

The Doe Run Company



2020

Sustainability Report

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2020 Message from the CEO

<https://doerun.com/media/news/2020-letter-from-the-ceo/>



Doe Run President and CEO Jerry Pyatt shares updates about the company, the global lead industry, our workforce and our communities in Southeast Missouri.

Welcome to our 2020 Sustainability Report. Thank you for taking time to learn more about Doe Run and our environmental, social and economic commitments.

The past year has been unlike any other as our world faced the COVID-19 pandemic. As society adjusted to changing situations, many of the freedoms, services and relationships we may have previously taken for granted came into greater focus. While the outlook with respect to the pandemic and its economic impact is improving, I know this has been a devastating time for many people, communities and businesses. Our hearts go out to them.

This past year also emphasized the critical services and products that are required to keep our country functioning, including the services of first responders, health care providers, and those supporting agriculture, energy and transportation. As a part of the circular economy of lead batteries, we too support the critical infrastructure that helped to protect human life.

- Lead batteries provided back-up power to the many hospitals that cared for the influx of patients.

- Lead batteries also served as back-up power for telecommunications, so people could stay virtually connected to their jobs, schools and loved ones.
- And as more people relied on online shopping and delivery services, lead batteries started the trucks and cars that brought food and other essentials directly to their homes.

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Essential Business

As an essential business, supporting the transportation and energy sectors, Doe Run continued to operate throughout the pandemic to provide the minerals and metals needed to help power our world. While employee safety is always a priority, operating throughout the pandemic did require us to be even more vigilant about keeping our employees and their families safe. Our health and safety team implemented the CDC's guidelines to keep employees safe at work, such as wearing masks, social distancing and, if needed, contact tracing. We are pleased to report that we have maintained production throughout the pandemic. As of this writing, we have not received notification from employees, medical providers or health departments that they believe a positive COVID-19 case was due to an exposure at work. Read more about how we are approaching safety [here](#).

Our business, like many others, faced other impacts of the pandemic, including financial hardship as the global economy struggled to adapt. Coming on the heels of an extended period of tariffs on lead concentrate sales, the pandemic further weakened lead concentrate demand. To adjust, we took several measures early on, and additional measures as needed, to improve the company's financial position, including deferring or eliminating non-mandatory capital expenditures and other spending, and negotiating better supplier and financial terms. As a last resort, we also made the difficult decision to reduce our workforce. These decisions are never made lightly, but by taking proper measures we have been able to weather the impact. As I write this update, concentrate demand is strong and we are optimistic about the recovering economy.

As one of the largest employers in our region, Doe Run is essential to the communities where we operate. We employ local people, support local businesses, provide a tax base, and support schools and nonprofits through donations. Part of being a sustainable business is making sure we can continue to provide these economic benefits for our communities for the long term.

Sustainable Operations

Despite the challenges of 2020, Doe Run continues to maintain our sustainability commitments. We balance our social, economic and environmental responsibilities with an eye to the future. Readers can track our [performance data here](#). We continue to [remediate historic mining properties](#) left behind by our predecessors. We're also protecting land we own throughout Southeast Missouri through [responsible forestry management](#) efforts.

For many of us, this past year reinforced just how important our loved ones are to us. In addition to our health and safety protocols for COVID-19, new programs and new technologies, such as our maintenance pre-shift inspection app, help us protect employees and improve safety performance.

Doe Run also continued to support our communities through donations to local school districts and universities to support science, technology, engineering and math (STEM) education. We also spent more than \$164 million with local suppliers and businesses, helping them weather the challenging year.

Industry Outlook

Lead batteries start virtually every vehicle in the world, and in the U.S., approximately 73% of the lead required domestically is produced by U.S. lead recycling companies, including Doe Run. The fact that lead batteries are 99% recycled and that lead can be re-used infinitely for batteries makes the lead battery the gold standard of a circular economy.

With that in mind, it is not surprising that as the total battery market grows (which is expected to reach ~ \$150B in 2030, according to 2020 Avicenne Research commissioned by the Consortium of Battery Innovation), the lead battery market will also expand to a projected \$49B by 2030. This growth will require more than the recycled lead produced in the U.S. Currently, the U.S. imports approximately 450,000 metric tonnes of lead metal, primarily from Canada and Mexico. As the demand for batteries grows, so will the need for more lead metal.

