

About MTI

AN INSIDE LOOK

Minerals Technologies (NYSE: MTX): A leading global resource- and technology-based company that develops, produces and markets a broad range of specialty mineral, mineral-based and synthetic mineral products and provides supporting systems and services.

As a leader in minerals-based application technology and innovation, we have a robust new product pipeline, supported by our people-focused culture and Operational Excellence foundation, that is delivering a comprehensive portfolio of value-added solutions to a diverse customer base. We make it our priority to provide customers with differentiated products along with best-in-class customer service and technical expertise.

We continuously invest in further embedding sustainability throughout our operations, motivated in large part by the commitment and engagement of our employees around the world. **We recognize that being a responsible business and corporate citizen is critical to our ongoing success. For us, it is an ongoing journey where we continue to learn, adapt and improve.**

-  **World-class manufacturing operations** and specialty minerals processing capabilities
-  **Sustainability and corporate social responsibility** principles deeply integrated in all business areas
-  **World leader** in Bentonite and Precipitated Calcium Carbonate (PCC)
-  **Vertically integrated** from mine-to-market
-  **Leader in minerals-based application technology and innovation**
-  **Comprehensive value-add solutions** for diverse customers
-  **Strong balance sheet** with sustained cash flow generation
-  **People-centered culture** focused on **Operational Excellence and safety**

4 BUSINESS SEGMENTS

Performance Materials (Bentonite)

\$823M

46% of total sales

Leading supplier of tailored bentonite-based solutions for a broad range of industrial and consumer markets.

Specialty Minerals (Carbonates)

\$575M

32% of total sales

World's largest Precipitated Calcium Carbonate (PCC) producer with the most advanced technology portfolio serving paper and packaging, construction, transportation, and consumer sectors.

Refractories

\$298M

17% of total sales

Premier supplier of monolithic and shaped refractory products and services for high-temperature applications in the steel, non-ferrous metal, and glass industries.

Energy Services

\$95M

5% of total sales

Provides range of innovative technologies, products and services for offshore filtration and well testing to the global oil and gas industry.

MTI AT-A-GLANCE

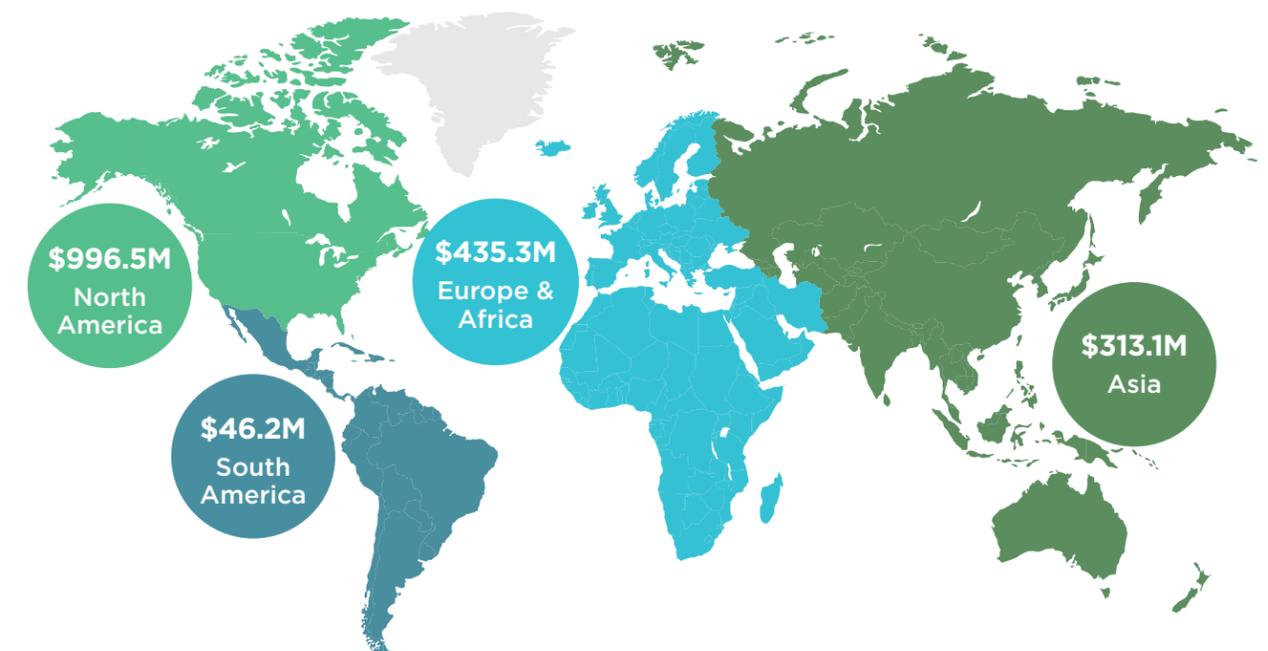
35
COUNTRIES

158
WORLDWIDE
PRODUCTION LOCATIONS

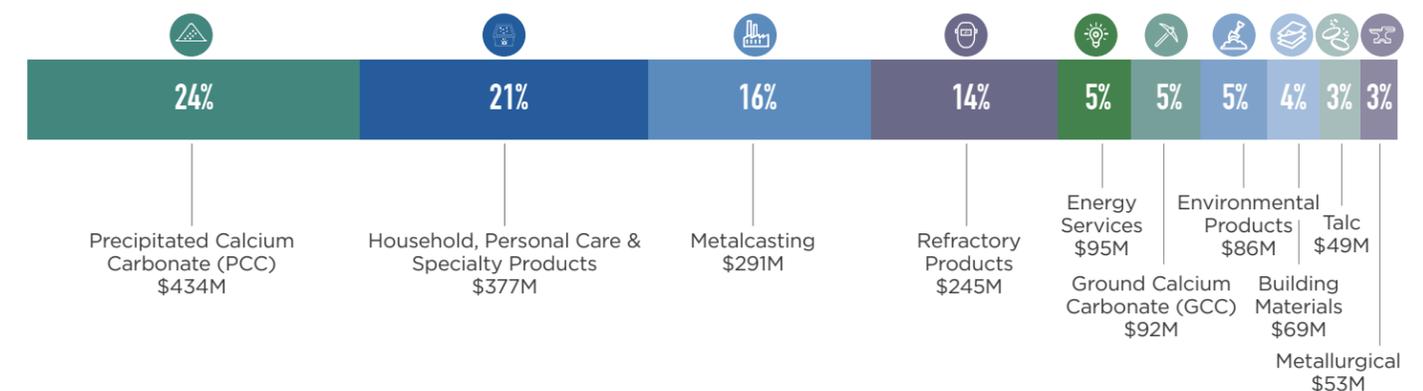
12
R&D
CENTERS

3,628
EMPLOYEES AROUND
THE WORLD

\$1.8 BILLION GLOBAL MINERALS-BASED COMPANY



SALES BY PRODUCT LINE



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The 2019 Corporate Responsibility & Sustainability Report is MTI's 12th annual report. This Report covers performance and data from the period of January 1, 2019 to December 31, 2019, and is part of MTI's corporate story, allowing us to show progress year-on-year. Some initiatives from 2020 have also been included. This is our second year following the Global Reporting Initiative (GRI)'s most recent framework as a guide for identifying, measuring and reporting our non-financial impacts. In connection with our sustainability policies, our 2019 Annual Report, 2020 Proxy Statement and our website, this report helps showcase MTI's sustainability efforts and how they are integrated with our people, in our plants, and through our processes.

Please note: Photos depicting individuals not wearing the proper COVID-19 Personal Protective Equipment (PPE), or in close proximity to one another, were taken prior to the onset of COVID-19 in 2020. MTI has implemented robust safety protocols at all of its global locations to combat COVID-19.

A Message from Our CEO

At MTI, we are focused on providing the safest workplace for our employees, creating innovative technologies tailored to our customers' evolving demands, reducing our environmental impact, preserving natural resources and making positive contributions to our local communities — all of which are ingrained in our values. Over the past 12 years, MTI has published an annual Corporate Responsibility and Sustainability Report that describes our efforts in continuous improvement regarding our safety culture, environmental performance, social impact, new product development, and community engagement. This year's report details several highlights across our focus areas, spotlights employee-led efforts and discusses the progress to achieve our 2025 environmental reduction targets.



Douglas T. Dietrich, Chief Executive Officer

MINERALS TECHNOLOGIES VALUES

PEOPLE

We place the health and safety of people ahead of all else. We cultivate respect for individuals and for the diversity of cultures, beliefs and perspectives.

EXCELLENCE

We constantly seek new, innovative technologies and efficient business processes to remain a market leader. We drive for success by focusing on continuous improvement in all facets of the business— processes, systems, products, services and people.

CUSTOMER FOCUS

We foster relationships with our customers based on trust and mutual benefit. We strive to enhance value to customers through improved product quality, customer service and innovation.

HONESTY

We value honest, open and ongoing communications with our employees, customers, shareholders, suppliers and the communities in which we do business. We uphold the spirit and intent of the law and conduct our affairs ethically.

ACCOUNTABILITY

We deliver profitable growth and higher returns for our shareholders. We manage our operations, our capital and our business opportunities in a sustainable manner. We serve as good stewards of natural resources, and we employ sound environmental practices to protect the communities in which we operate.

“Sustainability at MTI is about being a responsible citizen and engaging our people, products, innovations and resources to address our stakeholders evolving demands and support the communities where we live and operate.”



Our new Metalcasting processing facility in Albion, Michigan.

Q&A with Chief Executive Officer

DOUGLAS T. DIETRICH



This is MTI's 12th year reporting on its sustainability initiatives. How has MTI's commitment and strategy evolved during this time? What influences your sustainability priorities?

Sustainability has always been part of MTI's DNA and is the foundation of how we operate our company. It starts with people — attracting and developing a talented, diverse, engaged workforce, ensuring everyone arrives home safely at the end of each day and by being a responsible neighbor in our communities.

Over this time, we have more closely embedded and aligned our sustainability practices with our business strategy and goals. We have also broadened the scope beyond adhering to regulations and limiting our environmental footprint. For example, as our customers have increased their focus on solutions that not only are cost-effective but also address sustainability concerns, we have evolved our new product pipeline to provide these higher-value solutions. We have further integrated our continuous improvement mindset to improve our manufacturing processes and reduce our footprint in key areas such as energy, emissions, and waste. Many of these projects use more renewable energy sources and have both environmental and cost reduction benefits. We continue to recognize opportunities that are good for the environment, provide value for our customers, improve the communities where we operate and lower costs for operating our facilities. Being a more sustainable company also makes us a better company.

External initiatives like the Global Reporting Initiative (GRI) are influencing global companies, governments and non-governmental organizations to accelerate their sustainability efforts. Over the last two years, we have mapped our sustainability strategy and framework using GRI's standards, which have helped us to take a deeper and more holistic look at our economic, environmental, and social impacts based on the priorities of our stakeholders.

By identifying the topics most relevant to our business and stakeholders, we are focusing on the issues where we can create the most tangible impact. We assess associated risks and opportunities and adjust our approach accordingly.



Employees at our PCC satellite facility in Thailand celebrate an Operational Excellence award.



Our manufacturing plant in Dongming, China develops bentonite-based products for a broad range of consumer and industrial markets.



In 2019, MTI established environmental reduction targets in six focus areas. How is MTI progressing on its way to achieve these targets and what are the future plans?

Last year, we took steps to further advance our sustainability initiatives by establishing **2025 environmental reduction targets in six focus areas, which are outlined in more detail in the Environmental Section, starting on page 31.** From the outset, we knew that the goals had to be aspirational, holistic, measurable and attainable. A 2025 timeframe allows for the opportunity to measure significant performance improvement. We also made sure that the goals we set were right for our business. They followed a comprehensive assessment of the most important areas to our company and stakeholders with an emphasis on employee engagement.

We have made significant progress in our first year — from identifying our highest-priority activities to engaging employees across our company to adopt a more energy-efficient and resource conservation mindset. We are on track to meet or exceed our reduction targets and have implemented several projects that improved our performance in 2019 and will contribute even more in the years ahead.

New projects at some of our larger facilities to improve our fuel usage efficiency and manufacturing productivity led to a 12% reduction on an absolute basis in Greenhouse Gas Emissions (GHG) compared to 2018.

Our sustainability journey continues, and I am focused on the trends in environmental performance and employee engagement to make sure our efforts are making a difference. We plan to identify new areas of improvement and opportunities to go further by setting more stringent reduction goals.



MTI recently created a Sustainability Lead Team. How will this team help further advance MTI's sustainability strategy and provide oversight?

We have several cross-business culture-based Lead Teams that serve as a central source for key company initiatives, such as environmental, health and safety (EHS), continuous improvement and lean manufacturing (Operational Excellence), new product and process development (Technology and Innovation), best practices in mining and reclamation (Mining), diversity and inclusion, and expense reduction (Expense Optimization). Each of these Lead Teams reports to me and develops goals, standards and systems to ensure that we are making tangible progress in these key areas. While most of our sustainability efforts have been traditionally managed by the global EHS team and link into focus areas of our other Lead Teams, I decided that we needed to create a dedicated Sustainability Team.

With a team devoted to sustainability, we are better positioned to leverage and communicate best practices across our company, work closely with the business units and facilities to implement global projects and understand where resources are needed to address challenges. I am confident that, under the guidance of our Sustainability Lead Team, we are well on our way to exceeding our 2025 targets while setting the groundwork to start new goals.

4

Diversity and Inclusion (D&I) is an important part of MTI's culture and values. How is D&I integrated in your sustainability strategy?

Sustainability provides a distinct competitive advantage for our company, and it starts with fostering a diverse and inclusive workforce. D&I, and the cross-section of ideas, experiences and backgrounds it engenders, is critical to driving our high-performance culture – and is a cornerstone of MTI's sustainability strategy as well as our commitment to human rights. As part of this, I have formed a dedicated Global Inclusion Council focused on raising awareness, implementing training on topics such as unconscious biases, communicating regularly on key D&I elements, and identifying initiatives to further promote a diverse and inclusive environment.

Recent incidents of discrimination in North America and other parts of the world reinforce why we must take deliberate actions every day to understand biases and ensure everyone feels comfortable and all voices are heard. It is why we have been so focused on embracing diversity and inclusion by raising awareness and promoting education and training initiatives. It is why MTI has always strived to create an inclusive and open culture built on our core values of respect, honesty and trust. While we have made progress with these efforts, we recognize that diversity is strength, and we aim to be stronger.

I have formed a dedicated Global Inclusion Council focused on raising awareness, implementing training on topics such as unconscious biases, and communicating regularly on key D&I elements.



5

What role does MTI's continuous improvement culture play in your sustainability initiatives? Why is employee engagement so important?

To really shift the sustainability mindset deeper into everything we do, employee engagement is a critical aspect of accomplishing that objective. The sustainability of our operations, resources and financial position has always been a core value and our people are the driving force behind making this a reality.

In our locations across the globe, I see examples of our employees in action, seeking ways to make a lasting, positive impact toward our sustainability efforts. Our people-first culture is reflected in countless areas, such as how we improve manufacturing processes to reduce our environmental footprint or put in place standard work protocols to keep our employees safe. And it is demonstrated by our employees' daily efforts, through kaizen events and suggestions, to solve challenges and identify ways to remove waste and risk from our processes. We have an opportunity to drive this mentality even further.

We want to educate all employees about the important role they play and empower them to help us achieve our goals.



Employees plant greenery to commemorate World Environment Day.

6

What obstacles or challenges does MTI face in the coming years around its sustainability initiatives, especially with regard to achieving its reduction targets?

I am encouraged with the progress we have made in our first year since implementing our targets. However, as this is a journey and we are operating in a dynamic manufacturing environment, we face some obstacles which we are prepared to address. As we see increased customer demand for some of our products, there is also a commensurate increase in energy use at these locations as well as waste associated with the production. We recognize the immediate need to become more resource efficient to balance the dynamic. With this at the forefront, we are designing new plants and capacity expansions today with innovative solutions that will allow us to become more energy efficient, lower water discharge and minimize our waste footprint in the future.

In addition, we have been working hard to implement a more rigorous process for environmental data collection, validation, analysis, and reporting. While we have certainly made noticeable strides, we continue to look for ways to evolve with changes in our operations and customer needs by adding new elements or metrics to track. This year's report reflects some of the data corrections and areas of performance improvements.

Overall, we are finding more opportunities for reduction projects than we initially understood when we implemented our environmental targets, and **it is the active participation of our employees that has helped uncover these benefits.**

7

In what ways has MTI adapted its new product development pipeline and timeline for development to address customers' growing environmental concerns as well as your own?

Our sustainability imperative is changing the competitive landscape and making us evaluate how we develop new technologies. We are actively adapting to this change by increasing the speed of development and tailoring our pipeline to meet our customers' most pressing demands. During the past year, we introduced a broad array of new solutions that help our customers to meet their sustainability goals, including products focused on mineral and fiber recycling for the paper industry, clean-up of contaminated water, containment of harmful pollutants at customers' waste management sites, and emissions reduction during the foundry casting process. To further enhance this focus, we have also introduced indicators to more closely evaluate the number of products we are developing that either support MTI's environmental goals or provide a sustainability value proposition for customers. In addition, **the speed of new product development – from ideation to commercialization – has increased by 20% over each of the last two years.** These metrics represent a significant change with our new product development efforts in a short timeframe.

OVER THE PAST 3 years, OUR NEW PRODUCT DEVELOPMENT PIPELINE HAS GROWN from 21% to 33% OF PRODUCTS WITH A SIGNIFICANT SUSTAINABILITY-RELATED BENEFIT AND WE SEE A CLEAR OPPORTUNITY to continue this trajectory.





How do you balance sustainable business practices with the pressure to meet investors' financial expectations?

One of the major pillars of sustainable operations is financial success. Throughout our history, MTI has demonstrated that promoting employee safety and development, environmental stewardship, product quality, and economic value go hand in hand.

I raise several questions when looking at our sustainability strategy and initiatives. Are we making the lives of our stakeholders and the world around them better? Are we helping to solve problems that our customers face? And are we doing this as efficiently as possible to be good stewards of both financial and natural capital?

These questions influence our investment decision when analyzing sustainability projects. In nearly all cases, we are finding that we can make investments in initiatives that deliver environmental benefits while also yielding cost savings and solid returns.



How has MTI adapted to the COVID-19 pandemic and demonstrated the resiliency and sustainability of its business model?

Sustainability can be looked at from an environmental or manufacturing perspective, but it also relates to the sustainability of our business, people and culture. Throughout the COVID-19 pandemic, I have seen many examples of the power of our culture and the engagement of our employees to persevere, adapt to new circumstances and support our communities. The success and resiliency of our business model is built on a multi-stakeholder view, accountability, transparency and a strong safety focus. While the scale and impact of COVID-19 has been unprecedented, our response is an expression of MTI's deep competence in managing sustainability factors. Since the outbreak was first reported in January, we have implemented a series of business continuity plans, procedures, and protocols to protect the health and safety of our employees and the communities we serve while continuing to deliver value-enhancing products to our customers. During this time, our facilities have continued to operate around the world, providing products, services and equipment essential to basic human needs, and our strong process control has enabled our business systems to transition to a virtual work environment.



Our facility in Unye, Turkey received recognition from the Governor of the Ordu province for implementing best practices to protect employees, continuing to deliver critical products to support the local economy and infrastructure, and supplying needed masks to keep residents safe during the COVID-19 pandemic.

We are proud of the work we do every day to serve our customers and communities. We recognize that during these challenging times, success will be defined by embodying our core values and how well we work together to keep everyone safe and healthy.

MTI's sustainability story will continue to evolve and adapt. We are proud of the accomplishments we have made toward advancing the social, economic and environmental aspects of our business, but we know there is more work to do. ...And we plan to do it!



2025 Environmental Targets

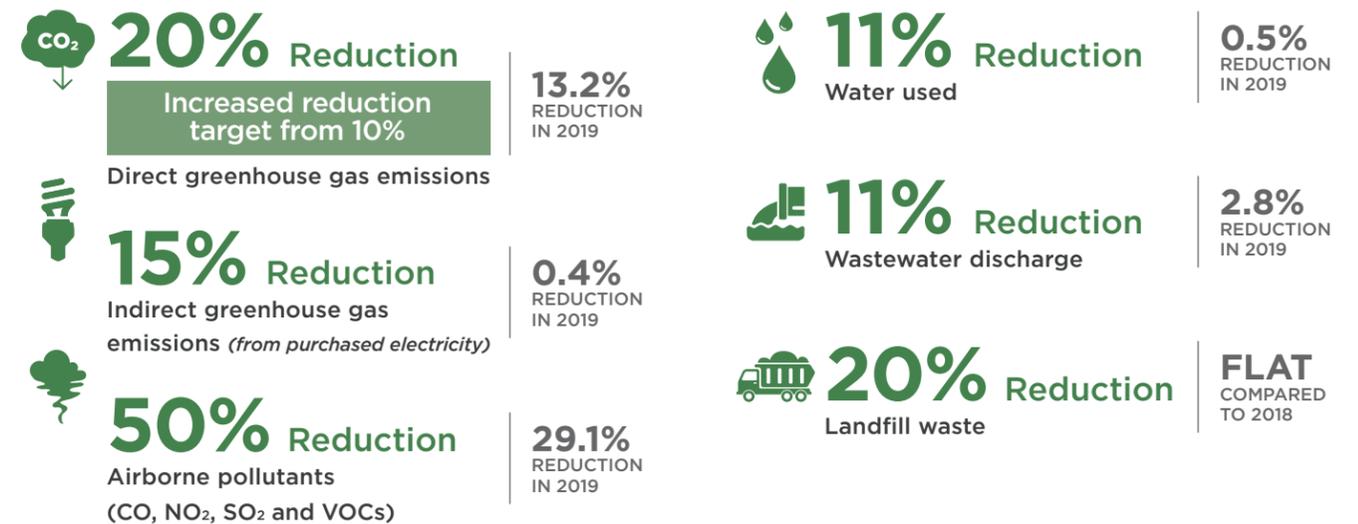
OUR PROGRESS IN YEAR 1

In 2019, MTI established its environmental reduction targets in key focus areas following a comprehensive assessment by a multi-disciplinary team. In setting these goals, we had a few guidelines in mind. First, we wanted targets that would be measurable, yet attainable over several years. We wanted the goals to be relevant - aligned with issues that matter most to our company and stakeholders. We wanted to implement targets that would further integrate the sustainability imperative in our overall corporate strategy. Finally, we wanted to provide a clear path to engage our employees at all levels with an actionable strategy to raise awareness and monitor and report progress towards these targets. In addition, we have taken steps to improve the quality and comprehensiveness of our data collection and analysis systems to ensure we are accurately tracking our performance.

