development plans.

### Built to Engage

JM is a wholly owned subsidiary of Berkshire Hathaway Inc., a holding company engaged in diverse business activities, including property and casualty insurance and reinsurance, utilities and energy, freight rail transportation, finance, manufacturing, retailing and services.

Berkshire Hathaway is a large publicly traded company with 288,000 employees located throughout the world.

#### Governance

As an operating business of Berkshire Hathaway, JM is managed on a decentralized basis with minimal involvement by its parent company in the day-to-day business activities. Berkshire Hathaway's corporate management participates in decisions associated with significant capital allocation, investment activities and the selection of JM's President and Chief Executive Officer. JM management also regularly attends the Berkshire Hathaway annual shareholder meeting in official capacities.

JM's organization is led by President and Chief Executive Officer Mary Rhinehart, who reports directly to Berkshire Hathaway. The heads of JM's businesses and functional areas report directly to Ms. Rhinehart.

Since its establishment in 2011, the JM Sustainability Council has been tasked with driving sustainability principles within the company and making decisions that help JM achieve and maintain a competitive advantage through sustainable business practices. The Council, led by JM's Chief Sustainability Officer, includes members of the executive team responsible for business units and functional areas of the company. Council members meet quarterly to set, evaluate and adjust JM's sustainability strategy and activities, including assessing progress, setting goals and ensuring alignment of the sustainability strategy with JM's overall corporate strategy and objectives.

The Council's goals are aligned with JM's six fundamental priorities – operational excellence, financial strength, environmental respect, customer satisfaction, employee commitment and integrity.

### Stakeholder Engagement

In 155 years of designing, manufacturing and marketing building material solutions, JM has developed relationships with internal and external stakeholders who influence, and are influenced by, the products, policies, processes, and contributions of our business. As an organization, JM understands that the concerns of stakeholder groups such as employees, customers, suppliers, regulatory agencies, trade associations, communities and potential employees evolve over time and that the concerns of these groups must be addressed equitably and with transparency. Comprehensively understanding the interests of stakeholder groups benefits the company as such information is utilized to better delight customers and provide a higher level of value from our products and outreach.

In order to include the interests of stakeholders in strategic sustainability decisions as well as in the *We Build Environments* publication, JM business and functional leaders actively

identify important stakeholder groups on an ongoing basis. A cross-functional sustainability team collects input from stakeholders affected by the economic, environmental and social impacts of our business, and prioritizes their concerns to ensure that sustainability endeavors and communications are of material interest to the stakeholder audience and aligned to JM's values, priorities and strategy.

JM engages with employees in many ways, including through regular town hall meetings, surveys to obtain feedback that identifies opportunities for improvement, annual performance reviews, and through volunteer project opportunities that involve employees and family members. Employees are also kept involved and updated via company newsletters and web-based communication. Employees participate in facility Green Team activities, leadership and training programs, and plant activities such as service recognition and operational and safety achievement events.

Regular site visits and open forums with JM suppliers and customers provide continuous feedback on product safety, design, development, distribution, installation and use. JM also engages with customers and suppliers through account management and marketing communications, trade and industry gatherings, technical support, onsite training and workshops, plus regular interaction through distribution channels.

JM values its corporate reputation in the communities we serve and in the locations where we manage people and manufacture our products. The company's outreach to communities includes programs such as: the JM STARS (Striving To Assist, Respond and Serve) employee volunteer program and charitable giving; local sponsorships, memberships, meetings, open houses and regulatory hearings; and joint preparation exercises with community emergency services. JM also conducts plant tours and site visits for government officials and meets with elected officials to maintain compliance and gain better understanding of issues that may affect the business and its stakeholders.

### 2012 Awards/Certifications/Alliances/Partnerships

### Awards

- JM Colorado Environmental Leadership Program, Gold Leader
- 2013 Safe-in-Sound Excellence in Hearing Loss Prevention Awards™
- National Safety Council (NSC) Occupational Excellence Achievement Award – all 31 JM U.S. locations recognized since 2005; 11 for 7 years in a row
- Occupational Safety & Health Administration (OSHA)
  Voluntary Protection Program (VPP) Star status 8 JM U.S. manufacturing facilities

### **Certifications**<sup>1</sup>

- Customs-Trade Partnership Against Terrorism (C-TPAT)
- EPA Smartway Certification for our JM carrier fleet in Hazle Township, PA
- ISO 50001 Energy Management System in 2012 at five manufacturing facilities across Germany
- Greenguard Indoor Air Quality Certification for Low Emitting Products
- Oeko-Tex Standard 100
- SCS Certified Recycled Content
- SCS Certified Compliant with U.S. EPA Region 9 and Alameda County, State of California Specifications for Environmentally Preferable Insulation
- SCS Certified Indoor Air Quality Indoor Advantage Gold + Formaldehyde Free
- TerraChoice EcoLogo Program
- UL Environment Environmental Claim Validation Recycled Content

### **Alliances and Partnerships**

- Alliance for a Sustainable Colorado
- The Alliance to Save Energy
- American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)
- Asphalt Roofing Manufacturers Association (ARMA)