But lead is not the only metal necessary for an expanding economy. Zinc and copper each have a role in stored energy and electricity transmission. Doe Run's mines also produce zinc and copper concentrates. Zinc is essential to modern technologies, like satellites and electronic circuits, protects buildings from rust and corrosion, and is an important dietary mineral. This past year, we piloted VisioFroth™ technology at our Brushy Creek Mill, helping us to **recover more zinc** from the flotation process. The VisioFroth technology enables us to be better stewards of the natural resources in our care and to take advantage of the market by recovering more metal.

Looking Forward

While it is clear that expanding economies across the globe will put a strain on minerals and metals, it is equally clear that we must strive to provide these materials as responsibly as possible. Doe Run continues to explore new technologies that can produce critical metals while reducing environmental impact, as well as technologies that can recover more value from the mineral processing.

Throughout the past year, we often heard about people and companies navigating “these uncertain times.” But 2020 also reminded us of what we are certain about. We are certain that operating a safe and responsible business is paramount to our employees and communities. We are certain that protecting our environment must always be a priority. And we are certain that lead has a bright future and will continue to be essential to our global infrastructure.

We invite you to learn more about our company through our sustainability stories and performance data, and we welcome your feedback [here](#).

Sincerely,

Jerry L. Pyatt
President and CEO

Managing Our Environmental Impact

<https://doerun.com/media/news/managing-our-environmental-impact/>



We sample air emissions regularly at stacks like this throughout Resources Recycling. For Doe Run, much of our environmental management focuses on reducing air emissions and protecting water quality through water treatment plants.

Managing the environmental footprint of our operations is critical to being a sustainable company. As one of our core values, we strive to protect the natural resources in our care and those we share with our communities.

For Doe Run, much of our environmental management focuses on reducing air emissions and protecting water quality through measuring, monitoring and treating water to meet permitted levels for water discharges. Our environmental specialists work closely with regulatory agencies, like the Environmental Protection Agency (EPA) and Missouri Department of Natural Resources (MDNR), to meet our shared goals.

“Over the years, we have upgraded our infrastructure, invested in smarter data systems and enhanced employee training so everyone understands the role they play in reducing our environmental impact,” said Kevin James, environmental compliance manager at Doe Run. “We are committed to meeting regulatory requirements and improving our processes.”

Protecting Air

A key part of environmental management is monitoring and measuring air emissions at our facilities. This is especially important at the Resource Recycling facility, where we use a smelting process to recycle lead batteries and other lead-bearing materials to recover essential metals and return them to new use.

We sample our air emissions regularly, both at our stack and just beyond our property line. Specialized testing firms are brought on-site annually to measure the amount of lead and other parameters in the air coming from stacks, and determine how efficiently our baghouses and other control devices are operating. A network of ambient air monitors measure lead and sulfur dioxide concentrations. These monitors are located just beyond our rurally located facility. Although there have been recent challenges with in-plant measures and controls, this monitoring demonstrates that we have been able to meet the national ambient air quality standards for more than 40 consecutive months.

Proactive planning and preventative maintenance are required to produce consistent, reliable air measurements. Air monitoring measurements are very small, usually in the parts per billion, and require specialized equipment and analysis. Environmental team members plan testing and maintenance events six to 12 months in advance in order to adequately prepare and keep the systems running smoothly.

“Outside auditors have said that our air monitoring approach is one of the most robust they have seen, but we continue to look for ways to improve with smarter technology, like a new continuous emissions monitoring system (CEMS) that provides real-time data on our stack emissions,” said Amber Morris, environmental instrumentation specialist at Resource Recycling facility. “The new CEMS technology self-identifies any potential issues and enables us to quickly address them so we can continue to accurately measure emissions.”

Doe Run has made several investments to improve the infrastructure at Resource Recycling, which have helped to better manage air quality. This includes enclosing much of the plant and adding negative pressure ventilation systems to reduce the potential of fugitive emissions. We also installed new baghouses and ventilation systems to collect lead particles and other airborne materials.