These commitments take our sustainability efforts to the next level. They bring more focus and transparency to the environmental aspect of our sustainability efforts and are fully aligned with our overall corporate strategy and financial goals. As part of our continuous improvement mindset, we will be closely monitoring our progress to achieve these goals and identify additional or new targets in the coming years.



Solar panels at our carbon neutral Pet Care facility in the Netherlands.



The calculations for these targets are based on the emissions and resource use per ton of production (measured on an intensity level).

Performance Materials

\$823M Revenue | \$104M Operating Income*

*Excludes special items

35 Locations

(mining, manufacturing and R&D)

Fully Integrated

from mine-to-market with significant reserves strategically located globally

Broad Customer Base

industrial, consumer, and environmental markets

Leading Producer

and supplier of bentonite

90-Year Track Record

providing superior value to customers through customized technologies and exceptional service

Strong Commitment

to mining sustainably and land reclamation worldwide

Bentonite's unique chemical structure makes it the mineral of 1,000 uses, acting as a thickener, sealant, binder, lubricant or absorption agent.

LEADERSHIP POSITIONS

#1

Bentonite and Premium Sodium Bentonite Globally

U.S. Metalcasting Binders for Auto and Heavy Equipment

Greensand Bond Products Worldwide

U.S. Bulk Clumping & Europe Premium Cat Litter

Quality Assured Waterproof Concrete Structures

DID YOU KNOW?

Performance Materials commercialized 29 new products in 2019. 50% of our new innovation pipeline projects are designed to make MTI and our customers' more sustainable and reduce the environmental footprint.

Specialty Minerals

\$575M Revenue | \$86M Operating Income*

*Excludes special items

World's Largest PCC Producer

with the most advanced and comprehensive technology portfolio

Consistent and Reliable Cash Flow

from discrete investments in satellites at customer paper mill sites with long-term contracts

54 Satellite PCC Plants Operating

globally and 2.6 million PCC tons produced in 2019

Vertically Integrated

from mine-to-market with three Ground Calcium Carbonate (GCC) facilities, two Specialty PCC (SPCC) facilities and one talc operation

Value-Added Mineral Solutions

improve customers' performance and serve wide range of markets: plastics, paints, sealants, construction, and consumer

PCC: specialty engineered pigment that improves the brightness, opacity and bulk in paper while reducing costs.

LEADERSHIP POSITIONS

#1

Global Leader in PCC for Paper and Packaging Markets

North America Leader in Automotive and Construction Sealant Markets

DID YOU KNOW?

Mining land reclamation, vegetative restoration and wildlife protection at our operations in Lucerne Valley, California have spanned a 30 year journey — read more on page 71 in the Community Engagement section.



The broad spectrum of Specialty Minerals products are a staple in the lives of our customers and consumers, including paper and packaging additives, breakfast cereal, desserts, calcium supplements, pharmaceutical products, floor tile, paint, automotive sealants, roofing shingles, and pet food.

Refractories

\$298M Revenue | \$43M Operating Income*

*Excludes special items

Broad Portfolio of Value-Added Monolithic Refractory

materials for iron and steel making that allow for safe operating conditions at the lowest cost per ton of steel

Over 100 Years

of steel industry experience

17 Production

plants and 4 R&D centers globally

Innovative Applications Include:

engineered monolithic refractory lining systems, metallurgical wire products, bulk calcium and calcium wire, refractory measurement systems, and advanced carbon products

Steel Mill Service

embedded within customer site to provide highest-quality service and product performance

DID YOU KNOW?

We are the only producer of calcium metal in the Western Hemisphere, which is used in our vertically integrated metallurgical wire business.

Our LaCam® LI-Explorer is the most technically advanced laser scanning tool for hot ladles. It can withstand temperatures above 3,000°F and utilizes 3D imaging to ensure the most precise measurements of the ladle in under two minutes.

Ferrotron Unit

market leader in laser profile measurement technology for refractory lining in iron and steel industries

LEADERSHIP POSITIONS

#1

North America Monolithic Refractories

North America and Europe Core Calcium Wire

Refractory Laser Measurement Systems Globally

Energy Services

\$95M Revenue | \$10M Operating Income*

*Excludes special items

Trusted Offshore Oil & Gas Partner

treating problematic fluids and measuring well performance

Comprehensive Portfolio

of customized products, services, and patented technologies to address complex fluid projects

Service Offerings

in all major global offshore basins, including the Gulf of Mexico, Brazil, North Sea and Southeast Asia, for water treatment and filtration and select areas for well testing

Customized Solutions Improve

production, cost, compliance and environmental impact of customers' activities

16 Global Locations

in key offshore regions

DID YOU KNOW?

In 2019, we treated over 1 billion gallons of wastewater, primarily from oil and gas companies, with our proprietary filtration technology. This is achieved by identifying oil components and other contaminants in produced water from production wells and treating the water for cost effective re-injection or safe discharge in an environmentally friendly manner.

LEADERSHIP POSITIONS

#1

Gulf of Mexico flow-back filtration, produced water deepwater projects and high-pressure / high-temperature well testing



From Mine-To-Market

PROVIDING VALUE EVERY STEP OF THE WAY

- Global footprint of world-class operations and specialty minerals processing facilities
- Identify efficiencies, cost reduction opportunities and environmentally-friendly processes
- Positioned to support global customer needs



BEST-IN-CLASS PROCESSING AND MANUFACTURING

- Long-term reserves
- World-class limestone mines (calcium carbonate)
- Largest global reserves of bentonite and premium sodium bentonite
- Strong stewards of land we operate and mine



LEVERAGING UNIQUE MINERAL RESERVE POSITION



- Mineralogy and fine particle capabilities
- Extensive surface chemistry and application technology expertise
- Over 80% of projects developed with customers
- New product development indicators to meet MTI environmental targets and customer goals



RESEARCH AND DEVELOPMENT



- Solutions aligned to meet customer and market demands
- Serving broad customer base, industrial and consumer-oriented markets



PROVIDING VALUE-ADDED SOLUTIONS FOR CUSTOMERS IN GROWING MARKETS

ALL OUR ACTIVITIES ARE GUIDED BY OPERATIONAL EXCELLENCE PRINCIPLES, SUSTAINABLE PRACTICES & COMMITMENT TO SAFETY.

EVERY EMPLOYEE IS TRAINED ON AND ENGAGED WITH THESE CORE VALUES AND KEY PRINCIPLES REGULARLY.

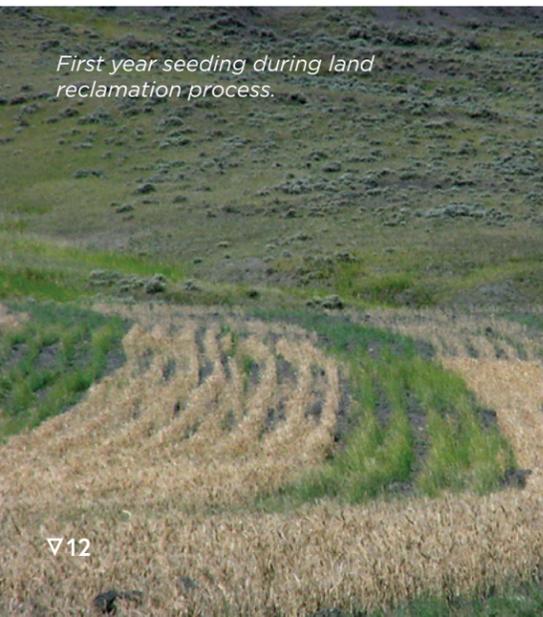
Sustainability Commitment, Strategy and Governance



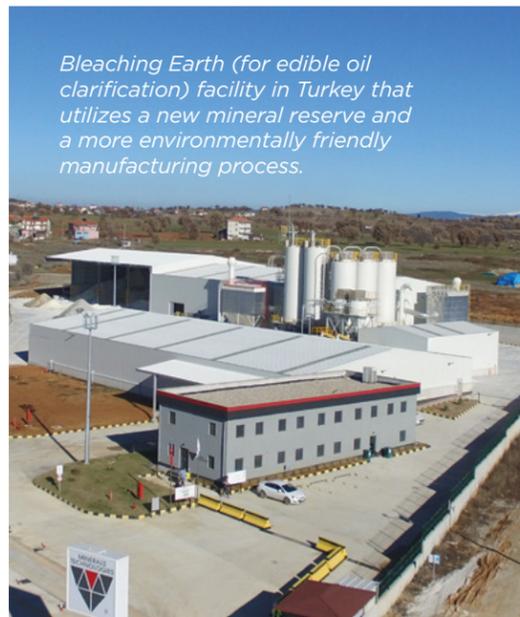
Sustainability is a core value at MTI and deeply embedded in our DNA. We manage our operations, our capital, our systems and our business opportunities in a sustainable manner, and we place the health and safety of our employees and the communities where we operate above everything else.

We firmly believe that MTI has a responsibility and commitment to ensure the needs of our business are met today while building a healthy and sustainable future for our employees, customers, shareholders and communities. Continuous improvement is a way of life in all that we do. Through our Operational Excellence culture, we continuously evaluate opportunities to better protect the environment, improve our operating footprint at our mines and facilities, and optimize our processes to conserve resources. Our employees are involved in driving our sustainability principles in their day-to-day activities, and they are knowledgeable about and responsible for helping us reach our environmental targets.

First year seeding during land reclamation process.



Bleaching Earth (for edible oil clarification) facility in Turkey that utilizes a new mineral reserve and a more environmentally friendly manufacturing process.



We know that we each have a shared responsibility to protect our planet and the local communities where we operate. Internally, we are focused on reducing or eliminating the environmental, health and safety impacts of our operations and products. **We monitor our environmental footprint, conduct comprehensive land reclamation activities and continually innovate for improved sustainability in our products and manufacturing practices.** We also collaborate with customers on a wide range of solutions that allow them to meet their sustainability goals — our products help customers reduce waste and emissions, remove contaminants, enhance water and soil conservation, and enable recycling and reuse. Overall, sustainability provides a powerful internal framework that leads to improved productivity and relationships with our employees and communities.

EVERYONE AT MTI HAS A ROLE IN SUSTAINABILITY



Sustainable practices are beneficial for more than our people and the environment. They also help our company grow responsibly, attract and develop talented people, and advance our innovation pipeline, positioning MTI for long-term success and viability.

Operating responsibly and driving continuous improvement takes engagement and commitment at every level of our company. There is no one-size-fits-all solution. The challenges facing our world are complex. The solutions are complex. And that's where MTI excels — converting complexity into value — every day.

Sustainability Governance and Accountability

Sustainability is integrated into MTI's corporate governance and organizational structures, allowing us to embrace change and innovation and measure our environmental progress across a range of metrics. That is why every leader and every employee is expected to contribute towards meeting and exceeding our goals.

BOARD OF DIRECTORS

The MTI Board of Directors has primary responsibility for oversight of risk and strategy for the company, which includes areas that impact our sustainability efforts. The Corporate Governance and Nominating Committee is directly responsible for reviewing and evaluating MTI's programs, policies and practices relating to social, environmental and governance issues which could impact the long-term sustainability of our business. There are many aspects of sustainability that are reviewed, including strategy and risk, environmental performance and 2025 targets, diversity and inclusion, talent and leadership development, safety, and ethics and compliance. The Corporate Governance and Nominating Committee, along with the Chairman of the Board and our CEO, review and approve each publication of MTI's Corporate Responsibility and Sustainability Report. Additional information about our Board's structure, composition and oversight can be found in MTI's [2020 Proxy Statement](#).

LEADERSHIP COUNCIL

Our Leadership Council (LC), under the direction of CEO Doug Dietrich, oversees our businesses, functional areas and culture-based lead teams — all of which integrate sustainable processes and practices into their strategies. The entire LC is actively engaged in the management of MTI's broad sustainability practices. Mr. Dietrich champions sustainability at an organizational level and each business unit leader helps drive sustainability practices and initiatives as part of their overall business strategy.

SUSTAINABILITY LEAD TEAM: CREATED IN 2020

In 2020, we made a change to our structure to improve coordination and oversight of our sustainability efforts through the creation of a distinct Lead Team, separate from its previous oversight within the Environmental, Health and Safety (EHS) Lead Team. Company and stakeholder expectations have changed over time, and as such, responsibility to meet expectations extends across many functions and lead teams — from employee safety, to environmental performance, manufacturing and mining, new product development, compliance, labor management, and supply chain.

With the creation of a dedicated Sustainability Lead Team, we are strengthening our commitment to sustainability, bringing more structure to these broader efforts and providing a platform to better share best practices across the entire company. The Sustainability Lead Team includes senior leaders from various functional areas of expertise across our global footprint and meets regularly. It is sponsored by our CEO and directly interacts with the Board of Directors, Leadership Council, and business leaders. Read more about MTI's Lead Teams on [page 22](#).



Duane R. Dunham
Chairman of the Board

“Sustainability is a core value at MTI and integrated into our corporate governance and organizational structures. With active oversight from our Board of Directors, MTI has made considerable progress across a broad range of sustainability initiatives since publishing its first report 11 years ago. We are encouraged with the noticeable improvements made in the first year since setting environmental targets and the many important contributions MTI is making to support its employees, customers, and communities.”

SUSTAINABILITY LEAD TEAM'S KEY OBJECTIVES INCLUDE:

MANAGING MTI'S PROGRESS toward achieving our 2025 environmental targets and providing guidance and support across the company for implementing new projects to achieve goals

WORKING WITH THE LEADERSHIP COUNCIL TO IDENTIFY NEW TARGETS and focus areas for MTI as we continue to advance our sustainability journey

ADVANCING MTI'S SUSTAINABILITY STRATEGY and developing and publishing the annual Sustainability Report

STRENGTHENING OUR DATA COLLECTION and validation processes so we have a robust system to measure our progress towards our established goals

ACTING AS THE FOCAL POINT AND RESOURCE CENTER for communicating to employees around news, ideas, success stories, and sharing of best practices

COLLABORATING WITH OTHER MTI LEAD TEAMS to generate ideas and ensure that sustainability is a key focus for each team

BENCHMARKING AGAINST MEGA TRENDS AND EXTERNAL REPORTING TRENDS, including expanding our disclosure along the GRI framework, to ensure MTI is clearly communicating and disclosing our efforts to external stakeholders.



How Sustainability is Integrated in Our Strategy

Sustainability is becoming an increasingly important part of everything we do. We view sustainability as a vital driver to MTI's long-term health and growth. We subscribe to a broad definition of sustainability that includes environmental, social, governance and ethics (ESG) factors, as we pursue initiatives that add value to our business, employees, and communities and protect the planet. Since first reporting on our sustainability practices in 2009, we have continued to refine our strategy and identify key focus areas to ensure we are prioritizing those issues most important to our stakeholders and that impact our business. **By doing so, we have developed a clear framework that allows stakeholders to easily understand our social impact and how we link social/environmental value with sustainable business value.** Going forward, we plan to conduct a formal materiality analysis in accordance with GRI's standards as we look to continuously improve our approach to sustainability.

ENVIRONMENTAL

CONSERVING AND PROTECTING



Minimize Impact

Seeking to reduce the environmental impact of our activities through more efficient manufacturing processes. We have enhanced our focus with 2025 environmental targets that provide a clear path to improve our performance.

Product Sustainability

Evolving our new product development processes and pipeline to meet MTI's environmental goals and address customers' most pressing environmental challenges. We seek to accelerate the speed with which we bring products to market and increase the percentage of new products with a sustainability benefit for MTI and our customers.



SOCIAL

CARING FOR OUR PEOPLE AND COMMUNITIES



Health and Safety

Nothing is more important than the health and safety of our employees — a 100% injury-free and illness-free workplace is achievable. We continue to enhance our safety-first culture with a strong focus on hazard identification, fatality risk prevention initiatives, continuous improvement, and comprehensive training.

High-Performance Culture

Our talented, engaged global team is our greatest asset and drives our high-performance culture, including our commitment to sustainability. We have a deep respect for the diverse backgrounds of our employees and firmly believe every individual should be treated with dignity, honesty and respect. We provide the resources for our employees to develop while attracting new talent to help us achieve long-term success.



GOVERNANCE

OPERATING ETHICALLY



Legal Compliance

Understanding that honest, ethical and transparent conduct is vital to our success and reputation. Every employee plays an essential part in complying with local and national laws, rules and regulations. We have a comprehensive framework of codes, conducts and principles that employees are trained in and understand are integral to how we operate.



ECONOMIC

RESPONSIBLE GROWTH



Financial Performance

Generating sustained economic benefits for our employees, shareholders, local communities and broader society.

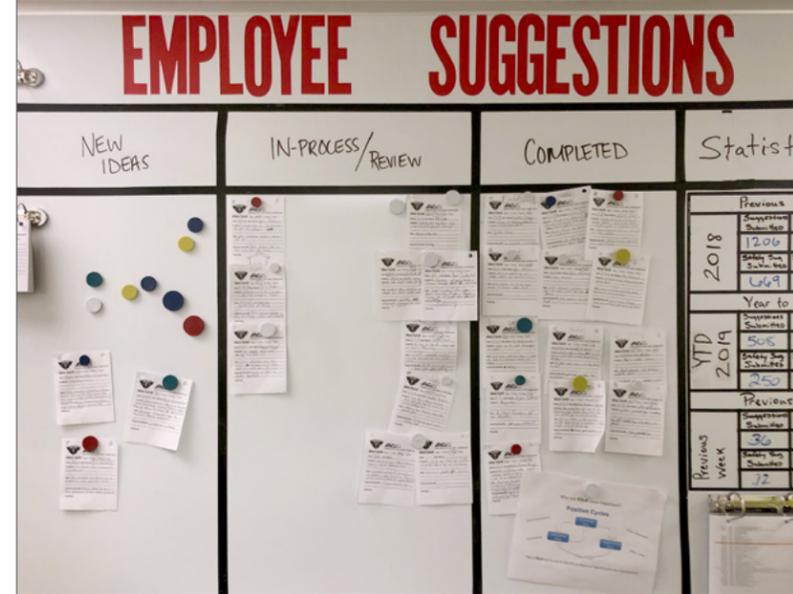
Investing for Sustainable Growth

Operating for the long-term by encouraging ongoing customer-driven innovation in new product development and investing in our core infrastructure, including maintaining and improving the performance, safety, and environmental standards at our facilities.



Stakeholder Engagement

Listening to, engaging and collaborating with our stakeholders — employees, customers, suppliers, investors, regulators and members of the communities where we live and work — makes us a stronger company. Stakeholder engagement not only makes us a better company, it also plays a critical role in our ability to be a more responsible corporate citizen. Transparent, authentic dialogue helps us focus on where we can strengthen our people-first culture. Because of this, we regularly interact with our stakeholders to better understand their unique perspectives and share important information about our key focus areas and initiatives. Moving forward, we will continue to expand and enhance our multi-faceted approach to engaging with stakeholders.