- Best Practices Research Alliance's Energy Efficiency Lab Home by IBACOS
- California Energy Efficiency Industry Council
- California Manufacturers and Technology Association
- Center for Environmental Innovation in Roofing (CEIR)
- Center for the Polyurethanes Industry, American Chemistry Council (CPI)
- The Climate Registry
- Colorado Environmental Coalition
- Cool Roof Rating Council (CRRC)
- The Council of the North American Insulation Manufacturers Association (C-NAIMA)
- Electricity Consumers Resource Council (ELCON)
- EPDM Roofing Association (ERA)
- European Disposables and Nonwovens Association
  (EDANA)
- Foam Sheathing Coalition
- Glass Alliance Europe, the European Alliance of Glass
  Industries
- Glass Manufacturers Industry Council (GMIC)
- GlassFibreEurope, the European Glass Fiber Producers
  Association
- Industrial Energy Consumers of America (IECA)
- Living City Block
- North American Insulation Manufacturers Association
  (NAIMA)
- Polyisocyanurate Insulation Manufacturers Association (PIMA)
- Single Ply Roofing Industry (SPRI)
- U.S. Environmental Protection Agency (EPA) Energy Star Partner
- U.S. Environmental Protection Agency (EPA) SmartWay Transport Partner
- U.S. Green Building Council (USGBC) National Member

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### Statement GRI Application Level Check

GRI hereby states that **Johns Manville** has presented its report "JM 2012 Sustainability Report" to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level C.

GRI Application Levels communicate the extent to which the content of the G3.1 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3.1 Guidelines. For methodology, see www.globalreporting.org/SiteCollectionDocuments/ALC-Methodology.pdf

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 25 March 2013

Nelmara Arbex Deputy Chief Executive Global Reporting Initiative



The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. www.globalreporting.org

**Disclaimer:** Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 15 March 2013. GRI explicitly excludes the statement being applied to any later changes to such material.

### Looking Ahead

We Build Environments communicates JM's corporate commitment to sustainability and conducting business in a responsible and ethical way that respects the planet, our stakeholders and the economic contributions of our business.

As JM evolves in its journey toward sustainability, our goals also change in correlation with the dynamics of the company, changes in compliance and regulation, advancements in technology, desires of our stakeholders, and as focus areas emerge that are important to our sustainability path moving forward. During the year 2012, JM leadership updated the sustainability goals to guide future sustainability activities and publications such as *We Build Environments*. The updated goals continue the company's focus in these key areas:

### Life Cycle Assessment (LCA)

Use LCA as a business value lever to enable success of JM's business units; continue participation in industry LCA activities.

### **Recycled Materials**

Commit to long-term recycled materials targets and implement within each business unit to increase percentage of inputs used in JM products.

### Toxins

Continue to identify the presence of CMRs (carcinogens, mutagens and reproductive toxins) and create prioritized strategies to reduce or eliminate CMRs in JM finished products.

### **Energy and Carbon Intensity**

In support of JM's five-year energy intensity reduction goal of 5 percent between 2010 and 2014, reduce greenhouse gas emissions by 26,000 tonnes  $CO_2e$  by eliminating 30,000 MWh of electrical energy use and 110,000 MMBtu of natural gas energy use from JM's manufacturing operations in 2013.

### **Solid Waste Intensity**

Reduce solid waste intensity by 10 percent over a five-year period ending in 2014.

### Social Aspects of Sustainability

Focus in 2013 on establishing processes and action plans to achieve the five-year targets identified in the areas of performance management; people development; health, wellness and safety; human rights and ethical treatment in employment; and community investment.

### Water

Baseline water usage and discharge company-wide.

### About This Report:

### **Final Thoughts**

The 2012 publication of *We Build Environments* marks the second year the company has reported its sustainability endeavors and progress to provide transparent information related to topics of interest to our internal and external stakeholders, including customers, specifiers, suppliers, regulatory agencies, public officials, our employees, potential employees and our communities. JM's inaugural sustainability report was published in March of 2012 and is available online at www.jm.com/sustainability.

In defining the content of the *We Build Environments* report, JM is diligent in identifying topics that are material to key business constituencies and significant to the values and culture of the organization. To add greater insight to this process, JM has assembled a cross-functional team focused on determining and prioritizing stakeholders, understanding material content for inclusion in the report, and providing economic, environmental and social data aligning to Global Reporting Initiative (GRI) guidelines and performance indicators. Annual engagement tools such as surveys, face-to-face meetings, plant visits and publications like the sustainability report provide opportunities for the company to acquire feedback from parties who highly influence, or are influenced by, the activities and impacts of JM processes, products and outreach.

The content of this publication reflects information and metrics gathered during the reporting period of January 1 through December 31, 2012. Where possible, we have included additional company and product information in order to provide a deeper context regarding our business approach and long-standing sustainability efforts. JM publishes a sustainability report on an annual basis, and pursues opportunities for better communicating sustainability efforts in a transparent and meaningful way.

In order to ensure comprehensive report content as well as a high level of transparency for our stakeholders, JM has created this report in adherence to the Global Reporting Initiative (GRI) sustainability reporting guidelines. GRI is a widely recognized and applied reporting standard for companies such as JM who are focused on measuring and managing the economic, environmental, social and governance implications of their business. *We Build Environments* fully complies with the GRI C Application Level and has undergone an Application Level-Check by GRI to confirm the thoroughness of this report's content index. For a full list of the GRI standard disclosures and performance indicators reported on by JM in *We Build Environments*, please refer to the GRI Index found on page 25. To learn more about Global Reporting Initiative, visit www.globalreporting.org.

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