We regularly sample air emissions just beyond our Resource Recycling property.

“Over the years, we have upgraded our infrastructure, invested in smarter data systems and enhanced employee training so everyone understands the role they play in reducing our environmental impact. We are committed to meeting regulatory requirements and improving our processes.”

– Kevin James, environmental manager at Doe Run

Water Management

Water is essential to Doe Run’s operations. We use water in the milling process to produce lead, copper and zinc concentrates from ore, and on average, more than 36 million gallons of water per day flow naturally into our mines. This water needs to be pumped aboveground, where it is either used in our milling process or treated so we can return it to the environment.

We take great care with our water because the abundant natural water sources in the area are essential to the local economy and the outdoors-loving community in which we operate.

Across the Viburnum Trend, Doe Run has built a network of ponds and dams that hold any water pumped from our mines or that comes in contact with our operations. This water may travel through several storage areas before it reaches one of our five water treatment plants, where it is treated to remove metals and meet permit limits so it can be safely directed to nearby streams. Each year, our Southeast Missouri Mining and Milling Division (SEMO) treats approximately 20 billion gallons of water through this process.

“When it comes to water, our approach is about achieving balance across the Viburnum Trend,” said Kris Bieker, water treatment specialist, at SEMO. “Maintaining multiple storage ponds and treatment plants gives us the ability to adjust our capacity so no one location becomes overburdened, and we can continue to meet our permit requirements.”



Doe Run’s water treatment plants ensure water that comes in contact with our operations whether at the surface or in our underground mines is treated before it is returned to the environment.

Data is key in helping us manage our water. In 2020, we implemented a Pi Historian data system that provides real-time data about our water levels and capacity at each site. The entire database can be accessed remotely to help us resolve any issues before they escalate. For example, during heavy rainstorms, our environmental management team can monitor water levels continuously – even from home during off hours – and can make adjustments as needed. The system also enables us to provide daily water management reports to leadership so they can make better decisions about our mining and milling operations.

Environmental Management Systems

Our team of environmental employees uses several tools and processes to ensure we maintain environmental compliance. One of the most comprehensive tools we use is the Environmental Task Management System (ETMS), which helps us efficiently collect data and keep track of environmental requirements. This system is regularly updated as new permits are issued and new regulations are enacted.

We also hold International Organization for Standardization (ISO) environmental certifications for Resource Recycling and all of our mine and mill sites. To earn these voluntary certifications, our operations implemented environmental management systems at each site, which include using root cause analysis to identify and address issues before they become problems. As a part of the ISO certification process, we undergo third-party audits of our systems, which provide an outside expert's perspective to help us evaluate our techniques, discuss new practices, and work towards continuous improvement. Learn more about our ISO certifications [here](#).

Conserving Missouri's Natural Beauty

<https://doerun.com/media/news/conserving-missouris-natural-beauty/>



Doe Run owns several conservation properties in Southeast Missouri, including Grasshopper Hollow, which is the largest fen grouping in North America.

Gentle rolling hills, cool green forests and streams that meander through the landscape are some of the many reasons so many locals and visitors love Southeast Missouri. We, too, love these aspects of the area and we call this home because this is where nature left an abundance of minerals, deep inside the earth.

As a local business and as employees who are proud to work and live in this area, operating responsibly means making sure that we protect and conserve the environment for generations to come. One way we do this is by managing the forests and natural landscapes on property we own.

“Doe Run owns nearly 52,000 acres of surface land and our land management team maintains several sites with unique features and histories,” said Andrew Jackson, real estate coordinator at Doe Run. “About 38,000 acres of our land is included in our active forestry program. We work cooperatively with the U.S. Forest Service to maintain our forests so they blend seamlessly with those of federal lands. In this way, we can provide continuous tracts that benefit local flora and fauna.”

“Our approach to forestry management is to manage each area to its fullest potential. The careful balance between maintaining the forest and harvesting trees provides a valuable, renewable resource for industries while also ensuring that Missouri’s forests flourish for centuries to come.”