STAKEHOLDERS	METHOD OF ENGAGEMENT	KEY TOPICS OF DISCUSSION
Employees 	<ul style="list-style-type: none"> Quarterly all-employee CEO-led webcast Direct communications from management (email, CEO updates, podcasts and team meetings) Steady news flow on corporate intranet Plant visits by management Regular safety meetings Annual Performance Reviews for all employees Extensive safety and Operational Excellence (OE) training and development, including over 30,000 cumulative hours of mandatory training annually for all employees Environmental, Health and Safety (EHS) and OE employee-led webinars Robust suggestion system promotes employee involvement in product and process improvements, cost savings and lean initiatives Pulse surveys Safety and Operational Excellence recognition letters Bravo Chip to recognize noteworthy behavior Annual Operational Excellence Achievement Awards Business conduct hotline 	<ul style="list-style-type: none"> Health and safety initiatives and performance Diversity and Inclusion Recruiting process Innovation and new product development Compensation and benefits Company performance and strategy updates Investments in operations Progress with culture-based lead teams Performance management and career development High-performance culture and core values Rigorous training Corporate social responsibility Reward and recognition Best practices and how to adopt across MTI sites Updates on company policies and protocols Establishing self-directed work teams and high-performance systems
Customers 	<ul style="list-style-type: none"> Regular meetings with customers Customer satisfaction surveys Industry tradeshows Social media Targeted newsletters Voice of Customer processes Market driven R&D portfolio with customer engagement at key stages and technology roadmaps “House of Quality” process ensures customer requirements are driven in four areas through product development 	<ul style="list-style-type: none"> Product quality, service and performance Market trends and innovative new products Reducing costs Environmental benefits of products and 2025 environmental reduction targets Ecovadis or similar surveys Product differentiation Incorporating Voice of Customer for new product ideas “House of Quality” metrics

EMPLOYEE SUGGESTIONS

STAKEHOLDERS	METHOD OF ENGAGEMENT	KEY TOPICS OF DISCUSSION
Investors and Analysts 	<ul style="list-style-type: none"> Quarterly earnings calls Press releases and SEC filings Regular one-on-one or group meetings; management met with approximately 50% of shareholders in 2019 based on actively traded shares outstanding Management presentations at financial and industry conferences Annual shareholder meeting Outreach on governance and sustainability topics, including our top 60 shareholders who held approximately 85% of our shares in 2019 Website 	<ul style="list-style-type: none"> Financial and operating performance Outlook and market conditions Mergers and acquisitions Competitive positioning Environmental, health, safety and social performance Capital allocation Corporate governance
Communities 	<ul style="list-style-type: none"> Volunteer activities and donations to local charities Local employment opportunities Career fairs and plant tours Local government and associations participation Emergency preparedness training with first responders 	<ul style="list-style-type: none"> Jobs and local business opportunities Environmental impact and protection Community involvement Charitable giving Safety and emergency/disaster planning Local sourcing of supplies and raw materials
Suppliers 	<ul style="list-style-type: none"> Supplier Code of Conduct and Conflict Minerals Policy (ethics and compliance) Supplier performance assessments Supplier quality audits with feedback loop Supplier qualification, documentation and selection Supplier risk management Identifying smaller and local suppliers 	<ul style="list-style-type: none"> Performance criteria and expectations Safety and regulatory issues Sustainability of business relationship Pricing and agreement terms Collaborating on new, sustainable projects Lowest total cost discussions Single source supplier avoidance
Regulators / Elected Officials 	<ul style="list-style-type: none"> Meetings and engagement with government officials on legislative and regulatory issues Discussions regarding evolving legislation and impact on new products Compliance with various permits 	<ul style="list-style-type: none"> Policies that impact business, including environment, permitting, incentives and regulatory framework Regulatory developments Job market and maintaining a skilled workforce

Initiatives that are Improving Our Environmental Footprint

MAKING MTI, OUR CUSTOMERS, CONSUMERS AND COMMUNITIES MORE SUSTAINABLE

Emissions Reduction for Customers

In 2019, we extracted over 1.2 million tons of waste carbon dioxide from our PCC customers' exhaust stacks as well as our own and sequester those emissions in useful products, reducing harmful release to the atmosphere. Our process is less resource and energy intensive and more sustainable.

Plänet B is a bioeconomy initiative in Äänekoski, Finland designed to improve the circular economy. Our satellite plant located there, which produces Precipitated Calcium Carbonate (PCC), is a member of Plänet B and has been recognized for using about 25,000 tons of waste CO₂ from Metsä Group's bioproduct mill as a raw material.

Read more about [Plänet B](#).



Sustainability of Papermaking Process

We provide paper mill customers with superior quality filler and recycling solutions that improve the sustainability of the papermaking process and reduce:

- Costs
- Fiber (trees) and energy needed to produce a variety of paper products
- Solid waste sent to landfill that can now be diverted into usable materials for producing paper

More information is available on [page 54](#).



Addressing More Complex Waste Remediation Projects

We're the leading supplier globally of Geosynthetic Clay Liners (GCLs) for industrial, hazardous and municipal solid waste landfills and mining sites. We are evolving our robust portfolio of highly specialized polymer enhanced bentonite liners to address more complex environmental issues. These liners manage the disposal sites for mining waste and other difficult waste materials more effectively, with less resources and for longer time frames, than traditional liners.



Renewable Energy Sourcing

Our European Pet Care business is certified as carbon-neutral and has installed over 1,300 solar panels at its facility in the Netherlands. We are in discussions to source 50% of electricity at one of our largest plants in the U.S. from a local windfarm, which has the potential to significantly improve our overall electricity use and indirect emissions. We are identifying additional opportunities across our global operations to deploy renewable energy options as a cost-effective way to reduce our carbon footprint.

Additional detail on our renewable energy sourcing can be found on [page 36](#).



Capacity Additions are Resource Efficient

During 2019, we added significant capacity through new PCC satellites and expansions as well as expansions at our Dongming, China and Usak, Turkey operations. These new plants and expansions provide significant market opportunities with additional revenue sources as well as new customer partnerships. We are using energy efficient equipment and processes at these sites that utilizes approximately 10% less energy per ton than a typical MTI plant.



New Process for Bentonite Clay Mining to Reduce Greenhouse Gas (GHG) Emissions and Airborne Pollutants

At one of our plants in Wyoming, we have switched to more efficient natural gas processes for bentonite clay drying, and this is a focus area for other energy-intensive operations. This contributed to the following environmental and cost benefits:

- Reduced GHG emission by nearly 17,000 tons from 40,000 tons (4% of MTI's 2018 total)
- Reduced Airborne Pollutants by nearly 1,500 tons (23% of MTI's 2018 total)
- Delivered operating savings of approximately \$150,000 in 2019

Read more about this on [page 34](#).



Mining Sustainably

We conduct mining rehabilitation activities in close coordination with landowners and environmental agencies so that reclaimed land is more productive, useful and sustainable. We have a proven track record of strong practices from mining to reclamation, including rehabilitating land for a wide range of animal and plant species. This includes positive feedback from audits performed by external agencies. Our Mining Lead Team was formed to ensure we are achieving the highest standards in mining, exploration and reclamation.

Read more about our mining practices on [page 44](#).



Water Recovery System in Place

In 2019, one of our PCC satellite plants identified an opportunity to significantly reduce effluent water discharge in a cost-effective manner. The team installed a closed loop process control for comprehensive water recovery and re-use in its operations. Previously, the facility had been discharging approximately 18 million gallons per year to the local municipality at a cost of around \$110,000 per year. Following installation of the new system:

- Reduction in water usage by 29 million gallons/year
- 98% reduction in water volume sent to municipal city water system
- Total savings: \$115,000

This sustainable process improvement is being leveraged with other PCC plants, which are sources of higher water discharge, to identify further ways to reduce water usage and costs and recycle effluent water.

Read more about the process on [page 39](#).



Packaging Improvements to Support Circular Economy

Historically, cat litter packaging in Europe has been paper bags. We have been working closely with packaging suppliers to support a growing focus on the circular economy, which relies on recyclable/renewable packaging and reducing the weight of packaging. To improve the recyclability of our products, we have introduced packaging made of mono materials that are much easier to recycle and reuse, avoiding waste added to the environment.

Our personal care business packages products in squeeze tubes which contain plastic that makes it much harder to recycle. We have invested in an enhanced manufacturing process that allows packaging of personal care products in squeeze tubes that are manufactured out of solid aluminum. In the aluminum form, these products now avoid the more complicated, less energy efficient and less valuable recycling process associated with plastic material.

More information is available on [page 46](#).



Culture-Based Lead Teams

We focus on continuous, sustainable improvement in all facets of our business— processes, systems, products, services, people, cost reduction, productivity, mining and reclamation, and elimination of waste. This effort ensures that we are prioritizing the safety and health of our workforce while protecting communities, the environment and our operations.

LEAD TEAM FOCUS

As illustrated in the below diagram, MTI has seven culture-based Lead Teams dedicated to Sustainability, Environment, Health and Safety, Operating Performance Excellence, Innovation, Diversity and Inclusion, Mining and Reclamation, and Expense Optimization. These cross-functional Lead Teams, comprising employees from across geographies and diverse talents, report directly to our Chief Executive Officer and are sponsored and led by a senior executive appointed to provide guidance and expertise. Members rotate on and off the Lead Teams, helping further embed these principles throughout the organization and ensure our strategy is guided by diverse perspectives. Each of these Lead Teams develops goals, standards and systems, tracks metrics, and shares best practices to ensure that we are making tangible progress in these key areas.

BOARD OF DIRECTOR INVOLVEMENT AND OVERSIGHT

In addition to receiving detailed information on our financial and operating performance, financial position and capital allocation, succession planning, and risk assessment, among other subjects, the Board of Directors receives monthly updates on performance metrics from all of the Lead Teams. **At least once a year, the Board receives detailed reviews from the Lead Teams on current status, progress, metrics and future plans for strategic discussions with our CEO.**

LEAD TEAMS:

- 1 **Environmental, Health and Safety** Continuously improve health and safety programs, training and compliance. Develop risk reduction systems and initiatives.
- 2 **Operational Excellence** Continuous improvement and lead lean practices to enhance our business performance and drive people-focused culture.
- 3 **Technology and Innovation** Forefront of innovation and accelerate the speed and success rate of new product introductions.
- 4 **Mining** Develop goals and tactics to ensure the universal use of best practices for mining, exploration, and reclamation to minimize impact.
- 5 **Expense Optimization** Drive cost avoidance and reduction through improvement in processes and implementation of employee suggestions and best practices.
- 6 **Diversity and Inclusion** Cultivate a diverse and inclusive work environment for all employees.
- 7 **Sustainability** Advance sustainability strategy, manage environmental progress towards reduction targets, benchmark trends and communicate best practices across company.



SAFETY



Health and Safety Above All Else – A 100% Injury-Free Workplace is Achievable

The health and safety of our employees is our number one core value. We are committed to the health and safety of our employees, contractors, customers, and members of the communities in which we operate. **Our “safety first” culture has been built through dedication, continuous improvement and active engagement.** We continue to enhance our safety culture and our top priority is for all employees and contractors to return home in the same condition they arrived to work. While we believe zero-injuries across all our operations is attainable, we have set goals of 1.00 for Total Recordable Incident Rate (TRIR) and 0.10 for Lost Workday Injury Rate (LWIR), and we continue to make strides to drive incidents below these levels.

IN 2019, WE FOCUSED ON:

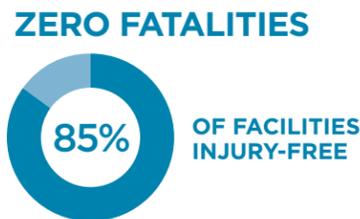
- Expanding safety leadership principles** and tools to empower and protect one another
- Improving training programs** for our newer employees
- Sustaining progress in our initiative** to reduce serious injuries through a comprehensive fatality risk reduction program
- Enhancing our safety** and environmental facility audits

2019 SAFETY PERFORMANCE HIGHLIGHTS

13% Decrease in Total Recordable Incident Rate (TRIR) - 1.12 injury rate

>30K Hours of safety-related training completed by employees

Below 4-Year Average in both TRIR and Lost Workday Injury Rate (LWIR), which tracks more severe injuries



14% Reduction in total environmental releases

7 Facilities have operated injury-free for more than 20 years

30% Increase in engagement metrics: employees completed over 293,000 engagements (job observations, unsafe act reporting, Gembas and non-routine task and hazard evaluation)

35% Facilities have operated without an injury for more than 10 years — an improvement compared to 23% in 2018



Our Approach to Safety

Our approach to safety, is embedded in our culture of continuous improvement, reinforced by our management systems, and a key aspect in driving employee engagement.



OUR SAFETY FOUNDATION – OVERSIGHT AND INVOLVEMENT OF ALL EMPLOYEES

Our Board of Directors, Leadership Council, and Business Unit leaders **receive comprehensive health and safety briefings**, and review detailed health and safety performance and related metrics, including injury/illness rates, lost workdays, types of injury, and environmental releases regularly. In addition, all MTI employees receive weekly EHS metrics and injury/illness reports for global and business specific performance.

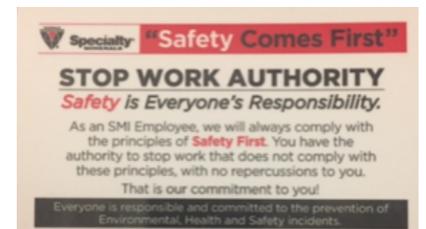
The MTI Environmental, Health and Safety Lead Team (EHS Lead Team), which reports to the Chief Executive Officer, **develops global environmental, health and safety goals, policies, standards and systems to help** all Business Units, Resource Groups, sites, and employees work safely.

Our Business Units set cascading goals aligned with MTI's global EHS Goals. They monitor progress across each location and report the latest metrics through the EHS Lead Team and Leadership Council. Business units further collaborate through Global EHS meetings to facilitate benchmarking and exchange key learnings and trends for EHS programs.

Our EHS Lead Team reviews and then **distributes Safety Alerts to all employees when an injury occurs** so that learnings are widely communicated. The alerts describe the injury, illnesses, or near miss, and provide the causal factors, root cause and corrective actions. The goal is to inform all other employees as a way to prevent similar accidents at their site.

We solicit and engage employee feedback through site safety committees, routine global employee EHS meetings, EHS webinars, EHS Kaizen events, EHS FMEA and Residual Risk Reduction (R3) evaluations, EHS suggestion systems, job observations, hazard hunts, townhalls, and open-door policy interactions. Our suggestion system is a vital tool in directly involving employees in providing feedback and recognizing opportunities for improvement as well as sharing of best practices globally.

On an individual level, **it is every employee's responsibility to correct unsafe procedures, practices, and conditions** wherever they exist. Each employee is encouraged to exercise “Stop Work Authority” to prevent an incident.



Stop Work Authority in all locations.

KEY PRINCIPLES AND ACTIVITIES TO ADVANCE OUR SAFETY CULTURE

Our improved performance over the years and high level of employee engagement with EHS awareness follows a close examination of our severe injury causes and the introduction of new proactive safety measures, which allow our teams to focus on conditions or actions that exist around human performance or doing work the “right way.”

THE INITIATIVES INCLUDE:

- 1 Leadership Engagement**
 Leaders at all levels in the organization are actively engaged in setting safety performance expectations and holding themselves and the rest of their organization accountable.
- 2 Risk Identification and Mitigation**
 Through the use of the Residual Risk Reduction (R3) and FMEA techniques, health and safety hazards are proactively identified and mitigated. Reporting near misses, unsafe acts and unsafe conditions by all employees is also a mechanism to identify and address issues before they cause injuries. Multiple assessment campaigns by multi-disciplined teams also support PDCA (Plan, Do, Check, Act) and identification of new improvement opportunities.
- 3 Health and Safety Training**
 All employees receive a level of continuous safety training commensurate with their level of exposure. Training is provided in both classroom and online-based formats and in the local language of the employee.
- 4 Worldwide EHS Support**
 A global network of EHS professionals across all businesses and individual facilities has been established to support organizational safety improvement. This group is guided by the EHS Lead Team that provides the strategic guidance to drive continual improvement.
- 5 Integration of Operational Excellence (OE) Program with Safety**
 We have experienced significant improvements in plant working conditions through deeply integrating our OE and Lean practices with safety. Our sites identify and address the risks present at our sites using our risk reduction and Operational Excellence processes, including 5S, Visual Management and Standard Work. The worldwide implementation of Lean principles improves communication and engagement and reduces waste and inefficiencies in our workplace that could result in incidents.



American Colloid is a subsidiary of MTI.

ACTIONS FOCUSED ON FATALITY RISK REDUCTION AND EMPLOYEE ENGAGEMENT

In 2019, our EHS objectives focused on multiple strategies, with fatality risk mitigation at the forefront, to align EHS efforts across MTI businesses worldwide and actively engage employees. This includes identification and continuous assessment of the inherently high-risk situations in all locations, investment in improving the safety of these activities, development and management of mitigation plans, and leadership engagement in mitigation status reviews. We have made tangible progress across several programs, building on our efforts started in 2018.

KEY PROGRAMS:

Forklift/Pedestrian Separation

Our Forklift/Pedestrian Separation initiative has led to a **94% risk reduction**.

Mobile/Pedestrian Separation

We've **reduced 69% of the risk** associated with this activity.

Lockout, Tagout, Tryout (LOTOTO)

Plant improvements and upgrading system designs to strengthen isolation of energy sources

Fall From Heights

Structural improvements by applying hierarchy of controls and implementing industry best practices

Confined Space Entry

Focus activity in 2020



LEADING INDICATORS TO ASSESS EMPLOYEE ENGAGEMENT

A key tool we use to assess the strength of our safety performance and employee engagement is a set of leading indicators focused on every employee at MTI. We conduct Gembas (walk and see activities throughout the facility), identify Hazards/Near Misses and Job Observations that lead to changes, and Non-Routine Task Reviews (NRTR) for jobs that do not have a standard work due to their infrequent occurrence. These leading indicators help us monitor our health and safety performance and provide critical insight for identifying initiatives, short-term or long-term, to effectively remove risk and avoid EHS incidents.

IN 2019, OUR EMPLOYEES REPORTED A MONTHLY AVERAGE OF 24,000 LEADING INDICATOR ACTIVITIES COMPARED TO 18,000 IN 2018, AN INCREASE OF 30%

40% INCREASE
IN GEMBA

28% INCREASE
IN UNSAFE ACT REPORTING

53% INCREASE
IN JOB OBSERVATIONS

Continuous Improvement in Safety and Occupational Health Performance

CETCO Energy Services Malaysia has Occupational Health and Safety Management System ISO 18001:2007 certification.

MTI EHS standards provide the basis for protective measures and programs at our sites to protect the health and safety of our employees. Occupational health and safety standards and practices are core to our policies and strategies. **Occupational health standards such as respiratory protection, ergonomics, hearing conservation, exposure monitoring/occupational surveillance, and chemical hygiene are a few examples of how occupational health programs are integrated in our practices.** Our standards apply the most stringent requirements globally while recognizing more specific regulations in various locations. Occupational illnesses have always been tracked as part of our injury/illness performance data and evaluation.

COMPREHENSIVE HEALTH AND SAFETY TRAINING FOR ALL EMPLOYEES

Every employee is required to complete comprehensive safety training of approximately 8 hours annually. New employees also complete a series of safety training modules on all critical topics during their first year. In total, MTI employees cumulatively complete over **30,000 hours** of safety-related training on an annual basis.

Training is an essential part of our health and safety strategy. **To minimize the risk of an accident or injury, we ensure that our employees have the information they need, delivered effectively, and at the appropriate time.** Our ongoing training programs demonstrate our commitment to targeting zero injuries, ensuring that safety is always top of mind and that we continually raise standards at MTI.

EHS webinars, which focus on a wide range of critical safety themes, are held each month for all employees. Multiple sessions are offered to accommodate for global participation. Sessions are also recorded and made available to all employees for use and reference.

PERFORMANCE METRICS

Recordable Rate - Injuries/Illnesses Per 100 Employee Years

Regions	2015	2016	2017	2018	2019
America	1.44	1.82	1.62	2.06	2.01
Asia	0.96	1.20	0.71	0.23	0.23
Europe	0.80	0.50	0.76	0.69	0.19
MTI Total	1.23	1.25	1.18	1.28	1.12

Lost Workday Rate - Injuries/Illnesses Per 100 Employee Years

Regions	2015	2016	2017	2018	2019
America	0.32	0.37	0.33	0.10	0.41
Asia	0.24	0.40	0.28	0.00	0.12
Europe	0.72	0.10	0.23	0.39	0.09
MTI Total	0.40	0.26	0.26	1.16	0.26

Safety Performance Injuries/100 Employees



Diligent and focused on building on strategies that improved performance towards the end of 2019.

4 more lost workday cases in 2019



Our mining and manufacturing team at our Wyoming facility had a perfect safety record in 2019, operating without any lost time accidents in 2019. This included over 38,000 hours worked at the mine and nearly 104,000 hours at the mill.

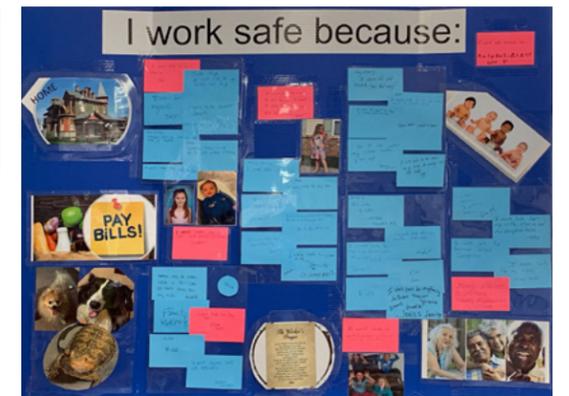
2019 INJURIES/ILLNESSES BY TYPE

1. Strains
2. Lacerations
3. Fractures
4. Bruises
5. Contusions
6. Sprains

As strains and lacerations have been our most common type of injury for several years, many of our training modules and awareness activities have focused on identifying the causes and implementing a series of corrective actions.

WORKPLACE SAFETY AUDITS

Through our EHS Lead Team and site-specific personnel, we implement a safety auditing program for adherence to local, state and federal safety standards and regulations. These assessments take a “fresh eyes” approach by engaging experts from outside of the business unit to help observe and report any improvement opportunities. The assessments confirm MTI’s commitment to best management practices and principles. We continually increase the rigor and level of scrutiny to drive continuous improvement in our operations.



Contractor and Host Site EHS Program/Performance

Contractors support our operations with valuable expertise and specialized services, working in our facilities and alongside our employees. That is why we expect them to meet our high EHS standards.

We also influence the safety of host locations where we operate. The hosts sites where our PCC business operates have implemented mobile separation initiatives such as use of barriers to protect the employees. We also collaborate with the host sites on crisis management plans and participate in regular drills to ensure effectiveness of response measures.

In our Energy Services business, our team works closely with customers to plan every detail of our projects with oil and gas companies. Before any project, we prepare our equipment in our facility as if we were offshore and have the customer on site to tour the intended layout. The tour is used to anticipate potential issues on location for space, safety or system capabilities. Once we are on location, all employees are embedded in daily operation meetings for communication and hazard mitigation activities.

CETCO OILFIELD SERVICES INDONESIA
Received Contractor Safety, Health, Environmental Management System (CSMS) Certificate from PT Pertamina Hulu Energy (PHE)

Emergency Preparedness and Response Drills

It is our responsibility to identify the types of emergency situations that may pose a threat to our employees. Our EHS teams are responsible for developing thorough Emergency Response Procedures to safely respond to emergency situations, train employees in these protocols, and to continually evaluate the Emergency Action Plans.

All facilities have a site-specific Emergency Response Preparedness Plan, conduct annual reviews of the plans and engage in mock drills with various local agencies to assess readiness for a variety of potential situations. All drills involve a documented critique that notes any gaps or improvement opportunities. The procedures are intended to ensure the safety of our employees and communities, protect our assets, and restore our businesses if our operations are impacted. Examples may include Automated External Defibrillator (AED) and CPR training, fires, natural disasters, utility outages, cybersecurity attacks, acts of violence or threats outside of our control, and Pandemic preparedness.



Employees practice emergency response drills.

ENVIRONMENT

Overview of the Environmental Data

PROGRESS TOWARDS 2025 TARGETS

In the following section, we describe the corrections to the 2018 baseline data and 2025 targets. More importantly, we outline our 2019 emissions, highlight success stories driven by employee involvement and our progress towards the 2025 targets.

Since publishing our first Corporate Responsibility and Sustainability Report 11 years ago, we have focused on further ingraining sustainability throughout our company, including continuously implementing best practices to improve our environmental footprint.

In 2018, a cross-functional team was formed to analyze our key environmental areas and develop reduction targets. With the 2025 targets now established, we are focused on meeting or exceeding these key metrics. The newly created Sustainability Lead Team will oversee year-year metrics, manage progress towards the targets and strengthen our data collection and analysis. In addition, the team is identifying opportunities to share and evaluate best practices in waste, water, and emissions reduction across MTI.

Some of the environmental data contained in this report is slightly different than what was reported in the 2018 report. This is due to adjustments resulting from additional data verification, ongoing efforts to standardize and improve performance indicators across the company, and changes to reporting methods. As part of our commitment to a more rigorous process for environmental data collection, validation, analysis and reporting, we identified some errors and inconsistencies in how environmental data was collected and reported in 2018. To address these errors, we have adjusted our 2018 baseline metrics to reflect activity associated with the 2018 acquisition of Sivomatic in Europe, the reclassification of coal usage by one of our plants, and reclassification of a waste stream. As a result, we have modified a few of our 2025 targets based on the revised 2018 baselines and 2019 metrics.



Our facility in Lucerne Valley, California produces finely ground calcium carbonates (GCC) for the plastics, paint, sealant, glass, roofing and plaster markets.

Monitoring, measuring and understanding the impact we have on the environment has been a longstanding core element of our sustainability strategy.

As a resource-intensive manufacturing company, we are aware of our responsibility to not only remain compliant with applicable environmental regulations in the locations where we operate, but also work to minimize the impact of our operations on people and the planet. While we have made considerable progress improving our footprint, we remain committed to identifying new opportunities to drive our performance further and faster.

In 2019, we maintained our continuous improvement journey in sustainability performance towards our long-term environmental goals, focused on reductions in the following key categories from a 2018 baseline:



Scope 1
Direct greenhouse gas emissions CO₂



Scope 2
Indirect greenhouse gas emissions CO₂
(from purchased electricity)



Purchased electricity plus the quantity of electricity supplied to our satellites by host mills



Water consumption



Wastewater discharge



Landfilled waste



Airborne pollutants

We continuously evaluate our environmental management practices to uncover broader opportunities that translate to environmental benefits, increased resource-efficiency and reduced operating costs.

Greenhouse Gas Emissions (GHG)

Considering the health and environmental issues associated with related air pollutants, MTI recognizes that it is imperative that we reduce our total GHG emissions and work diligently to minimize our environmental impact in the areas we operate. Often, this means working closely with the local communities as they aim to reduce industrial pollution and commercial sources of emissions. MTI strives to improve the communities that we operate in. By encouraging our facilities to reduce energy use and identify opportunities to invest in renewable energy, we aim to lower our Scope 1 and 2 GHG emission levels. **We are making meaningful progress – from identifying our highest-emitting activities to engaging employees across our company to adopt a more energy-efficient mindset.**

2025 GOAL

MTI has increased our Direct CO₂ emissions percentage **reduction target 20%** FROM AN INITIAL TARGET OF 10% REDUCTION.

Our strong 2019 performance has enabled MTI to **set a more aggressive target** for reducing Scope 1 Direct CO₂ emissions.

SCOPE 1 DIRECT CO₂ EMISSIONS

In 2019, MTI delivered a very significant **11.6%** reduction of Scope 1 Direct CO₂ emissions which lowered overall emissions from approximately 442,000 tons to approximately 391,000 tons. Several of our large manufacturing and processing sites contributed to this improved performance.

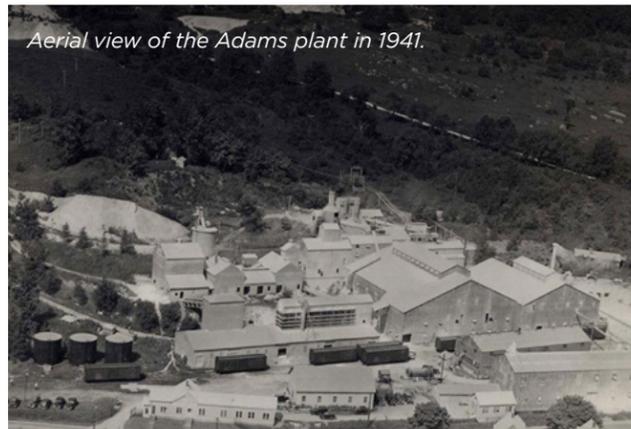
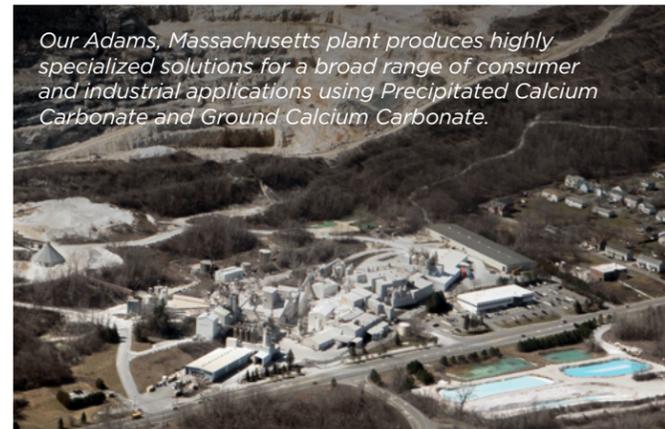
KEY PROJECTS INCLUDE:

1. We identified an opportunity at our Colony West, Wyoming plant to switch to natural gas processes as the energy source for drying bentonite clay. The immediate impact was very significant, and we achieved a **reduction in:**
 - a. GHG emissions of approximately 17,000 tons from this plant (equating to 4% of MTI's 2018 total)
 - b. Airborne pollutants of approximately 1,500 (equating to 22% of MTI'S 2018 total) while improving dryer throughput and reducing costs

2. Our Adams, Massachusetts facility reduced GHG by about 8.5% and 8,000 tons by switching fuel usage, utilizing more efficient haul trucks and optimizing the fuel consumption at the facility.

PLAN TO ACHIEVE TARGET

MTI is leveraging best practices from both Colony and Adams to investigate and implement projects to convert additional dryers to natural gas processes while improving fuel usage efficiency across our global operations.



The following table summarize the Scope 1 Direct CO₂ emissions resulting from our production processes (dryers, kilns, boilers and calciners), mobile equipment, and the Scope 2 Indirect CO₂ emissions resulting from our mining and manufacturing use of purchased electricity generated from fossil fuels.

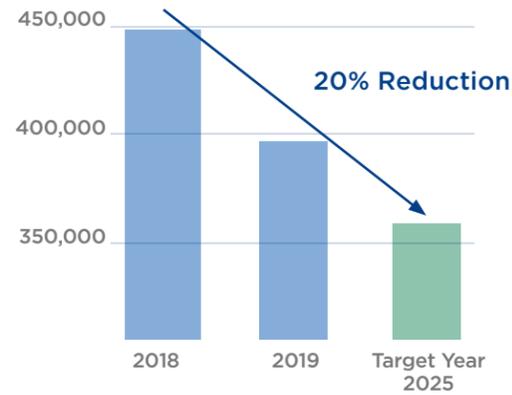
MTI 2019 GREENHOUSE GAS EMISSIONS (GHG)

	2018 BASELINE	2019	% CHANGE	2025 TARGET
Direct GHG CO ₂ Process & Mobile (ton)	441,881 ¹	390,782	-11.6%	353,000 ²
Direct GHG CO ₂ Process & Mobile (lb/ton Produced)	97	84	-13.2%	78
Indirect GHG CO ₂ (ton)	154,573	158,577	+2.6%	131,000
Indirect GHG CO ₂ (lb/ton Produced)	34	34	0%	29

¹ Our 2018 baseline has been adjusted downward from 525,618 tons and intensity of 117 lb/ton due primarily to an error associated with the 2018 acquisition Sivomatic operations in Europe (Netherlands, Austria and Turkey) and the reclassification of coal usage by one of our metalcasting blending operations.

² MTI has increased our 2025 Direct GHG reduction percentage target up to 20% from the 2018 initial target of 10% reduction.

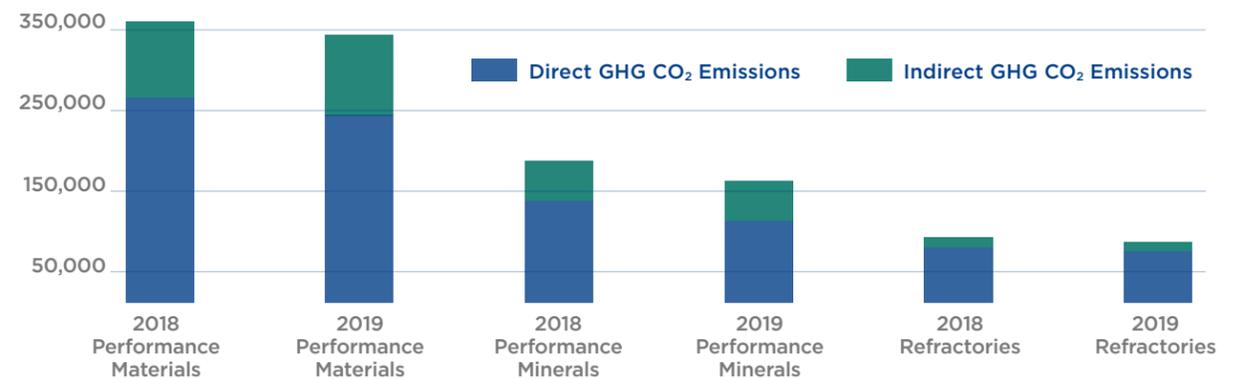
Total Direct GHG CO₂ Emissions (Tons)



Total Indirect GHG CO₂ Emissions (Tons)



2018 and 2019 GHG CO₂ Emissions (Tons)



SCOPE 2 INDIRECT CO₂ EMISSIONS

In 2019, MTI's Scope 2 indirect emissions increased slightly from approximately 154,000 tons to approximately 159,000 tons. Although we had several sites that reduced their indirect emissions via efficiency improvements and sourcing green electricity, MTI invested in several capacity expansions and saw increased product demand from customers that drove increased electricity use in mills, pumps, and motors. **While implementing these capacity expansions, we have been focused on delivering more resource-efficient processes and more advanced innovations to limit our emission use over time.**

PLAN TO ACHIEVE TARGET

MTI is investigating opportunities to increase our sourcing of green electricity from solar panel farms and wind turbine operations in order to further reduce our indirect emissions and exceed our target.

FOR EXAMPLE:

1. Our Sivomatic sites in the Netherlands and Austria are carbon neutral. They are audited by Climate Neutral Group to calculate their CO₂ emissions, offset partially with on-site solar panels in the Netherlands that generated about 20% of our electricity demand, internal reduction projects, and purchasing green energy from utilities. They compensate the difference by purchasing CO₂ certificates from Climate Neutral Group Biogas and Wind Projects in Turkey — all of which led to a 2019 credit cost of approximately \$16,000. We are leveraging this model to implement a similar concept at other facilities.

2. We are looking at a unique opportunity to source up to 50% of power supply to our facilities in South Dakota and Wyoming from wind turbines. The electric utility in Eastern Wyoming is constructing a new wind turbine field and offering ratepayers the opportunity to nominate part of their land for this source. While contract negotiations are ongoing, this new wind turbine power source represents an opportunity to reduce Scope 2 GHG emissions by 50% at these facilities.
3. At our various Specialty PCC (SPCC) and Ground Calcium Carbonate (GCC) plants in the US and UK, MTI sources a significant share of our power requirements from renewables through our supplier contracting process. In particular, more than 40% of the power consumed annually at our Lifford, UK plant is generated by renewable sources. Additionally, we continue to seek opportunities to increase the green profile at these facilities through the purchase of Renewable Energy Credits (RECs).
4. Our Scottsbluff, Nebraska, USA operation receives almost all of its electricity from a solar farm and energy storage facilities and has nearly zero indirect emissions.



Source 50% of electricity from renewable sources by 2025

at our mining and manufacturing facilities. This target, combined with the efficiency improvement strategies for reducing GHG emissions, supports our goal to reduce indirect GHG emissions by 15%.

2025 GOAL

Purchased Electricity

In 2019, MTI's absolute electricity usage was flat even though production increased. We had several Paper PCC sites that significantly reduced electricity use via equipment upgrades and energy efficiency projects.

2025 GOAL

Globally, we continue to identify energy efficiency opportunities and formalize plans for improvements that reduce electricity consumption at our locations. Our strategies to achieve the 2025 targets include more efficient operations, energy efficient lighting (LED), pumps, mills, and motors.

PLAN TO ACHIEVE TARGET

MTI is investigating and planning to upgrade equipment to increase efficiency and reduce electricity usage as well as install LED lighting at almost all of our global facilities.

SPECIFIC ACTIONS INCLUDE:

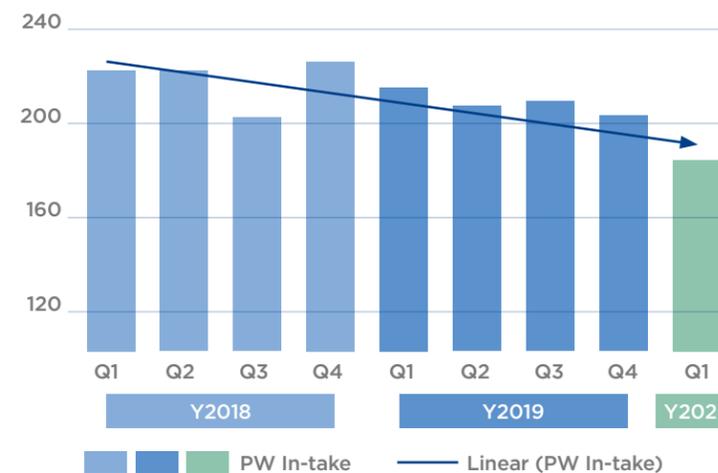
1. New agitator design for our Paper PCC plants
2. More efficient air compressors and motors for our Performance Materials plants
3. Efficient pumps for some of our Performance Minerals locations

MTI 2019 ELECTRICITY UTILIZATION

	2018 BASELINE	2019	% CHANGE	2025 TARGET
Electricity (MWh)	639,467	640,629	+0.2%	544,000
Electricity (kWh/ton Produced)	71	69	-2.8%	60

As an example, one of our PCC plants installed a new agitator, implemented LED lighting and optimized their scrubber operation. This plant has measured approximately 18% electricity use reduction over the past two years.

Electricity Consumption/Batch Trend



EMPLOYEES ENGAGED IN ENERGY REDUCTION ACTIVITIES

Much of our success in progressing towards our energy reduction goal can be attributed to employee engagement. Some of our most successful initiatives to engage employees in energy reduction efforts have been "energy treasure hunts" at select facilities, where teams on the ground identify possible day-to-day energy-efficiency improvements. The goal is to find opportunities to reduce energy use, costs and GHG emissions related to energy — many of which are low- or no-cost improvements that are relatively easy to implement, such as the installation of more efficient lighting (LED) and mechanical systems, motors, belts and drives, fans and pumps, refrigeration systems and office equipment. During 2019, we capitalized on several projects to switch less-efficient lighting units with LED lighting and from several other opportunities like compressed air efficiencies and equipment turn off after hours. Under the direction of our Green Energy Team and Energy Reduction team in our Expense Optimization Lead Team, we are looking for more ways to engage employees in day-to-day activities to identify gradual improvements across our global facilities.

Water (Used and Discharged)

2025 GOAL

REDUCE water consumption by 11% by 2025.

Water is essential to life. In many regions, water risks are increasing, and availability is becoming more of a concern. Our industry requires a certain amount of water to operate, but we recognize our responsibility to use this natural resource efficiently across our global footprint and ensure that we do not compete with the local community for water resources.

In our Specialty Minerals facilities, it has been our longstanding practice to conserve and recycle as much water as possible while providing an economic benefit to the local community. In areas where

there is ample water available, the majority of the water used by these facilities is associated with the water purification processes to produce specific grades of Specialty PCC and Talc products. The wastewater from these operations has high solids, which are discharged to onsite settling ponds, which we closely monitor. The water is treated through a series of these ponds and ultimately reused in our products or processes or discharged.

For our Paper PCC satellites, we are located at the customer's paper mill which uses significantly more water than our satellites plants use and most of our water usage is returned to the host mill carrying our product. In a few sites where water availability is limited, the local communities have established separate discharge criteria for our excess water. The host paper mill and our satellite are important to the community well-being, and we work with the community to ensure conservation of water. As a result, we track not only the volumes of water coming into our sites and discharging from them, but we also closely track specific water quality criteria to ensure we are compliant with our local discharge permits.

MTI WATER USED

In 2019, MTI's water consumption increased about 2.4% and our intensity metric declined by 0.5% through enhanced water efficiency use while production increased. We had several Paper PCC sites that reduced overall water consumption due to efficiency projects. Higher product demand for some of our Specialty PCC water purified products led to increased water consumption.

Water consumption in a PCC plant comes from multiple sources:

1 **Process Water for direct slurry consumption**

2 **Kiln Gas Moisture**

3 **Scrubber / Cooling Water**

MTI's predominate facilities that generate water consumption and discharge operate in our Specialty Minerals business unit. These product lines use water for process and cooling purposes. The other business units use minimal amounts of water and are not included in these figures.



One of our treatment ponds for settling and neutralizing our wastewater from Specialty PCC operations to ensure safe discharge to the environment.

Of the total water used in a PCC plant, over 70% is utilized within the process and delivered to the host paper mill customer as a slurry carrying our product. 9% is typically evaporated, and 18% is typically used for scrubbing the paper mill stack gases so that CO₂ can be extracted and used by MTI in the production process. Process efficiencies can create recycle water loop opportunities within our portfolio of PCC satellite plants.

KAIZEN EVENT LED TO CLOSED-LOOP WATER SYSTEM TO RECOVER WATER

BACKGROUND An effluent filtering system was installed when our Wisconsin PCC satellite was built in 2011. This filtered effluent was very clean but sent directly to the municipal city sewer system (at a cost of \$6.40/thousand gallons). The plant averaged 366,000 gallons of treated effluent weekly and none of this was recovered for use in the operations.

OPPORTUNITY FOR IMPROVEMENT The team wanted to find a way to reduce costs and make the plant more sustainable. They began to implement an action plan to evaluate how to best recover and recycle the wastewater while reducing water usage.

ACTIONS TAKEN A series of major and mini-Kaizens were conducted to develop a new water recovery process. R&D was brought in to analyze how the wastewater would affect filtering systems and local city waste treatment. Once they knew that recovering effluent water was possible, the team designed a comprehensive system to re-purpose otherwise discharged water, reduce the suspended solids, and reuse process water in the system.

RESULTS Implemented a closed loop process control program to monitor and control the blending ratio with significant improvement to business performance and sustainability efforts.

\$150K+
TOTAL SAVINGS

9M gal/yr
REDUCTION IN PROCESS WATER DISCHARGED

98% reduction
WATER DISCHARGED TO MUNICIPAL CITY WATER SYSTEM

THE PAPER PCC GROUP IS STARTING TO IMPLEMENT SIMILAR PROGRAMS TO OPTIMIZE AND REDUCE WATER USE AT OTHER FACILITIES.

PLAN TO ACHIEVE TARGET

MTI is investigating and planning to increase our implementation of closed loop cooling and water recovery projects as well as conduct site water usage studies to determine the best method for water conservation. In addition, we have several projects in place to utilize higher concentration of solids in our slurries and improve the efficiency of our process cooling equipment.

Our Adams (US) management has engaged with sustainability professionals to conduct a water balance study at their facility. The study will identify areas to reduce, reuse and recycle water. Since the Adams location is one of the largest consumers of water in MTI, the conservation efforts at this location will help us achieve the 11% overall water reduction target.

MTI WATER DISCHARGE

The process wastewater from the onsite PCC plants is discharged to wastewater treatment plants operated either by the host paper mills or by local municipalities. Cooling water from PCC plants is managed in a variety of ways, including returning to the host mill for use in their systems, direct discharge of clean cooling water to surface water, and discharging of cooling tower blow-down to treatment operations. Water that is returned to the host mill for reuse is not considered wastewater.