– Dave Patterson, forester at Doe Run

Managing Doe Run’s Forests

Doe Run operates in the same region as the Mark Twain National Forest. Managing the wooded acres in our care is a responsibility our forestry management team takes seriously. Selective harvesting is conducted on our forested acreage. These acres are divided into smaller plots called stands. We inventory each stand to see which tree species grow there, then we create a plan that factors in weather, insect populations and growing conditions to grow the best trees possible at each site. We aim to thin out each stand every 15 years, which means we remove diseased and rotted trees to provide more space for healthy trees to absorb sunlight and nutrients.

“When we cut down select trees and sell them to local companies, we are improving the value of those trees left behind,” said Dave. “This careful balance between harvesting and maintenance provides a valuable, renewable resource for the local lumber industries while also ensuring that our forests flourish for centuries to come.”



Advanced logging equipment helps provide a renewable resource for local lumber industries.

Centuries ago, loggers used crosscut saws and mules to cut down trees and carry them to settlements or nearby rivers for transportation. Later, chainsaws and tractors made cutting down timber easier for loggers. Today, we are using even more advanced equipment that enables us to cut trees in a way that is better for the forest. Doe Run uses an innovative track cutter that nimbly cuts the tree to the exact lengths we need. Then, a forwarder machine picks up logs and loads them onto a truck. Without this machine, trees would have to be dragged across the forest floor, which disrupts the soil and can injure smaller trees and bushes. This equipment has the added benefit of keeping employees safer while being more efficient. Typically, Doe Run cuts 3 to 4 million board feet of timber per year. This timber is used in flooring, railroad ties, building materials, cabinets and barrels.

“The white oak in Southeast Missouri is considered the best in the world by wine and whiskey makers because the trees grow slower here,” said Dave. “Slower growth keeps the wood denser for a tightly sealed and more flavorful barrel. A white oak tree must grow for nearly 100 years before it is large enough to make a barrel. It’s just another example of how important these forests are. Our great-grandchildren could come to these forests and see some of the very same trees we are caring for today.”

Experiencing Nature Up Close

Some of Doe Run’s lands are dedicated to conservation. One of the most unique conservation sites owned by Doe Run is Grasshopper Hollow, a hidden jewel located in Reynolds County, west of Centerville. Doe Run owns 120 acres of this 593-acre natural area and we lease our portion of the natural area to The Nature Conservancy. Together with the Missouri Department of Conservation and the U.S. Forest Service, The Nature Conservancy jointly manages the areas. Grasshopper Hollow contains the largest known fen grouping in unglaciated North America. These low, marsh-like areas help collect overflow water when rivers flood and provide a home for native animal and plant species. Open to the public and accessible on a gravel road, Grasshopper Hollow is a terrific spot for bird watching. Southeast Missouri residents and visitors have the opportunity to view this wetland and its inhabitants firsthand by walking the Mary Bronstein Nature Trail, located near the intersection of Highway 72 and County Road 860.



The Grasshopper Hollow fen is home to many native animal and plant species.

Another unique area of property owned by Doe Run is the rhyolite formation that makes up Hughes Mountain. The fractures of these rocks, known locally as the Devil’s Honeycomb, formed as molten rock from ancient volcanos cooled and contracted some 1.4 billion years ago. This created a hexagonal pattern of columns that resemble a honeycomb, making this one of the most unique geological features in Missouri. Visitors can hike to the top of Hughes Mountain. The trail is accessible from Highway M, about five miles east of Highway 21.

Some of Doe Run’s conservation properties have been earmarked for the purpose of future land transfers to the U.S. Forest Service or other interested conservation agencies. Three such properties with interesting histories are the Hazelton Springs, Silvey and Irish Wilderness properties.

Hazelton Springs in Texas County, sits along the Big Piney River. During pioneer days, the river access and rich forests made the area a prime location for the lumber industry to mill timber and ship wood products down the Big Piney and Gasconade Rivers, eventually bound for St. Louis. The river also was ideal for a gristmill powered by a water wheel.