In 2019, MTI's water discharge was the same as 2018, due to several water usage reduction projects at our satellites which were offset by increased water discharge at our Performance Minerals plants. Several of the Paper PCC closed loop projects that reduced water consumption also significantly reduced the amount of water discharged.

PLAN TO ACHIEVE TARGET

Many of our initiatives for reduction in water consumption also will benefit our water discharge performance. In addition, these projects will significantly reduce the amount of water discharged and increase the percentage of water reused and recycled.

2025 GOAL
REDUCE water discharge by 11% by 2025.

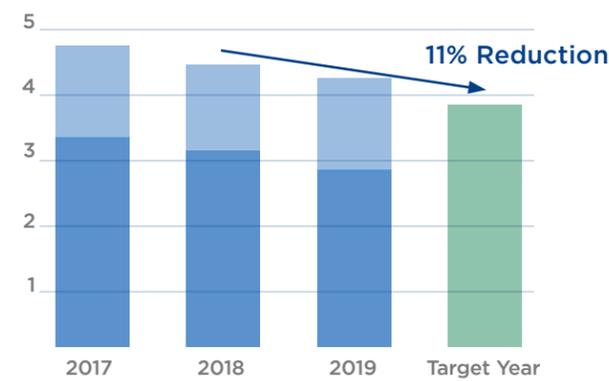
MTI 2019 WATER USED AND DISCHARGED

	2018 BASELINE	2019	% CHANGE	2025 TARGET
Process Water Used (Billion Gallons)	7.41	7.59	+2.4%	6.6
Process Water Used (Gallons/ton Produced)	823	819	-0.5%	733
Process Water Discharged (Billion Gallons)	4.13	4.14	+0.2%	3.7
Process Water Discharged (Gallons/ton Produced)	459	446	-2.8%	409

Process Water Used (Billions of Gallons)



Process Water Discharged (Billions of Gallons)



■ Paper PCC ■ Performance Minerals

Process Waste

2025 GOAL
REDUCE process waste by 20% by 2025.

The mitigation of waste is closely linked to the optimization of processes and continuous improvement in our production. Limiting waste generation and reducing volumes of off-quality product are derived from improving our process controls.

MTI has limited the definition of waste to include only process waste that is sent to final treatment or disposal, either offsite or onsite. MTI does not include maintenance waste (such as used oil), packaging waste or office trash in this section, as there are currently no records on these materials. MTI also does not consider unprocessed mining materials that are returned to the mine site as process waste. These materials have not been chemically altered and are typically not regulated substances.

This data also does not include materials that are recycled in offsite applications in the quantities of process waste. The primary example of this is the auxiliary minerals ("grit") separated from the calcium carbonate at almost all of our PCC plants. The undesired grit is produced during the process as a quality step to remove particles not appropriate for direct use in the PCC product as part of the paper making process. **To minimize the amount of grit formed in our process, MTI has developed and installed proprietary treatment processes in about half of our satellite plants that enables a portion of the grit material to be reused as a valuable addition to PCC products.**

For the remaining grit material, MTI strives to utilize lime like solids in other applications, such as agricultural soil conditioning or construction products, and we typically see over 40% of total available grit directed into beneficial reuse applications.

PLAN TO ACHIEVE TARGET

We plan to reach our goal of reducing our landfilled waste volume by 20% by 2025 by increasing the beneficial reuse of this waste stream. Waste minimization and recycling efforts are in progress at many of our locations and will continue to be a key focus area going forward.

IN 2019, MTI HAD SEVERAL SUCCESSES THAT WILL LEAD TO REDUCED PROCESS WASTE IN THE FUTURE:

1 Paper PCC found agricultural and **beneficial reuse applications for about 40,000 tons of grit**, which is about 45% of our grit production.

2 The Performance Minerals Lifford, UK team was able to identify an alternative outlet in late 2019 for their by-product precipitated calcium carbonate (PCC) with a local aggregates company. This company takes the PCC to blend with aggregate - sand and gravel - to improve the color of their products. **As a result, the Lifford team has achieved a 70% reduction in process waste.**

3 In 2018, we started up a new Bleaching Earth process and product that uses significantly less water and acid, resulting in less byproduct formation compared to our older process. This innovation led to a **reduction of nearly 6,000 tons of byproduct formation and disposal.**



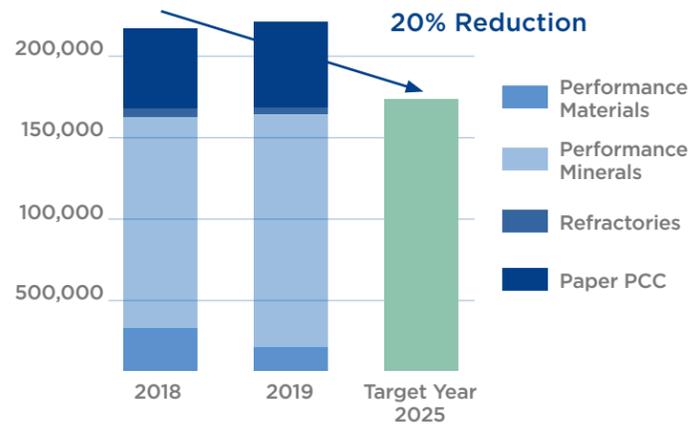
Left: Beneficial reuse of our process byproducts for agricultural applications.
 Right: Cooling towers at our PCC facilities enable increased recycling of process waters.

MTI 2018 PROCESS WASTE DISPOSED

	2018 ¹ BASELINE	2019	% CHANGE	2025 TARGET
Process Waste Disposed (ton)	208,993	213,359	2.1%	168,000
Process Waste Disposed (lb/ton)	46	46	0%	36.8

¹ Our 2018 baseline numbers have been adjusted upward from 173,049 tons and intensity of 38 lb/ton to 208,993 tons and intensity of 46 lb/ton produced due primarily to a reclassification of a process waste stream at one of our facilities.

Process Waste (Tons of Waste Disposed)



Our Lifford, UK plant which has identified a beneficial reuse for its by-products and achieved a 70% reduction in process waste in 2019.



Our new 125,000 ton satellite PCC plant in Indonesia came online in 2019.

2025 GOAL

50% reduction in airborne pollutants by 2025 with an 85% expected reduction in SO₂.

Airborne Pollutants

Total emissions for air pollutants are provided for both stationary combustion sources and mobile sources. Many of the Performance Minerals, Refractories and Performance Materials facilities report emissions of nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO) and volatile organic hydrocarbons (VOCs) to the local authorities. This data has been used where available. If no plant estimates are available, emissions have been calculated using total fuel usages and the United States Environmental Protection Agency (EPA) most recent emission factors. Since there are no significant combustion processes (dryers, kilns, etc.) or fuel usage by mobile equipment at the Paper PCC facilities, these sites are not included in our data.

In 2019, we significantly reduced our airborne pollutants emissions by about 28% compared to 2018, primarily due to our Colony, Wyoming plant switching to natural gas processes for bentonite clay drying and optimizing fuel usage at several other facilities. We reduced SO₂ emissions about 44% from 4,100 to 2,300 tons and NO_x emissions by 7% from 2,175 to 2,025 tons. Based on new data, we have lowered our target to 3,400 tons from about 5,000 tons.

PLAN TO ACHIEVE TARGET

Our strategy to reduce our emissions is focused on diversifying our fuel sources from coal and oil to natural gas throughout our facilities. We are currently evaluating other facilities where we can convert additional dryers to natural gas while improving fuel usage efficiency across our global operations.

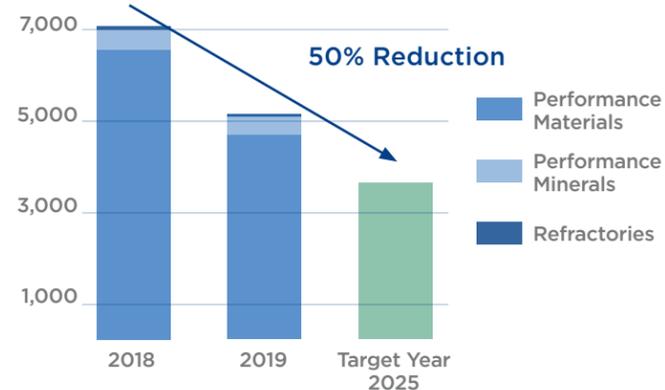
MTI 2018 AIRBORNE POLLUTANTS

	2018 ¹ BASELINE	2019	% CHANGE	2025 ² TARGET
Airborne pollutants (tons)	6,873	4,964	-27.8%	3,400
Airborne pollutants (lb/ton)	1.5	1.1	-29.1%	0.75

¹ Our 2018 baseline numbers have been adjusted downward from 8,813 tons and intensity of 2.0 lb/ton produced due primarily to an error associated with the 2018 acquisition of Sivomatic's operations in Europe and the reclassification of coal usage by one of our metalcasting blending operations.

² We have maintained a 50% reduction by 2025 target and lowered our target to 3,400 tons.

Airborne Pollutants Emissions (Tons of Airborne Pollutants Emitted Per Year)



Some limited MTI environmental emissions are not included in this report as detailed below:

- MTI is unable to determine the greenhouse gas emissions impact of the electrical use at our Paper PCC satellite facilities which are located on or adjacent to the host paper mills that receive the PCC product from our satellite facilities. Typically, the host paper mills supply electricity to the MTI satellite plants. Almost all of the paper mills generate this electricity from onsite cogeneration systems that use a variety of fuels, including biomass waste from the paper plant operations. The fuel usage (and the related emissions of greenhouse gases) changes each year, depending on the availability of the fuels and the operations at the mill. Due to this, it is difficult for MTI to estimate the indirect greenhouse gas impact from the use of electricity at our Paper PCC operations. The kWh's used by each satellite facility are recorded and included in the energy data section.
- Environmental data is not available for our Refractories Segment Steel Mill Service locations, which are located within customers' steel mills. The Steel Mill Service crews rely upon our customers to provide energy, water and waste management at the application site within the steel mills. These activities are a small fraction of the overall impacts associated with the operations of the steel mill.
- In addition, the environmental impact of our Energy Services business unit, which has no significant manufacturing operations, is not included in this report. The Energy Service crews rely upon our oil and gas producing customers to provide energy and waste disposal at the application site on the oil and gas producing platforms.
- We do not include the activities of our office locations in this report. These activities are a small fraction of the total MTI activities.
- The report also does not cover the activities of suppliers or contractors who perform work on our behalf, nor the activities of tolling (outsourced manufacturers).



Bentonite mining at our Wyoming operations.

Strong Commitment to Mining Sustainably

MTI's global mining operations span Australia, China, Mexico, Turkey, and United States, and we recognize our responsibility to operate in an environmentally respectful manner.

We mine Bentonite, Hectorite and Bleaching Earth in our Performance Materials business and Calcium Carbonate, Dolomite and Talc in Performance Minerals. Our approach to mining and land reclamation is guided by our Operational Excellence principles and continuous improvement culture - we are always looking for ways to continuously improve beyond what is necessary in terms of environmental compliance and land conservation.

In 2018, we created a Mining Lead Team comprised of individuals in senior-level mining positions throughout our global operations. In 2019, this team developed best practices to ensure we are achieving the highest standards in mining, exploration, reclamation and reporting processes across our operations. With the guidance of the Mining Lead Team, we are taking a more focused approach to our overall mining activities from exploration through closure as we strive to further minimize our impact on local communities and ensure we are strong stewards of the land we operate.

INDUSTRY LEADING BENTONITE MINING PRACTICES

MTI is the world's leading miner and processor of bentonite clay. Based on past mining experience and geologic data of surrounding underground formations, exploration crews continually locate and evaluate bentonite deposits through test drilling. **When a future mine site is selected, MTI's environmental specialists conduct vegetation, hydrology, soils and wildlife studies. We also utilize drone technology to gather highly detailed pre-mine surface topography and aerial imagery for planning and designing post-mine topography and surface water drainage patterns.**

We devote a significant amount of time and resources to establishing reclaimed land that benefits a wide range of species of plants and animals, including:

1 **Conducting winter aerial surveys** of big game mule (deer and pronghorn) and monitoring known raptor nesting locations and developing potential mitigation plans to minimize impacts.

2 **We continue our high activity in the study** of sage-grouse migratory and mating behavior and habitat. MTI continues to be a leading participant in a long-term University of Wyoming study on sage-grouse and is proactively working to minimize the effect of mining on the sage-grouse habitat.

More information on [the study](#) is available here.

How We Help

Our initial studies and development of mining plans enable our reclamation team to start planning with area farmers and ranchers in advance on plans to enhance their lands after mining has been completed.

For example, by proactively working with farmers and ranchers, MTI has added new ponds for grazing livestock, drainage patterns have improved, and vegetation has grown where little had grown before. The new ponds also help enhance the local wildlife by providing food and drinking water during more arid times.

STRUCTURED PROCESS IN PLACE

Once permits have been secured from the regulatory agencies, mining is conducted through a process known as back-cast filling with continuous live-spreading of soils. **Our objective is to minimize surface disturbance and to practice contemporaneous reclamation to the greatest possible extent during operations. Using this technique, topsoil and subsoil are sequentially replaced as each new series of mine pits is opened.**

These shallow pits are opened with the aid of heavy earth-moving equipment. As the overburden or the layer of earth directly over the bentonite is exposed, bulldozers and scrapers work together to uncover the bentonite beds. When a pit is fully exposed, final core samples are tested to ensure clay quality. A grid is also established to segregate specific clay types within a particular pit. As mining progresses, the bentonite is extracted, and topsoil and subsoil are replaced to create a suitable bed for reclamation seeding. Backfilled areas are contoured to match surrounding topography and provide a natural landscape. Our goal is to restore the land back to an even more valuable habitat or as an economic resource for stakeholders.

In the past five years, MTI has reseeded an average of approximately 400 acres per year in Wyoming, US.

Additionally, in the fall or early spring, our environmental specialists again enter the field. During this changing in seasons, native grasses and a nurse crop of wheat are planted to help vegetation and ground cover for smaller animal species. In regard to the sage-grouse initiatives, MTI is also ensuring that our mining reclamation work returns the sites back to pre-disturbance conditions to minimize long-term effects on sage-grouse. These efforts include planting and ensuring re-establishment of sage brush, controlling access to lands during critical time periods of sage-grouse mating, and treating invasive species.

STRONG FEEDBACK FROM REGULATORY AND ENVIRONMENTAL AGENCIES

We have been recognized as good corporate citizens and meet or exceed requirements from environmental inspections and audits from government agencies to ensure that we are protecting the land and communities in which we operate.

We have received feedback from various local entities at the Department of Environmental Quality as well and the Bureau of Land Management such as:



MTI continues to do good work on both their mining and reclamation across all of their mine areas. Mine sites are clean and orderly, topsoil is handled well from salvage to spreading, seeding is done in a timely manner with an eye for recreating native landscapes, and attention is paid to erosion and weed control early on which stops issues before they arise.



Employees from the Lovell mine work and communicate well together, as well as with their contractors, and maintain a high standard for their operations, which is reflected both on the ground in their mines and in the plans, modifications, and annual reports they submit.



The mining area has been reclaimed very well. Great vegetation establishment was noted in this area. The crossing tie in areas to the native lands was well done.

We have 12 Mine Safety and Health Administration (MSHA) regulated facilities in North America. In 2019, we received 206 citations across our MSHA facilities. Our mining teams are focused on implementing more rigorous measures to reduce MSHA citations across these sites.

Packaging Initiatives Contribute to Circular Economy

We have many initiatives in packaging to convert our products to more environmentally friendly packaging, reduce weight and improve recyclability.

PET CARE PACKAGING IN EUROPE

Sivomatic, our European Pet Care business, headquartered in Moerdijk, Netherlands, is a premier pet care producer in Europe. An important pillar within that business is sustainability. This means not only offering CO₂ neutral cat litter from a completely CO₂ neutral factory or using solar panels to generate energy, but also constantly evaluating how we can reduce the impact of our customer packaging on the environment.



Historically, cat litter packaging in Europe has been paper bags, closed with a fabric thread automatically sewn through the package. Over the years, packaging has evolved since plastic bags and carton boxes were introduced in the cat litter market. Our highly automated production facilities in the Netherlands and Austria are equipped for paper bags, plastic bags and carton boxes.

We continually work with packaging suppliers to focus on the circular economy, which relies on recyclable/renewable packaging and reducing the weight of packaging. This means that a package can be collected, mechanically recycled, and then included to produce new materials. In a circular economy, resources and materials are kept in a perpetual loop of use and reuse.

Over the years, Sivomatic has successfully reduced the weights of their packaging. **For example, over the last two years they have managed to reduce the weight of carton boxes by an average of 5%. For one type of the plastic bags, they even managed to reduce the weight by 15% per bag.**

If recycled materials are available and suitable, they are used, and take into consideration the desire to reduce the thickness or weight of packaging materials. Each and every quality test is done very thoroughly, and if necessary multiple times, because it is imperative that there is no loss of quality in every step of the process from production to end consumer.

Reducing (packaging) waste has been and will continue to remain an important focus area for Sivomatic – an initiative we are further analyzing across our product lines.



Sivomatic's newest packaging: A carton box made of 100% recycled carton.

PERSONAL CARE PACKAGING INVESTS IN MANUFACTURING CAPABILITY TO SUPPORT RECYCLABILITY

This investment shows our commitment to improving sustainability and helping customers reduce the environmental impact of their products. The equipment will be operational in mid-2020 with a portion of equipment capacity already reserved for new product launches.

Personal care products are a significant source of packaging waste. Many personal care product packages are recyclable, but a large portion of packaging is not easily recyclable due to the use of multilayer plastics or multilayer plastic/aluminum foil film structures. These materials contain different types of plastics and adhesives which make them difficult to recycle using commonly available methods.

Squeeze tubes are a common packaging type for personal care products. Most tubes in the market are made using multilayer plastic or multilayer plastic/foil construction and are incompatible with recycling processes. Some recent advances have produced tubes with improved recyclability, but most plastic tubes in the market are destined for landfills.

MTI's Personal Care business has recently invested in equipment that allows packaging of personal care products in squeeze tubes that are manufactured out of solid aluminum. **This investment allows the production of personal care products that can be readily recycled in the well-developed aluminum can recycling process – avoiding the more complicated, less efficient and less valuable plastics recycling process.**

Sustainability Recognition

The Changshu Economic Development Zone (CEDZ) was established in 1998 with the objective of driving economic activity in a responsible manner in the province. There are more than 600 companies invested in CEDZ from over 20 countries globally. **In 2019, our Changshu PCC satellite plant was recognized in the category for Energy Saving and Recycling Economy by the CEDZ for recycling CO₂ from our customers' boilers.** The award recognizes the plant's energy savings, carbon capture, and carbon fixing processes integral to our PCC plants. This follows our team's operational excellence efforts and focus on achieving reduced emissions and more efficient processes for our customers.



Transportation Initiatives

The environmental activities of our transportation division, Ameri-Co Carriers, Inc., which distributes many of our bentonite-based products and materials, are not included in this report. However, ensuring we conduct these activities in a sustainable manner, consistent with our core values, is a growing focus area at MTI.

SOME HIGHLIGHTS OF THIS OPERATION, INCLUDE:

MTI's average miles/gallon is approximately 8.6 compared to the national average of 6.4 miles/gallon. We accomplish this by:

- Investing in only using super single tires on our fleet of trailers. These tires are low profile, 22.5 inch wide tires that have a load rating equal to or greater than a pair of conventional 17 inch wide tires. There is a reduction in weight of about 100 to 120 pounds less per tire (up to 240 pounds per axle). With this, comes less drag when pulling a trailer, saving fuel. The main advantage of the super single tires are that they are stronger, yet lighter in weight than their standard counterparts. This contributes to better fuel mileage and recent studies show that trucks can save an average of almost 3% on gas or diesel fuel.
- Ordering trailers with auto-air inflation systems. These systems work to overcome one or more of the causes of tire underinflation by monitoring tire inflation pressure relative to a pre-set target and re-inflating tires whenever the detected pressure is below the target level. This reduces the wear on the tires and also contributes to improved fuel economy.
- Adding side skirts for all their van trailers. The addition of the side skirts reduces wind resistance and the drag on the trailers. This, in turn, improves the truck fuel economy and efficiency, which is estimated to be approximately 4% to 8% in fuel savings.
- Being an active member of the EPA's SmartWay program developed in 2004, which is supported by major transportation industry associations, environmental groups, state and local governments, international agencies and local communities. This voluntary public-private program:
 - Provides a comprehensive and well-recognized system for tracking, documenting and sharing information about fuel use and freight emissions across supply chains
 - Helps companies identify and select more efficient freight carriers, transport modes, equipment and operational strategies to improve supply chain sustainability and lower costs from goods movement
 - Advances global energy security and offsets environmental risk for companies and countries
 - Reduces freight transportation-related emissions by accelerating the use of advanced fuel-saving technologies

Ameri-Co submits data, including miles and fuel consumption broken down into four different fleets - flatbeds, dry vans, pneumatic and heavy haul, on an annual basis for review.



Ameri-Co team in action.



INNOVATION AND NEW PRODUCT DEVELOPMENT

Overview

INNOVATION IS AT THE HEART OF WHAT WE DO AND INTEGRAL TO OUR SUSTAINABLE GROWTH

R&D is the lifeblood of MTI — with the creation and commercialization of new technologies and products serving as a core part of our sustainable strategy.