“This was once the only grain mill in the area, so a small town built up around it,” said Andrew, whose great-great-grandfather once ran the mill. “It also was once the site of a sawmill and trout farm. Today, the forest has reclaimed the area once again, though you can still see the grist mill and outlines of the old post office and general store.”

The Silvey property is located near the border of Ozark and Taney County. Silvey’s primary beauty is a natural glade. Glades are small, thin-soiled rocky clearings often found in forested areas, providing views of exposed igneous and dolomite bedrock. This area is not accessible to visitors.

Another historic forest settlement Doe Run manages is the Irish Wilderness. Once a settlement of Irish immigrants, this rolling area now consists of a dense forest of oak, hickory, shortleaf pine and other smaller trees. Visitors hiking the 18-mile trail can see dried creek beds, grasslands, glades, bluff country, and breathtaking views overlooking the Eleven Point River. They might also encounter white-tailed deer, rabbits, gray foxes, turkey, hawks, owls and many types of songbirds.



An aerial view of the hiking trail to the top of Hughes Mountain.

Remediation Progress in 2020

<https://doerun.com/media/news/remediation-progress-in-2020/>



Soil and Land Services remediates yards in St. Francois County. Doe Run continues to make progress on historic mine site remediation projects.

Settlers flocked to this region more than 300 years ago to mine one of the largest and purest lead ore deposits in the world. Today, Doe Run is the only remaining lead mining company operating in Southeast Missouri, and we play a role in remediating many closed sites.

“In the 1970s, lead mining in Missouri moved from the area known as the Old Lead Belt south to the Viburnum Trend, where Doe Run currently mines. However, former mine sites operated by legacy companies require remediation by the Environmental Protection Agency (EPA),” said Chris Neville, asset development director. “We are restoring many of these historic mine sites, giving them new purpose or reclaiming the land.”

In 2020, we continued to make progress at several remediation sites.

Herculaneum

We remediated five acres of former residential property in Herculaneum to provide a bus parking lot and maintenance building for the Dunklin R-V School District. Relocating the district's bus facilities to the new site enabled the local elementary school to build more classrooms. Also in Herculaneum, the Riverview Commerce Park, LLC (RCP) port continued to ship fracking sand and grain along the Mississippi River. The port is located on 18 acres of riverfront property once owned by Doe Run, and continues to bring economic opportunities to the area.

Glover

At another former operations site in Glover, we made progress remediating a creek on-site and capping a permitted slag storage area with soil. Slag is the byproduct from the smelting process.

Old Lead Belt

Early settlers began surface mining in the area known as the Old Lead Belt more than 300 years ago. Over the years, Doe Run has remediated many of these former sites. In 2020, Soil and Land Services (S&L) remediated 86 residential yards in St. Francois County, and remediation will continue to ramp up in 2021. Also in the Old Lead Belt, Doe Run completed a pilot study to remove sediment from the Big River, using an innovative pump system for frack sand mining. The study will help the EPA understand how it can best remove sediment while minimizing the use of construction equipment in the river.

Working Safely During COVID-19

<https://doerun.com/media/news/working-safely-during-covid-19/>



As an essential business, Doe Run adjusted its approach for annual refresher training to keep employees safe during the pandemic.

The global pandemic has put health and safety in the spotlight like never before. Because safety is so foundational to our culture, Doe Run was well-prepared to adapt to the added challenges of working as an essential business during a pandemic.

While our workplace looks a little different now, we have been able to maintain production without any known instances of employees contracting the virus while at work. Beginning in March 2020, our HR and health and safety team implemented changes following the CDC's guidelines, including:

- Social distancing.
- Increased cleaning of high-touch areas, like door handles.
- Closely tracking exposures and requiring anyone who may have been exposed to COVID-19 in their personal life to quarantine to avoid spreading to others.
- Alerting any employees who may have come into contact with a person exposed to or diagnosed with COVID-19, so they could isolate and monitor for symptoms as appropriate.