Our robust pipeline of innovative value-added products across each of our businesses continues to be strengthened through close alignment with customers and the application of lean principles to improve the speed of development. We continue to enhance our efforts by increasing the number of commercialized products and improving the speed with which we bring them to market. Our evolving new product pipeline, which provides a more comprehensive and differentiated solutions offering for our customers, is essential for strengthening our positions in core product lines and supporting our growth into new markets and geographies.

We know that applying our global expertise and world-class technology platforms to our customers' and the world's challenges will allow us to create a pipeline of sustainable innovation that enhances the quality of life in a material way.

PROGRESS STRENGTHENING INNOVATION PIPELINE IN 2019

\$700M+
Potential Revenue
PIPELINE VALUE FROM DEVELOPMENT TO COMMERCIALIZATION

12% Total Sales
FROM NEW PRODUCTS* WITH PROGRESS TOWARDS GOAL OF 15%

55 New
VALUE-ADDED PRODUCTS COMMERCIALIZED

+19%
Increase in Sales
GENERATED FROM NEW PRODUCTS

18 Month
TIMELINE FROM IDEA TO COMMERCIALIZATION (21% INCREASE IN SPEED OF DEVELOPMENT)

198 Ideas
SUBMITTED BY EMPLOYEES

80% of Projects
DEVELOPED WITH CUSTOMERS

*Products commercialized in last 5 years

At MTI, we are driven by an important ambition: to innovate alongside our customers and help them be more sustainable. **Our products enable our customers to be more productive and efficient — to make more with less while reducing their impact on the environment.** Given our leadership positions across multiple product lines, we are in a unique position to anticipate market trends, better understand customers' specific challenges and goals, especially related to sustainability, and deliver higher-value solutions. We have a highly technical and broad portfolio of mineral-based solutions that help our customers, our company, and our planet be more sustainable. These sustainable solutions continue to comprise a growing portion of our portfolio, as demand increases across the globe and across diverse end markets.

DURING THE PAST YEAR, WE INTRODUCED NEW INNOVATIONS FOCUSED ON:

- ▶ Mineral and fiber recycling for the paper industry
- ▶ Clean-up of contaminated water
- ▶ Containment and removal of harmful pollutants from waste sites
- ▶ Emissions reduction during foundry casting process
- ▶ Energy reduction in manufacturing production
- ▶ Waterproofing and vapor intrusion barriers for construction projects



INCREASING PIPELINE OF SUSTAINABLE PRODUCTS

2 Indicators to Track Viability of New Products:

Products Meet Sustainability Indicator:
New products that benefit MTI's sustainability goals

2019	2018
33%	21%

Projects Meet Environmental Solutions Indicator:
Products that support customers' sustainability goals

2019	2018
54%	41%



Recognition at 2019 Metalcasting Congress

At the 2019 Metalcasting Congress, we won Best Presentation for Flo-Carb® additive, an innovative solution that reduces foundry emissions during the casting process. The product utilizes causticized lignite, a greener alternative to the higher-emitting seacoal material.

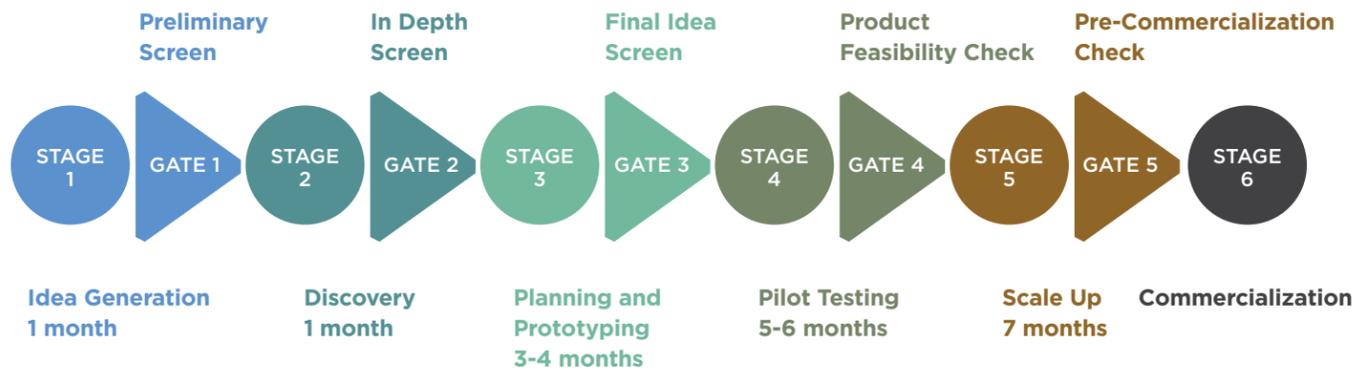
R&D STRUCTURE

Our new product and process development (NPPD) is overseen by our Technology and Innovation Lead Team (TLT), one of our culture-based teams that reports to our CEO. The team members are individuals with significant R&D and commercial expertise from across all businesses. The TLT develops the policies, tools, best practices, and metrics to ensure we are staying at the forefront with our innovation and technology initiatives.

Everyone has a role in product development at MTI. Through our company's suggestion system, employees in all areas of the organization are encouraged to submit new ideas that the TLT can then evaluate and determine if resources should be dedicated to the project. **In 2019, employees submitted 198 new ideas to contribute to the NPPD process, both related to R&D as well as commercial initiatives**

STAGE-GATE PROCESS

We drive our new product development pipeline through a stage-gate process and technology roadmaps with ideas that originate from our customers. This is a highly structured development process with clearly defined goals and tracking metrics to ensure the process is closely tied to interactions with our customers. At each stage, there is a gate check that involves screening and evaluation of the idea, including EHS impacts, sustainability issues, and feasibility of the product. This phased approach allows MTI to fail early and often, ensuring that commercialized products are closely aligned with our customers' evolving demands.



Paperex, The World's Largest Paper Conference

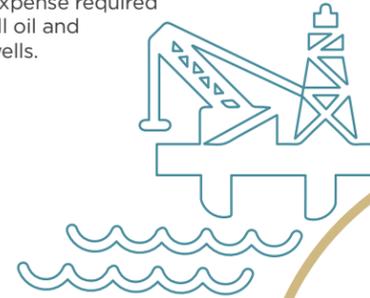
Our team presented at the Paperex Conference in India, showcasing our leading PCC technology portfolio with solutions that help increase base filler levels in paper and address important sustainability needs. Each of our geographies are attractive for deploying our high-filler and environmental technologies.

MTI'S NEW PRODUCT DEVELOPMENT AND INNOVATION DELIVERS SUSTAINABLE VALUE

Supplying safe, sustainable products, designed to meet the needs of our customers and society now and in the future, while minimizing their environmental impact.

WE IMPROVE OUR CUSTOMER'S PRODUCTIVITY

- Our Minteq® product portfolio improves the productivity of the steelmaking operations and reduces our customer's waste and energy consumption.
- Our Volclay® bentonite clay and Super-Lig™ bentonite clay improve drilling productivity and reduce the time and expense required to drill oil and gas wells.



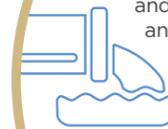
WE PROTECTED OVER 3,400 ACRES OF LAND AND GROUNDWATER

Our advanced Resistex® and Bentomat® environmental barriers contain wastes and leachates to prevent leaching of toxic chemicals into ground water.



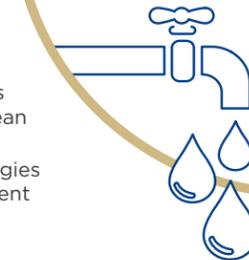
WE SUPPORT THE SAFE DISCHARGE OF OVER 1.2 BILLION GALLONS OF WATER

Our Energy Services business unit uses customized engineered equipment, Hi-Flow® and Crude-Sorb® specialized filtration media and separation technologies, to ensure our customer's wastewater meets their environmental discharge limits.



WE CAPTURE CONTAMINANTS TO PROTECT THE ENVIRONMENT

- We also produce FLUORO-SORB® adsorbent products to trap and retain PFOS and PFAS contaminates to reduce exposure to humans and help provide access to clean drinking water.
- Our water treatment technologies capture toxic metals and prevent discharge into water.



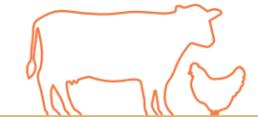
WE HELP REDUCE FOUNDRY EMISSIONS

Our Additol® and Maxicarb® greensand bond formulations reduce the emissions of our customer's foundry sands and improve the recyclability. Additol® LE reduces molding related emissions by 10-25% and improves both workplace conditions and employee health.



WE IMPROVE ANIMAL HEALTH

With bentonite-based mycotoxin sorbents and calcium nutrient based supplements for bovine and poultry.



WE ENHANCE FARMER'S CROP YIELDS AND SOIL HEALTH

With Enersol® and Agro-Lig® crop growth formulations and calcium carbonate-based soil amendments.



OUR PRODUCTS PROTECT THE ENVELOPE OF A WIDE RANGE OF BUILDING STRUCTURES

We enhance both the functional and aesthetic environment. For example, our calcium carbonate and talc are used in roofing, resilient flooring, joint compounds, block, pavers, glass, windows, sealants, plastics, paints and coatings. Our Voltex® below grade waterproofing products prevent water ingress damage. Our Liquid Boot® vapor barriers reduce the vapors entering the building from the surrounding soil.



WE PURIFY EDIBLE OILS

Our Rafinol™ bleaching earth refines and improves the quality and shelf life of edible oils for human consumption.



WE IMPROVE PRODUCTS USED AT HOME FOR THE CONSUMER

- Our broad portfolio of cat litter products reduces odors and improves the disposal of animal waste.
- We toll manufacture fabric additives: softening, fragrance, hueing, and cleaning in dry laundry powders.
- Our precipitated calcium carbonate, which utilizes much less fiber (trees) and energy than traditional fillers, helps serve as a key solution for filling and coating printing paper.
- Our calcium carbonate materials extend the lifetime and improves the performance of paints and sealants.
- Our talc improves plastic packaging by reducing waste and allowing food to stay fresh for longer.



OUR PRODUCTS IMPROVE PERSONAL HEALTH

- Our calcium carbonates operate as anti-acids and digestive aids.
- Our personal care formulations deliver active ingredients to your skin to improve health and beauty.



PROGRESS ON ENVIROFIL® PCC MINERAL RECYCLING AND SUSTAINABLE TECHNOLOGY

BACKGROUND

Many of our customers at paper mills are seeking ways to recycle by-products, which include carbon dioxide from side streams, and use them more efficiently in their processes. They are facing challenges with determining how to handle waste, reduce landfill costs, and respond to more stringent environmental regulations.

WHAT WE DID

In 2019, MTI commercialized a novel technology, ENVIROFIL® PCC, for recycling mineral pigments. **The process has proven to substantially improve wastepaper yield by significantly reducing solid waste disposal costs and reducing the environmental impact of the deinking process.** This new solution enhanced our customer’s ability to convert waste material that would normally be deposited to a landfill into a valuable pigment for producing paper. In the process of recovering useful cellulose fiber from recycled wastepaper, the PCC mineral component is mostly removed and discarded as part of the deink residue. Many paper mills that use recycled fiber burn this residue for its caloric value. The resulting ash is what remains of the mineral component.

DEPLOYMENT AT CUSTOMER’S PAPER MILL IN 2019

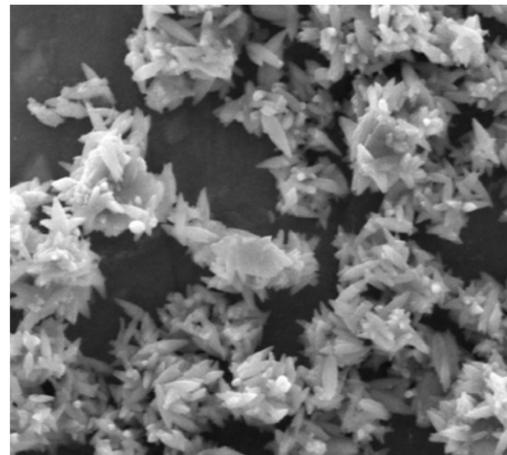
After extensive collaboration with UPM-Kymmene Corporation (UPM) to determine the best way to produce PCC from residue ash and address waste and landfill issues, we initiated production of ENVIROFIL® PCC at UPM’s plant in Germany. This partnership demonstrates the value ENVIROFIL® PCC can provide our customers who are seeking ways to recover waste from the production process.

In the first year of operation, the ENVIROFIL® PCC satellite at Schongau has reduced solid waste disposed to landfill by about 15,000 tons while reducing UPM’s greenhouse gas emissions by about 7,000 tons — helping UPM on its way to become a zero solid waste company. The product has met all customer specifications for paper machine operability, paper brightness and printability.

Now, MTI is engaging with its other paper customers that generate ash in Europe and throughout the world. There are several interested companies, and we see this as a technology with significant long-term potential.



UPM’s Schongau facility where Envirofil is produced.



ENVIROFIL® PCC in mineral form.

PROGRESS ON FLUORO-SORB® ADSORBENT SUSTAINABLE TECHNOLOGY FOR REMEDIATION OF PFAS

PFAS were (and continue to be) integrated into dozens of industry and consumer products over the past 60 years. Per- and polyfluoroalkyl substances (PFAS) have been used in common, daily products, including non-stick cookware, clothing materials, carpets, firefighting foams and various other products designed to resist grease, water and oil. During the production and use of products that contain PFAS, the chemical has seeped into soil and water and even migrated into the air. The strong carbon-fluorine chemical bond prevents their breakdown in nature, eventually allowing it to enter the food chain. As a result, scientists have been closely studying the health impact of PFAS, concluding that exposure may cause numerous health effects.

To address these concerns, states have begun enacting regulations that address PFAS remediation, and the United States Environmental Protection Agency (EPA) is actively studying its impact while considering adoption of standards to address clean-up levels. In advance of these and future regulations, FLUORO-SORB® adsorbent is an effective treatment made for the remediation and removal of PFAS.

MTI’S FLUORO-SORB® ADSORBENT — NSF CERTIFIED, PROPRIETARY PRODUCT

In 2019, we focused on expanding both our technical data and our customer interactions. Our data, produced in conjunction with several leading universities, clearly shows that unlike other sorbent products that are selective and unpredictable in adsorbing PFAS, FLUORO-SORB® adsorbent binds the entire spectrum of PFAS — including PFOA, PFOS, PFHxS and PFNA — efficiently and in a wide variety of removal and remediation processes. FLUORO-SORB® adsorbent also controls the source of contamination and can be deployed easily as a flow through treatment media, as a passive in situ treatment (permeable reactive barrier and in-situ stabilization and solidification — ISS), or used in a REACTIVE CORE MAT® composite geotextile mat for sediment capping.

FLUORO-SORB® adsorbent resists competitive adsorption from other water and sediment contaminants. Because of its higher adsorption properties and higher density, it requires fewer change outs than granular activated carbon (GAC), resulting in a substantially reduced total cost of ownership.

FLUORO-SORB® adsorbent can serve as a pre- or post-treatment media in connection with other technologies including GAC or ion exchange resin (IER) water treatment trains. This compatibility and seamless integration maximizes the removal of PFAS contaminants while improving efficiency and extending the life of existing GAC systems. Additionally, when combined with in-situ treatment (ISS or PRB) of the PFAS source, FLUORO-SORB® adsorbent will significantly reduce the reliance on “pump and treat” alone for achieving hydraulic control of a contaminated site.

43
Customer Evaluations
ONGOING



Voice of the Customer

The Voice of Customer (VOC) is MTI's integrated set of processes — our mindset and our culture in which all employees are proactive and constantly innovating to respond to and satisfy the challenging requirements and needs of the customer today and in the future. Our VOC team is comprised of commercial leaders across all businesses focused on three dimensions of customer satisfaction metrics. The teams' efforts are very closely linked to Operational Excellence principles and new product development efforts.



MISSION

Establish a customer-centric culture from the senior level to the shop floor where everyone at MTI is engaged with our customers and clearly understands their needs both now and in the future. It requires total organizational involvement, education and training and a set of metrics that shows continuous improvement.

1 We evaluate performance metrics such as on-time delivery, response and resolution times to customer complaints and accuracy of invoices to assess a customer's experience with us.

2 We utilize customer surveys to get clear feedback on our people, products, services and value proposition.

3 We closely track our product pull with customers at market development by integrating metrics around customer driven innovation, ability to gain share and deliver sales growth.

KEY METRICS HELP ASSESS HOW WE ARE PROVIDING VALUE FOR CUSTOMERS

PERFORMANCE	On Time in Fill TARGET: >95%	# of Inaccurate Invoices TARGET: 0	Customer Concern Response Time TARGET: <5 Days	Customer Concern Resolution Time TARGET: <30 Days
	CUSTOMER SATISFACTION	Commitment Indicator TARGET: 4.5/5	Survey People TARGET: 4.5/5	Survey Products & Services TARGET: 4.5/5
MARKET DEVELOPMENT	Customer Pull NPPD TARGET: >85%	New Sales (\$M)/Total TARGET: >10%	New Products Sales (\$M)/Total TARGET: >15%	

KEY INITIATIVES CONSIST OF:

- Strategic Account Best Practices**
Designed to span all aspects of the engagement process to satisfy both technical and commercial needs. It includes standards on account planning, execution and measurements. This helps to ensure we are raising the bar on how effectively MTI goals are aligned to customer needs.
- Effectiveness of Customer Surveys**
Reports an overall customer commitment indicator (CI) measured versus the prior year. It is a composite score that includes the Net Promoter Score¹, which assesses the likelihood of customers to continue doing business with MTI, and reinforces the importance of maintaining business relationships. MTI tailors communications and asks participants relevant and actionable survey questions using survey logic where and when appropriate. These communications are provided in multiple languages.
- Quality Functional Deployment and House of Quality**
This comprehensive methodology and Lean process is used to assess what is most important to a customer during the product development phase as well as to create new ideas for innovation for existing product lines.

The alignment of the entire team is designed to increase our value proposition to our customers, ensure we are meeting the highest quality control standards, and delivering continued sustainable growth for MTI.

¹ A registered trademark of Fred Reichheld, Bain & Company and Satmetrix Systems Inc.



Supply Chain Sustainability

MISSION

Delivering global sustainable procurement sourcing value through quality, operational excellence, and superior customer service at the lowest total cost.

We are committed to conducting business with the highest ethical standards, and we expect the same of our suppliers. At the same time, we see opportunities to generate shared value through sustainability. As we advance on our sustainability journey, we believe partnering with our suppliers will play an important role in our goal to generate significant positive impacts beyond our own operations. All suppliers are expected to abide by our [Supplier Code of Conduct](#), [Anti-Corruption](#), and [Conflict Minerals Policy](#) in their business dealings with us and to support sustainability through the principles outlined in our Supplier Quality Management qualification scorecard, which includes environmental, human rights, and community considerations.

Our supply chain activities include purchasing and logistic business activities responsible for obtaining the raw materials, packaging materials, supplies, equipment, and services required for the efficient operation of our company. Our efforts encompass activities in the identification and selection of sources for supplies and services that match our required quality and quantity requirements at the lowest possible total effective cost while ensuring the timely delivery of those goods and services.

1,400+
Suppliers

SUPPORTING OUR
GLOBAL BUSINESSES

43
New Suppliers

AUDITED FOR SUPPLIER QUALITY
MANAGEMENT IN 2019

575
Sustaining Suppliers

AUDITED FOR SUPPLIER QUALITY
MANAGEMENT IN 2019

WE LOOK TO SOURCE AS MUCH AS POSSIBLE FROM LOCAL SUPPLIERS TO REDUCE LOGISTICS COSTS AND DELIVERY TIMES.



Our transportation team delivering product to a customer.



Members of the Supply Chain team participate in a kaizen event.

Our Supply Chain continues to enhance its oversight through a Supplier Quality Management audit tool to assess risk profile and ensure our suppliers' performance meets MTI's expectations.

KEY CATEGORIES WE EVALUATE SUPPLIERS ON INCLUDE :



Safety is our number one priority that must be demonstrated in policies and practices. Risk reduction programs are promoted, and metrics are recorded, including reportable incidents, lost workday incidents, and near misses with corrective actions identified to improve safety.



Environment Supplier sets emissions and waste reduction targets to achieve improvements in sustainability.



Supplier Compliance and Ethics Supplier promotes integrity and ethical behavior and operates to prevent criminal conduct and violation of laws, including, but not limited to modern slavery, child labor, human trafficking, conflict minerals and anti-corruption.



Supplier Social Responsibility Supplier has comprehensive policies that promote diversity and inclusion and outreach with their communities.



Product Quality Adherence to our product quality standards. If nonconformances occur, the supplier must take the required actions to correct the nonconformances through internal controls. In addition, the supplier Certificate of Analysis helps provide consistent control around nominal specification values.



Customer Service Supplier produces and delivers on the required schedule with any potential non-compliance communicated in advance. Finished products are produced and held by supplier until MTI gives approval. The supplier documentation is timely, accurate, and complete in all areas.



Quality System Supplier has documented policies and procedures in place to provide quality products. Each supplier must meet at least annually with the MTI locations it services in order to review specifications and performs annual self-audits to verify compliance.



Improvement Potential Supplier proactively recommends improvement opportunities that will enhance quality and reduce costs. Supplier responds to MTI's future needs based on changes in the market and is proactive in developments that have demonstrated results.



Commercial Supplier has documented disaster recovery and long-term supply plans that specifically address conducting business with MTI. Supplier has implemented preventative measures against a cyber-attack, but also has detailed protocol to maintain business operations if a cyber-attack occurs.

MTI only conducts business with reputable suppliers who are capable of providing the goods and services required. One of our goals is to seek out and partner with local, small and disadvantaged businesses wherever and whenever possible.