“Compared to many workplaces, we were better equipped to handle the pandemic because we already have industrial hygiene programs and practices integrated into our systems. For example, hand washing is an important part of controlling lead exposure,” said Maggie Crocker, environmental, health and safety manager at the Resource Recycling facility. “Small changes, like wearing masks when around others and limiting the number of people in our control rooms or mine shaft elevators, enabled the rest of our employees to protect themselves and one another.”

Another foundational piece of our safety culture is regular training. During the pandemic, Resource Recycling modified its monthly classroom training to be done via video to avoid people gathering in large groups. At our Southeast Missouri Mining and Milling Division (SEMO), the all-day annual refresher program was conducted by a third-party trainer via live feed, and held with much smaller groups to allow for social distancing. The pandemic required us to adapt in ways that were unanticipated, but our trainers found ways to keep these sessions informative and effective. We expect to capitalize on these benefits and plan to continue to use a hybrid system of in-person and video training after the pandemic. In total, Doe Run employees completed **nearly 16,000 hours** of environmental, health and safety training in 2020.

“I grew up here and my family is deeply rooted in this community – my mom taught some of my coworkers in school. I’m proud to be making the workplace safer for my neighbors, my friends and their families.”

– Maggie Crocker, EHS manager at Resource Recycling

Personal Protective Equipment Upgrades at Resource Recycling

As an essential industry, our work continued, and so did our need to manage employee safety in all ways – beyond COVID-19. An example of this is identifying new equipment to help better protect Resource Recycling employees on the job. One of the most used forms of PPE in our facility are gloves, which are needed for everything from handling hot materials to protecting an employee in the battery breaking area from acid exposure. In 2018, we reassessed our current glove options to ensure optimal protection.

Over the course of a year, employees tested and provided feedback on many types of gloves designed for different types of work. Once we selected the best fits, we installed a dispensing machine that provides the correct gloves based on the employee’s assigned job task.



A glove vending machine at Resource Recycling dispenses different types of work gloves based on job task.

We're also using new technologies to improve our pre-shift equipment safety inspections and improve overall maintenance. In 2020, Doe Run's IT team developed a new app to help Resource Recycling's maintenance team maintain mobile equipment. The app enables employees to conduct equipment inspections utilizing a tablet prior to beginning each shift. By utilizing the tablet, the information is uploaded directly to a database, replacing a tedious manual process, improving maintenance scheduling and ensuring equipment is safe for employees to use.

Recognizing Safety Opportunities at SEMO

Even with a strong safety culture, we always look for ways to improve. One way we do this is by analyzing near-misses – situations that could have resulted in an accident, but didn't. In 2019, we rolled out a program that incentivizes SEMO employees to report near-misses so we can all learn how to avoid potential mishaps. Employees who submit near-miss reports are entered into quarterly drawings to receive a prize. Since beginning the program, employees have submitted two dozen near-miss examples.

"The near-miss program is important because it encourages employees to think every day, what if something had gone differently? And then provides an additional incentive to speak up, so we all can learn from it," said Doug Center, safety specialist at SEMO. "It's all about recognizing the opportunity we have to improve how we work to prevent accidents."

In 2021, the SEMO safety team will build on what has been learned through the near-miss program by preparing and conducting Toolbox Talks, small group meetings that will provide refreshers on specific topics related to near-misses.

Safety Milestones

In 2020, our strong focus on safety helped several of our facilities reach at least 10 years worked with no lost-time incidents:

- 23 years at Sweetwater Mill
- 21 years at the Seafab Metals facility of Fabricated Products Inc. (FPI), a wholly owned subsidiary of Doe Run
- 16 years aboveground at Sweetwater Mine
- 14 years at the SEMO port, the Missouri river port where Doe Run ships our metal concentrates
- 13 years at Brushy Creek Mill

Typically, another point of pride for our safety culture is the success of our mine rescue teams. While regional and national competitions were canceled in 2020 due to the pandemic, our teams continued to train so they are prepared to help their fellow employees in the event of an emergency. We hope to be able to participate in mine rescue competitions once again in 2021.

Supporting Students in Southeast Missouri

<https://doerun.com/media/news/supporting-students-in-southeast-missouri/>



Doe Run supports STEM education in Southeast Missouri with donations to local school districts and scholarship opportunities for college students.