In addition, all suppliers must also abide by our Anti-Corruption Policy. This ensures that all procurement decisions are made with integrity and objectivity, divorced from any personal considerations or benefits.

Growing MTI Sustainably

ADVANCING OUR GROWTH STRATEGY AND DISCIPLINED OPERATIONAL EXECUTION

Strong financial performance is key to the sustainable growth of our business and our future success. Our stakeholders around the world expect us to deliver on our financial commitments by generating and distributing economic value. **To address this, we are focused on earnings and revenue growth and maintaining a disciplined approach to capital allocation while also contributing to long-term strategic investments for our business.** We believe this approach will allow us to maintain our reputation as a leader in our markets, well positioned to respond to the evolving needs of our customers. Through our global operations, we create value for a wide variety of stakeholders, including our shareholders, investors, employees, suppliers and local communities.

2019 was a year of tangible progress advancing our growth strategy and disciplined operational execution against a backdrop of challenging conditions. We strengthened positions in core product lines while extending further into new geographies, capitalized on customer demand for our latest innovative products, and generated strong cash flow to support our financial flexibility. Throughout the year, we drove productivity improvements, tightly managed our expenses and continued to drive pricing actions to offset inflationary cost pressures. Our sustained financial performance enables us to further MTI's contributions to society and the communities where we operate by generating jobs, providing fair wages, adopting the latest technology and processes to reduce our environmental impact, and participating in charitable giving and community events.

The resiliency of our business model and our team's execution focus, agility and continuous improvement mindset were on full display throughout 2019.

EXECUTING ON OUR GROWTH INITIATIVES

We continue to drive forward our multi-pronged approach to growth through geographic expansion, new product development and acquisitions. Each of these initiatives is supported by our balance sheet strength and flexibility which provides the opportunity to drive attractive, sustainable long-term returns for our shareholders.



GEOGRAPHIC EXPANSION
into underpenetrated markets for our products and higher-growth regions



NEW PRODUCT DEVELOPMENT
pipeline evolving to meet customer and market demands



ACQUISITIONS
of mine-to-market minerals-based companies

2019 ACHIEVEMENTS INCLUDE:

Revenue: \$1.8 Billion

Earnings per Share: \$4.23

Operating Income: \$235 Million

Productivity Improvement: 3% and 1.5 Million in savings

Free Cash Flow: \$173 Million, up 36% compared to 2018

Capital Expenditures: \$65 Million

- Our investment decisions and growth strategy are guided by an emphasis on sustainable business practices and full compliance with laws, regulations and internal standards
- Invested in several new satellite PCC plants and expansions and facility expansions across several businesses to support growing customer demand for new value-added products
- Approximately 50 percent of this capital was invested in improving the performance and safety of our facilities worldwide, including a global initiative to ensure the complete separation of pedestrians and mobile equipment and dust mitigation activities

2019 OPERATIONAL AND FINANCIAL HIGHLIGHTS



+8% Household and Personal Care (HPC) Sales
driven by 31% growth in pet care



+8% Environmental Products Sales
Doubled margins through increased sales of specialized technologies



+7% Volume Growth In China
Extended penetration of tailored blended products in China foundry market



+7% Paper PCC Sales in Asia
driven by new 125,000-ton satellite in Indonesia



275K Tons New Capacity in Asia and Europe
Online in next 2 years from satellite contracts and expansions



Expanded PCC Applications
Into attractive packaging markets and Paper recycling



19% Sales Increase from New Products
Improved speed of development by 21%



Commercialized 55 New Products
FLUORO-SORB® ADSORBENT, ENVIROFIL® PCC, NewYield®, Resistex® GCL and Additrol® LE
Reflect focus on addressing broader environmental and recycling issues for customers and MTI

BALANCED APPROACH TO CAPITAL DEPLOYMENT



\$173M
in free cash flow
+36% OVER 2018



\$92M
paid down in debt
AND LOWERED NET LEVERAGE RATIO TO 2.1X EBITDA



\$48M
returned to shareholders
AND STARTED NEW 1-YEAR \$75M SHARE REPURCHASE PROGRAM



SOCIAL

Caring for Our People

Our people are at the heart of our business and are key to our ability to execute on our sustainability agenda. Our commitment to providing the safest possible working conditions and actively engaging all our employees in our safety efforts has been core to our company's values. This safety-first mindset helps us attract and retain top talent from around the world and drives continuous improvement in our manufacturing operations. We also provide extensive training and professional development opportunities and competitive compensation and benefits for our employees. We aim to increase employee engagement by leveraging the diversity of our global workforce and developing their talents by fostering an inclusive environment throughout our workplace. To remain a competitive employer, we acknowledge the importance of our company values, vision and sustainability program to our employees as we aim to continuously demonstrate our commitments and enhance our performance.

Our focus on people extends to our communities where we strive to be a good neighbor through our active engagement and responsible business practices.

In the following section, we look in detail at our performance across the social strategic focus areas.



Advance Safety-First Culture and Develop the Capabilities of Our People

Strategy

Create a safe workplace where employees can thrive and deliver high performing, sustainable organizational success.

We are committed to attract, develop and retain diverse people with the requisite skills to shape a better organization and foster employees' engagement and motivation.

Provide a Competitive Total Rewards Program Aligned with Strategy

Build a Diverse and Inclusive Culture

AGILITY

CONTINUOUS IMPROVEMENT

HIGH-PERFORMANCE

Where do MTI Employees Work?



3,628¹
TOTAL EMPLOYEES



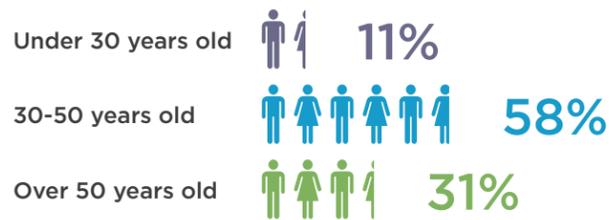
People-Focused Culture Starts with Operational Excellence

Our people are the most important part of MTI. They are the cornerstone of our Operational Excellence (OE) and safety-first culture and vital to our success. We are a dynamic global team with over 3,600 employees and our core values — **people, excellence, honesty, customer focus and accountability** — guide our actions.

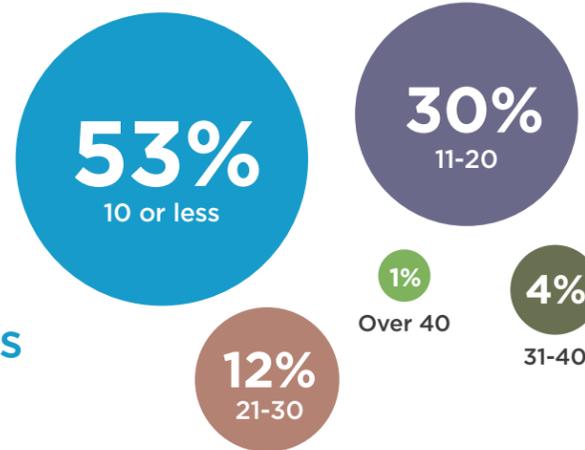
Our OE journey, rooted in the active engagement of our employees, began more than a decade ago when we developed a comprehensive and highly structured business system of lean principles closely integrated with safe and reliable work practices. We've significantly advanced OE across all aspects of our company, fostering a culture of continuous improvement where each employee recognizes the importance of applying these people-focused principles and tools to solve challenges, constantly refine our processes, identify and remove risk and waste, and deliver value to our customers. **Every day, MTI employees show their engagement and apply their skills in ways that deliver measurable outcomes and create both business and social value.**

In 2019, we saw firsthand the power of our culture through the involvement of our employees in a multitude of value-enhancing activities, development opportunities and recognition programs.

Employees by Age Group

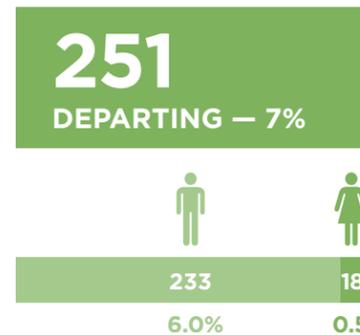


Years of Service



30% Board Members Diverse

New Hires and Turnover in 2019



+50%
10,843 KAIZEN EVENTS CONDUCTED
(highly focused problem-solving events to improve product and service processes)
On average, nearly 30 kaizen events were held across MTI on a daily basis

8,315 BRAVO CHIPS
AWARDED TO EMPLOYEES
A key element of our employment recognition program for accomplishments related to process improvements, customer service and cost reduction

+10%
64,964 SUGGESTIONS FROM EMPLOYEES
ON HOW TO REMOVE WASTE AND RISK FROM OUR PROCESSES AND PROCESSES
Employees shared approximately 178 suggestions on any given day on how we can do things better

75,000 HOURS
EMPLOYEES PARTICIPATED IN OE TRAINING AND DEVELOPMENT ACTIVITIES

6 FACILITIES
RECEIVED PRESTIGIOUS OPERATIONAL EXCELLENCE AWARD
given annually to facilities or functions that demonstrate superior application of OE principles and meet a world-class threshold of excellence

Operational Excellence, is a strategic differentiator for our company, and has solidified our high-performance culture by making MTI a more disciplined, agile and sustainable organization. Many of our activities, including identifying opportunities to improve our resource efficiency or initiatives that make our operations safer, leverage lean principles and our OE focus. The deep integration of OE goes beyond cost savings and productivity. It provides MTI with a common language and collective mindset across all locations that can be used to address a problem or challenge almost anywhere in the world.

¹ All employee data is as of 12/31/19. Departure numbers and percentages are based on voluntary departures.



Diversity and Inclusion

CORE TO OUR SUSTAINABILITY STRATEGY

Diversity and Inclusion (D&I) are more than just words at MTI – they are in our core values. As a global company, we are committed to a company culture that unconditionally accepts all colleagues. The viewpoints that our employees of all ethnicities, backgrounds and life experiences bring to MTI are immeasurable. We are committed to reflecting the diversity of the communities where we live and work, and we do not tolerate prejudice in any form. By promoting and accepting our differences, we create an environment that supports better decision-making, drives mutual respect and inspires collaboration. D&I also helps us better understand and serve our diverse customer base around the world. Ultimately, diversity and inclusion are core values that make MTI a much more competitive company.

Our goal is to cultivate a culture where diversity and inclusion is embedded in everything we do.

With our global operations, we believe in the power of an environment where everyone feels involved, respected, valued and connected – an environment where everyone is free to be their authentic selves and share ideas. We also view diversity as key to leadership development. **When selecting participants for internal development programs, we ensure that groups are balanced across a number of factors, including gender, ethnicity, tenure, function, geography and experience.**

Our commitment to a diverse and respectful workplace is embodied in numerous policies and procedures including our [Equal Opportunity Policy](#), our [Employee Code of Conduct](#), and our [Human Rights Policy](#).



Onboarding and Talent Management

We accelerate the development of our employees, strengthen our leadership capabilities, and enhance employee performance through engagement. **Our culture of continuous training and development motivates employees at all levels of the organization to work safely and efficiently.** We employ several methods to engage, train and develop employees, leading to higher levels of performance year after year. MTI is committed to strengthening the capabilities of every manager and holding them accountable to drive Operational Excellence, develop employees and inspire high-performance behaviors.

Key to our efforts in creating our high-performance culture is our extensive onboarding and ongoing training efforts, and the development and advancement opportunities we offer our employees.

ONBOARDING

All new employees receive extensive day 1, week 1, month 1, month 3, month 6 and year 1 onboarding training on required safety practices, policies and practices, and MTI culture.

TALENT MANAGEMENT

- All employees receive **extensive continuing education training**, both on-the-job and via online/classroom learning.
- All employees receive a level of **continuous safety training** commensurate with their level of exposure and in their local language.
- We offer extensive education related to the principles of Lean Manufacturing (Lean), which is closely aligned with Operational Excellence, to **prepare our workforce to become highly proficient problem-solvers.**
- We offer **development and advancement opportunities**, so our people are equipped to make meaningful contributions, learn new skills and achieve their full potential.
- We also offer **tuition reimbursement** programs to support continued education for MTI employees. More than 100 employees are currently enrolled in this program.
- Development is centered around a comprehensive performance review process, which includes **360 degree, multi-dimensional feedback for the majority of our management team.** Managers and employees collaborate to create an individualized development plan to guide their career progression at MTI.
 - The 360 process was inclusive of employees located in 14 countries where we operate, including Brazil, Canada, Chile, China, Finland, Germany, India, Malaysia, Netherlands, Nigeria, Poland, Turkey, U.K. and U.S.
- We offer a **pathway for interns to obtain gainful employment** upon graduation. Through MTI's College to Corporate Internship Program, we provide an immersive and hands-on experience to prepare interns to successfully navigate a future career. Our interns gain real-work experience, benefit from social engagement, and network with executives and key business leaders.
- MTI is proud to announce the recent creation and deployment of a **mentorship program.** The mission of MTI's Mentorship Program is to give employees the opportunity to develop the career, leadership and diversity of skills needed in order to be as successful as possible. By facilitating mentoring relationships, providing opportunities for one-to-one learning and teaching practical leadership skills, the program helps junior employees strengthen their knowledge, self-confidence, social-competence and pursue leadership goals.
- Senior leaders are given at least **15 personal development activities on a yearly basis** to further build their personal capabilities in leading Operational Excellence. Senior leaders are also required to engage in extensive coaching activities and team skill development, a key aspect of our continuous improvement process.

GLOBAL INCLUSION COUNCIL

With respect as one of our core values, we were proud to formally launch a dedicated Global Inclusion Council in 2019. This new Lead Team, which reports to our Chief Executive Officer, oversees our progress in advancing a work environment that values all employees. The Council comprises a cross-section of business leaders from across our company's regions and business areas, with the directive to examine how we promote and support diversity in all its forms. The main priorities to us as a company are raising awareness and educating through training and surveying employees, and identifying new initiatives to further promote diversity and inclusion.

KEY ACTIVITIES INCLUDE:

- 1 Updated our Mission Statement for all MTI employees to better reflect our enhanced focus on diversity and inclusion and incorporate values such as collaboration, innovation and employee development.
- 2 Conducted training with over 120 senior leaders on unconscious bias, microinequities and the importance of diversity and inclusion. A comprehensive online training will be introduced on a global basis to all employees in 2020.
- 3 Engaged an external firm to conduct a series of interviews with employees on their perception of diversity and inclusion at MTI and reviewed results with senior management.
- 4 Raised general awareness through companywide email communications, Town Halls, intranet stories and other leadership meetings.

Recent incidents in North America and around the world reinforce why we must take deliberate actions every day to understand biases and ensure everyone feels comfortable and all voices are heard.

GOAL IS FOR 100% of employees TO RECEIVE PERFORMANCE REVIEWS

In 2019, 93% of employees received performance reviews from their manager.

TRAINING ENHANCED THROUGH CLARITY NET

Clarity Net is MTI's online safety learning tool that has been used for over 10 years. The system is primarily used for EHS training globally for new employee onboarding and annual safety training for current employees. All new hires globally, regardless of position or if their location is in a OSHA or MSHA jurisdiction, receive a specific set of courses to be completed within the first two weeks of employment. Topics are assigned annually based on identified areas of improvement from the previous year. Examples include: Safety Orientation Overview, Confined Space Entry, Forklift, Fall Protection, Lockout/Tagout, Machine Guarding and Stairways and Ladders. Courses are available in over 20 languages to accommodate our global employee base as we keep "Safety First" in all of our daily activities.

Annual training is also assigned globally and is based on specific Business Unit safety needs and MTI's focused safety efforts, which could include regulatory requirements, targeted injury type prevention, and/or near miss information from the prior year.



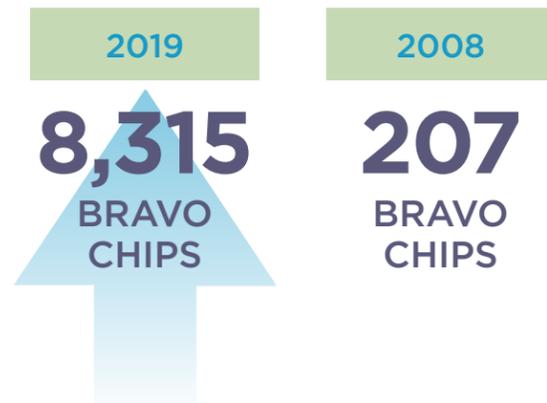
Competitive and Equitable Pay Practices

MTI has a strong commitment to pay for performance at all levels, which is reflected in our performance management and merit increase programs and our variable pay plans. To ensure that our compensation is competitive, we focus on three areas: the external job market, job alignment within MTI, and the sustained performance of our employees. We conduct compensation studies to ensure that our pay practices are equitable. We regularly conduct gender equity pay analysis to ensure parity in average salaries and total compensation between men and women at MTI.

EMPLOYEE REWARDS AND RECOGNITION

A key element of our recognition activities involves the use of a custom designed token chip called the Bravo Chip. The Bravo Chip is awarded to employees for noteworthy accomplishments across a variety of areas, including process improvements, customer responsiveness or service, and cost reduction. Each Bravo Chip represents an amount of cash based on the equivalent value of MTI shares. It is not a grant of stock — but a proxy of the value of a share of MTI stock. The Bravo Chip must be held for a period of one year before the final value is determined and payment occurs. Since its inception as an important vehicle for recognizing employees, the number of Bravo Chips granted each year has steadily increased.

Recognition of employee efforts in advancing Operational Excellence has helped to increase the level of engagement in our continuous improvement process. We recognize collective facilities or organizations on an annual basis with the Operational Excellence Achievement Award, which is presented to MTI organizational units that have demonstrated superior application of the principles of Operational Excellence. In addition, safety letters are sent from our CEO to recognize sites that operate injury-free as well as those that achieve the OE Achievement Award each year.



EMPLOYEE WELLNESS ACTIVITIES

The US Wellness program has been enhanced so that employees can now access their Health Assessment on the same website they use to access all medical related services. **We rebranded the Wellness program to Living Well 365 to provide a more user-friendly and comprehensive platform to engage our employees throughout the year rather just through a single event each year.** Other locations around the world offer programs such as annual physical check, stress management, and lifestyle change sessions, and employee meetings with public health nurses to discuss medical conditions and follow up with improvement programs.

CYBER SECURITY

We believe it is our responsibility to safeguard, in accordance with applicable laws, the personal information of our employees and all other individuals with whom we work, including customers, partners, suppliers and contractors. Cyber threats are one of the largest security threats that our world faces today, not only in our business, but in our personal lives as well. MTI's cybersecurity efforts fall under the responsibility of the Chief Information Officer and are led by our Information Technology Team. Since 2018, we have expanded our available training material for all employees and implemented enhanced measures to protect our company and customers from cyber and fraud threats. The courses cover topics from general secure practices, how to detect phishing emails, and protecting your data while traveling.

THE RISK-BASED FRAMEWORK IS FOCUSED ON:

- ▶ Identifying potential risks to systems, assets, data and capabilities
- ▶ Protecting critical infrastructure services
- ▶ Detecting cyber events
- ▶ Responding to events by taking appropriate actions
- ▶ Recovering and restoring capabilities that may have been impaired

New courses over the last year have been more targeted for specific circumstances, such as how to keep data secure while working from home. In addition to quarterly training, we also provide remedial training when needed. In 2019, all employees with system access were trained on key areas and are expected to ensure they remain compliant with our cybersecurity efforts.



Community Engagement

Our focus on people isn't just for those who call MTI home. Our commitment extends to the people in all the communities where we operate. Throughout our history, we have maintained a strong sense of community and have strived to be a good corporate citizen. **We understand the value of partnering with the local communities, and we recognize that thriving and resilient communities are essential for a sustainable future.** Community engagement benefits our neighbors, resonates with employees on a personal level, and allows us to operate with the trust and confidence of our neighbors.

In many locations, MTI is a major employer, taxpayer, and sponsor of community initiatives. Our facilities closely partner with local stakeholders to understand how we, as an organization and as individuals, can apply our time, talent and charitable giving to have a meaningful and lasting impact.

We support facility-led volunteer activities and donations to local charities, plant visits for community members, local employment opportunities and career fairs. Many activities focus on promoting safety through Family Safety days and emergency response planning and building more sustainable communities, such as initiatives to commemorate World Environment Day.

To encourage employee participation in educational, health care, civic and cultural institutions that benefit our local communities, we offer a matching gift program to our employees. MTI will match any employee gift up to a maximum of \$5,000 per calendar year to eligible educational, health care, civic, and cultural institutions.

United Way Involvement

We actively participate in several local United Way campaigns across our locations. United Way is an organization that champions the health, education and financial stability of every person in every community. Our Adams Specialty Minerals plant has long supported the United Way in Northern Berkshire, MA, and has been the largest donor in the region for a number of years. Adams was recognized by the chapter for the leading campaign of 2019. 90% of employees contributed to the campaign, raising over \$100,000. In the past 20 years, the Adams facility's donations have exceeded \$2.5 million.



Second Harvest Food Bank

Our employees in the Lehigh Valley, PA have been active supporters of the Second Harvest Food Bank, a charity that collects, stores, and distributes food to nonprofit agencies throughout the Lehigh Valley community. During the 2019 holiday season, our employees helped to donate more than 900 pounds of food and contributed to 750 pounds of meals that were provided to families in need through monetary donations.

Participation with Akshay Patra in India

Our Mumbai, India office partnered with the Akshay Patra Foundation, an organization based in Bengaluru that provides nutritious meals to local school children in need. Through this year's activity, our Mumbai office has donated meals to 100 school children for a full year.

The interactive session involved our team members and the students visiting MTI's facilities, focusing on the following elements:

1. Road safety and traffic signals
2. Best practices around hygiene and sanitation
3. Tree plantations and green initiatives for the community
4. Self-defense and safety
5. Wet and dry waste segregation



Biodiversity Management — Engaging with the Community in San Bernardino, California

Our Lucerne Valley mine operations are a key stakeholder in the Carbonate Habitat Management (CHMS) to protect the threatened and endangered plant species in the habitat reserve. Our employees actively engage with the community in habitat restoration by sponsoring the construction of greenhouses on local school campuses that are managed by community collaboratives. Our mine reclamation group purchases the plants from the collaboratives for use in mine reclamation efforts. Additionally, the Lucerne Valley Chapter of the Future Farmers of America and the Desert Crossroads Garden Club collect seed and propagate plants that are nurtured on the Lucerne Valley High School campus. In conjunction with applied learning courses, students visit the mine sites to participate in seeding, planting, and site-monitoring activities.



Our employees in Lucerne Valley have joined efforts to salvage and replant 110 Joshua Trees and 33 Mojave Yuccas using temporary waterlines to help the plants establish on their new site. Lucerne Valley employees continue to improve the habitat and provide water to desert wildlife, including bighorn sheep, donkeys, mule deer, songbirds, ravens and bats.

World Environment Day

Several of our plants across Asia celebrated World Environment Day on June 5, 2020.

In Thailand, multiple plants focused on creating awareness among employees of the importance of taking positive environmental action to protect nature and the environment. Activities were focused on planting new greenery and ways to reduce noise and pollution in the community.



Our PCC Satellites in Dandeli and Ballarshah, India brought together employees, contractors and their families to raise awareness for the environmental responsibilities that we all share, including prevention and control of air, water and noise pollution, elimination of plastic use, and energy conservation. The team discussed the environment pledge and practical ways to protect the environment on a daily basis.

Compliance with Laws, Permits, Regulations and Company Values

It is, and has always been, the policy of Minerals Technologies to conduct our business activities in a lawful and ethical manner. Ethics and integrity starts with a strong tone from the Board of Directors and Senior Management. Our commitment is supported by clear policies and training and is reinforced and monitored by every MTI employee.

MTI's ethics and compliance program is structured and operated to promote integrity and ethical behavior, and to prevent criminal conduct and violations of laws. Our Summary of Policies on Business Conduct (Code of Conduct) details the expectations and requirements we have as an organization for our employees.

Reinforced by our company values, the Code of Conduct applies to all areas of our operations and addresses the following areas:

- Lawful and ethical behavior
- Employee relations
- Anti-Harassment
- Antitrust and trade regulation compliance
- Community relations
- MTI proprietary and confidential information
- Protection and use of company assets
- Use of insider information
- Conflicts of interest
- Use of corporate opportunities
- Accuracy of business records
- Bribery
- Corporate political contributions

As a corporate citizen in many communities around the globe, we have a responsibility not only to obey the law, but also to promote high standards by conducting our affairs in a clearly ethical manner.



HUMAN RIGHTS

MTI strives to uphold human rights in all of our business activities.

We are committed to sustainable business practices that ensure the well-being of our employees, customers and the communities in which we operate. We promote and support human rights consistent with our values and are committed to complying with all applicable laws and standards related to labor practices and human rights in all of our locations.

We expect each of our employees to act in furtherance of this commitment, as outlined in our Human Rights Policy. The policy references and is aligned with our values, Employee Code of Conduct and the United Nations Guiding Principles on Business and Human Rights.

GRIEVANCE REPORTING PROCESS

We encourage employees and third parties to report any suspected violations of our policies or law, including those relating to human rights, internally to senior management or through our Company's Compliance Hotline by telephone: 1-877-209-3660 or electronically at: mineralstech.safe2say.info.

ANTI-BRIBERY AND ANTI-CORRUPTION

MTI's commitment to doing business with integrity means avoiding corruption in any form, including bribery, and complying with the anti-corruption laws of every country in which we operate.

MTI's Anti-Corruption and Anti-Bribery (ACAB) Policy establishes the limitations employees must adhere to when interacting with officials of various governments around the world and prohibits unrecorded funds or assets, false or artificial entries in books or records, and misappropriation of our assets. MTI has not been subject to any regulatory actions or fines for any incident of corruption.

THIRD PARTY INTERMEDIARIES

Our commitment to anti-corruption also applies to the use of third-party intermediaries and other business partners. Since anyone acting on our behalf can expose us to corruption risk and penalties under such laws, we perform a review of all prospective agents, distributors and consultants prior to entering into any agreement with them. This review includes due diligence on the prospective party, as well as an assessment of the transaction, geography and other risk factors. All third parties approved under this screening process and engaged by us must certify their agreement to abide by our Anti-Corruption and Anti-Bribery Policy as well as the Foreign Corrupt Practices Act.

COMMUNICATION AND TRAINING

Our Code of Business Conduct and Anti-Bribery and Anti-Corruption Policy are publicly available on the MTI website and are available in numerous languages spoken by our worldwide employee population. All employees of MTI annually certify compliance with the Code of Business Conduct.

All non-operator salaried employees are required to complete online compliance courses on Business Conduct and Global Anti-Corruption upon joining MTI and periodically thereafter.

Live compliance training is routinely administered at certain global facilities to senior managers and other designated employees, which are selected on a risk-assessed basis.

EHS Regulatory Compliance

Accountability is one of our core values, and one way we demonstrate this is through our commitment to 100% compliance with the local, regional and national EHS laws, permits and regulations under which we operate. Our ability to maintain compliance plays a major role in our license to operate, by demonstrating to our stakeholders that we are respectful of the law and fully capable of conducting our business in accordance with laws, regulations, and requirements in place to protect the health and safety of our employees and to preserve our environment.

ENVIRONMENTAL SPILL PREVENTION AND REPORTING

MTI's goal is to have zero compliance violations, and we operate with a "Zero-Release" mindset. However, when incidents do happen, we have procedures designed to ensure consistent and prompt reporting of all situations that may have significant impact. On environmental release issues, we require sites to internally report these events (spills). This is reflective of our continuous efforts to improve our processes and prevent future releases. All release events that may have the potential to impact the environment (also referred to as "near misses"), are analyzed using root cause processes and key learnings are shared throughout our company.

When a release occurs at a facility, a root cause analysis investigation is conducted, with a target completion within one week of the event to ensure that the information and circumstances are quickly captured. Further, the facility documents the investigation and develops corrective actions based on the root cause(s) identified. The facilities employ several root cause analysis techniques, including Fishbone diagrams, 5 Whys, Cause Mapping and TapRoot®.

Improvement efforts in 2019 targeted spill prevention, enhanced compliance tracking measures and more rigor around identifying the most likely release activities. We report all environmental releases regardless of agency reportability status. In 2019, we had a **14% reduction and 8 fewer in releases** with one more agency reportable release in 2019 as compared to 2018.

The EHS Lead Team reviews compliance and environmental incidents to identify risks, understand specific mitigation actions, and to track improvement. Teams are empowered through training and communication to complete mitigation steps and address any noted gaps expeditiously, including implementation of preventive measures to eliminate recurrences.



GRI Content Index

We continue to follow the Global Reporting Initiative (GRI) Standards as a guide for identifying, measuring and disclosing our non-financial impacts. Our 2019 Corporate Responsibility and Sustainability Report has been prepared referencing the GRI Standards.

GRI STANDARD (DISCLOSURE)	DESCRIPTION	LOCATION
1. Organizational Profile		
102-1	Name of the organization	Minerals Technologies Inc.
102-2	Activities, brands, products, and services	Minerals Technologies Inc. is a resource- and technology-based company that develops, produces and markets worldwide a broad range of specialty mineral, mineral-based and synthetic mineral products and related systems and services. MTI's products are available globally and not restricted in any form.
102-3	Location of headquarters	622 Third Avenue, 38th Floor New York, NY 10017 USA
102-4	Location of operations	2019 Form 10-K, pp. 20-23
102-5	Ownership and legal form	MTI is a publicly traded corporation (NYSE: MTX).
102-6	Markets served	Corporate Responsibility & Sustainability Report: About MTI; pp. 8-11 . 2019 Annual Report: inside cover; pp. 1-19
102-7	Scale of the organization	Corporate Responsibility & Sustainability Report: About MTI; pp. 8-9 , 61 , 64 . 2019 Form 10-K pp. F-1 to F-46
102-8	Information on employees and other workers	Caring for Our People pp. 64
102-9	Supply chain	Supply Chain Sustainability, pp. 58-59
102-10	Significant changes to the organization and its supply chain	In 2019, no significant changes occurred related to our organization or supply chain following our 2018 acquisition of the Sivomatic pet care business in Europe.
102-11	Precautionary Principle or approach	Throughout our operations and our product development, we are guided by the precautionary principle and carefully take into account the effects on the environment, health and safety.
102-12	External initiatives	Strong Commitment to Mining Sustainably, pp. 44-45 ; Packaging Initiatives Contribute to Circular Economy, pp. 46-47 ; Community Engagement, pp. 70-71

GRI STANDARD (DISCLOSURE)	DESCRIPTION	LOCATION
102-13	Membership of associations	MTI employees hold numerous professional memberships including the following significant organizations: <ul style="list-style-type: none"> • Association for Manufacturing Excellence (AME) • American Society of Safety Professionals (ASSP) • Industrial Minerals Association (IMA) • Sorptive Minerals Institute (SMI) • American Society of Mechanical Engineers (ASME) • American Petroleum Institute (API) • American Conference of Governmental Industrial Hygienists (ACGIH) • American Industrial Hygiene Association (AIHA) • American Board of Industrial Hygiene (ABIH) • Produced Water Society (PWS)
2. Strategy		
	Statement from senior decision-maker	A Message from Our CEO, pp. 1-6
3. Ethics and Integrity		
102-16	Values, principles, standards, and norms of behavior	As the Corporate Compliance Officer, the General Counsel of MTI has ultimate responsibility for monitoring compliance with MTI's Policies on Business Conduct and all related MTI policies and procedures. MTI's Summary of Policies on Business Conduct provides an overview of key policies for conducting MTI's business legally and ethically and is publicly available in MTI's preferred employee languages: Bahasa Melayu, Chinese, Dutch, English, Finnish, French, German, Gujarati, Hindi, Japanese, Korean, Polish, Portuguese, Spanish, Thai, and Turkish.
102-17	Mechanisms for advice and concerns about ethics	Compliance with Laws, Permits, Regulations and Company Values, pp. 73
4. Governance		
102-18	Governance Structure	Sustainability Governance & Accountability, pp. 14-15; 2020 Proxy Statement, Committees of the Board of Directors, pp. 21

GRI STANDARD (DISCLOSURE)	DESCRIPTION	LOCATION
102-19	Delegating authority	Sustainability Governance & Accountability, pp. 14-15; How Sustainability is Integrated in Our Strategy, pp. 16-17; Culture-Based Lead Teams, pp. 24
102-20	Executive-level responsibility for economic, environmental, and social topics	Sustainability Governance & Accountability, pp. 14-15; Culture-Based Lead Teams, pp. 24
102-21	Consulting stakeholders on economic, environmental, and social topics	Stakeholder Engagement, pp. 18-19
102-22	Composition of the highest governance body and its committees	2019 Annual Report; Sustainability Governance & Accountability, pp. 14-15; Culture-Based Lead Teams, pp. 22
102-23	Chair of the highest governance body	Duane R. Dunham is the chair of our Board of Directors. He is an independent director and not an executive officer of the company.
102-24	Nominating and selecting the highest governance body	2020 Proxy Statement, pp. 25
102-25	Conflicts of interest	MTI Code of Conduct; 2020 Proxy Statement, pp. 25
102-26	Role of highest governance body in setting purpose, values, and strategy	2020 Proxy Statement, pp. 12-24
102-29	Identifying and managing economic, environmental, and social impacts	2020 Proxy Statement, pp. 12
102-31	Review of economic, environmental, and social topics	2020 Proxy Statement, pp. 17-19
102-32	Highest governance body's role in sustainability reporting	2020 Proxy Statement, pp. 17-20; A Message from Our CEO, pp. 1-6; Sustainability Governance & Accountability, pp. 14-16
102-33	Communicating critical concerns	Sustainability Governance & Accountability, pp. 14-15; Stakeholder Engagement, pp. 18-19
102-35	Remuneration policies	2020 Proxy Statement, pp. 49
102-36	Process for determining remuneration	2020 Proxy Statement, pp. 61-64
102-37	Stakeholders' involvement in remuneration	2020 Proxy Statement, pp. 11

GRI STANDARD (DISCLOSURE)	DESCRIPTION	LOCATION
5. Stakeholder Engagement		
102-40	List of stakeholder groups	Stakeholder Engagement, pp. 18-19
102-41	Collective bargaining agreements	We respect our employees' right to join, or refrain from joining, labor unions or other legally authorized associations and to collectively bargain.
102-42	Identifying and selecting stakeholders	We identify our stakeholders as those entities that can affect or be affected by our actions, objectives and policies.
102-43	Approach to stakeholder engagement	Stakeholder Engagement, pp. 8-19; Voice of the Customer, pp. 56-57
102-44	Key topics and concerns raised	Stakeholder Engagement, pp. 18-19
6. Reporting Practice		
102-45	Entities included in the consolidated financial statements	MTI's Annual Report on Form 10-K for the Fiscal Year Ended December 31, 2019, Exhibit 21.1.
102-46	Defining report content and topic Boundaries	MTI determined that our governance, health and safety programs, progress towards 2025 targets, new product development, supply chain, and our policies and practices in taking care of our employees and stakeholders are pertinent to ensure our company's long term sustainability.
102-48	Restatements of information	There are no significant restatements of information compared to the previous report.
102-49	Changes in reporting	This report represents MTI's shift to reference the most recent GRI Standards reporting framework.
102-50	Reporting period	January 1-December 31, 2019
102-51	Date of most recent report	July 31, 2019
102-52	Reporting cycle	Annual
102-53	Contact point for questions regarding the report	Michael Landau, Corporate Communications email at sustainability@mineralstech.com
102-54	Claims of reporting in accordance with the GRI Standards	This report aligns with GRI Standards but has not been produced in accordance with the Core or Comprehensive option.
102-55	GRI content index	This document represents the company's content index.
102-56	External assurance	MTI is not seeking external assurance for this report. MTI will continue to evaluate external assurance in future years.

GRI STANDARD (DISCLOSURE)	DESCRIPTION	LOCATION
ECONOMIC		
Economic Performance		
201-1	Direct economic value generated and distributed	Growing MTI Sustainably, pp. 60-61; 2019 Form 10-K pp. F-1 to F-46
201-4	Financial assistance received from government	No material governmental financial assistance was received.
Market Presence		
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	Both male and female employees are paid at least 100% of the local minimum wages.
Indirect Economic Impacts		
203-1	Infrastructure investments and services supported	Growing MTI Sustainably, pp. 61
Anti-Corruption		
103-1	103-1 Explanation of the material topic and its Boundary	Compliance with Laws and Regulations, pp. 72, Anti-Corruption, pp. 73, Supplier Compliance and Ethics, pp. 58-59
103-2	103-2 The management approach and its components	Compliance with Laws and Regulations, pp. 72, Anti-Corruption, pp. 73 and Grievance Reporting Process on pp. 73 as well as Supplier Compliance and Ethics, pp. 58-59.
103-3	103-3 Evaluation of the management approach	Compliance with Laws and Regulations, pp. 72, Anti-Corruption, pp. 73 and Grievance Reporting Process on pp. 73 as well as Supplier Compliance and Ethics, pp. 58-59.
205-2	Communication and training about anti-corruption policies and procedures	Compliance with Laws, Permits, Regulations and Company Values, pp. 73
205-3	Confirmed incidents of corruption and actions taken	MTI is not aware of any instances of corruption in 2019.
Anti-competitive Behavior		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	MTI is not aware of any incidents of anti-competitive behavior, anti-trust or monopolistic practices in 2019.

GRI STANDARD (DISCLOSURE)	DESCRIPTION	LOCATION
ENVIRONMENTAL		
Energy		
103-1: Management Approach	Explanation of the material topic and its Boundary	Purchased Electricity, pp. 37
103-2	The management approach and its components	Purchased Electricity, pp. 37 ; 2025 Environmental Targets, pp. 7
302-1	Energy consumption within the organization	Purchased Electricity, pp. 37
302-3	Energy intensity	Purchased Electricity, pp. 37
302-4	Reduction of energy consumption	Purchased Electricity, pp. 37
Water		
103-1: Management Approach	Explanation of the material topic and its Boundary	Water (Used & Discharged), pp. 38-40
103-2	The management approach and its components	Water (Used & Discharged), pp. 38-41 ; 2025 Environmental Targets, pp. 7
303-1	Interactions with water as a shared resource	Water (Used & Discharged), pp. 38
303-4	Water discharge	Water (Used & Discharged), pp. 40
303-5	Water consumption	Water (Used & Discharged), pp. 40
Biodiversity		
103-1: Management Approach	Explanation of the material topic and its Boundary	Strong Commitment to Mining Sustainably, pp. 44-45
103-2	The management approach and its components	Strong Commitment to Mining Sustainably, pp. 44-45
304-2	Significant impacts of activities, products, and services on biodiversity	Strong Commitment to Mining Sustainably, pp. 45
304-3	Habitats protected or restored	Strong Commitment to Mining Sustainably, pp. 45
Emissions		
103-1: Management Approach	Explanation of the material topic and its Boundary	Greenhouse Gas Emissions, pp. 34-36
103-2	The management approach and its components	Greenhouse Gas Emissions, pp. 34-36 ; 2025 Environmental Targets, pp. 7

GRI STANDARD (DISCLOSURE)	DESCRIPTION	LOCATION
305-1	Direct (Scope 1) GHG emissions	Greenhouse Gas Emissions, pp. 35
305-2	Energy indirect (Scope 2) GHG emissions	Greenhouse Gas Emissions, pp. 35
305-3	Other indirect (Scope 3) GHG emissions	MTI does not currently track Scope 3 emissions and will reevaluate in the future.
305-4	GHG emissions intensity	Greenhouse Gas Emissions, pp. 35
305-5	Reduction of GHG emissions	Greenhouse Gas Emissions, pp. 34-35
305-6	Emissions of ozone-depleting substances (ODS)	MTI does not believe we use any ozone depleting substances
305-7	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	Airborne Pollutants, pp. 43
Effluents and Waste		
103-1: Management Approach	Explanation of the material topic and its Boundary	Process Waste, pp. 41-42
103-2	The management approach and its components	Process Waste, pp. 41-42 ; 2025 Environmental Targets, pp. 7
306-2	Management of significant waste-related impacts	Process Waste, pp. 41
306-3	Waste generated	Process Waste, pp. 42
Environmental Compliance		
103-1: Management Approach	Explanation of the material topic and its Boundary	Environmental Regulatory Compliance, pp. 74
103-2	The management approach and its components	Environmental Regulatory Compliance, pp. 74
103-3	Evaluation of the management approach	Environmental Regulatory Compliance, pp. 74
Supplier Environmental Assessment		
308-1	New suppliers that were screened using environmental criteria	Supply Chain Sustainability, pp. 58
308-2	Negative environmental impacts in the supply chain and actions taken	MTI is not aware of any negative environmental impacts in the supply chain.

GRI STANDARD (DISCLOSURE)	DESCRIPTION	LOCATION
SOCIAL		
Employment		
401-1	New employee hires and employee turnover	Caring for Our People, pp. 64
Occupational Health and Safety		
103-1: Management Approach	Explanation of the material topic and its Boundary	Safety, pp. 24
103-2	The management approach and its components	Safety, pp. 25
103-3	Evaluation of the management approach	Safety, pp. 25
403-1	Occupational health and safety management system	Safety, pp. 28
403-2	Hazard identification, risk assessment, and incident investigation	Safety, pp. 27
403-3	Occupational health services	Safety, pp. 26-27
403-4	Worker participation, consultation, and communication on occupational health and safety	Safety, pp. 25
403-5	Worker training on occupational health and safety	Safety, pp. 28
403-6	Promotion of worker health	Employee Wellness Activities, pp. 69
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Safety, pp. 30
403-8	Workers covered by an occupational health and safety management system	All MTI employees and contractors on site are covered by our health and safety management system
403-9	Work-related injuries	Safety, pp. 28-29
403-10	Work-related ill health	Safety, pp. 28-29

GRI STANDARD (DISCLOSURE)	DESCRIPTION	LOCATION
Training and Education		
103-1: Management Approach	Explanation of the material topic and its Boundary	Onboarding and Talent Management, pp. 67
103-2	The management approach and its components	Onboarding and Talent Management, pp. 67-68
404-2	Programs for upgrading employee skills and transition assistance programs	Onboarding and Talent Management, pp. 67-68
404-3	Percentage of employees receiving regular performance and career development reviews	Onboarding and Talent Management, pp. 67
Diversity and Equal Opportunity		
103-1	Explanation of the material topic and its Boundary	Diversity and Inclusion, pp. 66
103-2	The management approach and its components	Diversity and Inclusion, pp. 66
Supplier Social Assessment		
414-1	New suppliers that were screened using social criteria	Supply Chain Sustainability, pp. 58
414-2	Negative social impacts in the supply chain and actions taken	MTI is not aware of any significant negative supply chain developments.
Public Policy		
415-1	Political contributions	MTI did not make political contributions.
Customer Health and Safety		
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	MTI is not aware of any non-compliance concerning the health and safety impacts of products and services.

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