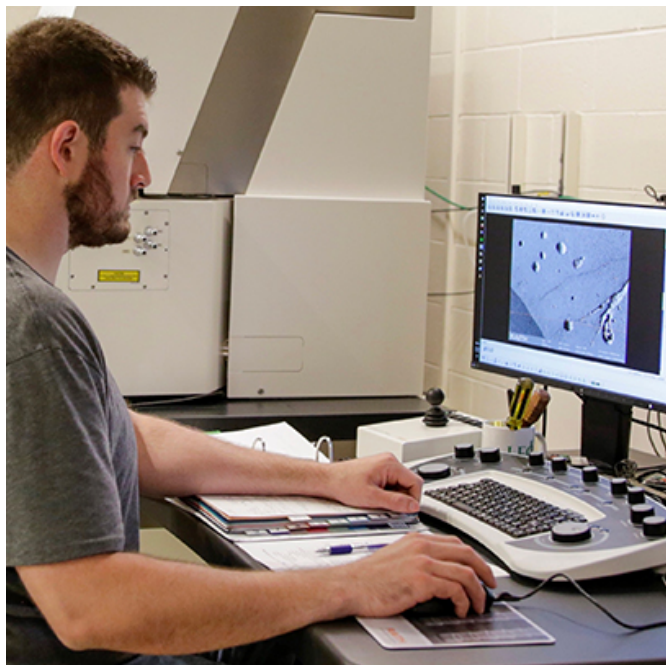
We are proud to call Southeast Missouri our home. Many of our employees have lived here for generations, and the area’s rich mining history has played a large part in creating our close-knit communities.

That’s why we support local schools and organizations that create opportunities for the next generation to learn skills for successful future careers. Doe Run also helps maintain our local and state economies and jobs in our community by supporting Missouri businesses.

“One of the most important ways we can invest in our communities is by helping local students build the technical skills needed for the workforce of the future – whether that is working here at Doe Run or elsewhere,” said Dianne Whitaker, director of human resources at Doe Run. “The mining sector is expected to grow by more than 13% by 2029, and other technical and science-based jobs will continue to be in high demand, so it’s important that students build a strong foundation in math and science now.”

In 2020, Doe Run donated nearly \$84,000 to support science, technology, engineering and math (STEM) programs and scholarships for elementary through college-level students.

- Donations to Iron County C-IV School District in Viburnum helped to purchase microscopes, K'Nex bridge building kits, and other building materials that encourage active learning through creative problem-solving. Viburnum High School was able to purchase two robotics competition starter kits for the Robotics Club to participate in VEX Robotics competitions.
- We enabled Bunker R-III School District to enhance existing math curriculum, providing students with access to online videos and activities for use in the classroom and at home.
- STEM kits donated to North Wood R-IV School District in Salem let middle school students build prototypes, perform experiments, and analyze and interpret data.
- An X-ray spectrometer donated to Missouri University of Science and Technology (Missouri S&T) has enabled students to measure the spatial distribution of elements within powders, thin films, composites and bulk alloys. These skills are vital for the engineering, geology and metallurgy students who could one day work in our mines, mills and Recycling Facility.
- We sponsored college scholarships for students attending Southwest Baptist College, Mineral Area College and Missouri S&T.



In 2020, Doe Run donated an X-ray spectrometer to Missouri University of Science and Technology (Missouri S&T).

**“Doe Run also invests in our community by supporting local businesses.
In 2020, we spent \$164 million with 678 Missouri companies.”**
– Dianne Whitaker, director of human resources at Doe Run

Community Engagement in the Time of COVID-19

Protecting one another is a top priority while at work, and this extends to our communities. Throughout the pandemic, local hospitals and health care facilities were in critical need of protective equipment – some of which we already use in many of our facilities. We offered our support to local health departments, and were able to donate N95 masks, respirators and filters to health care facilities throughout Southeast Missouri, enabling doctors and nurses to safely provide care to patients in need.

In addition to Doe Run's contributions, we also want to recognize our employee efforts to give back in their own communities – especially during these challenging times. Employees came together to provide food, essential supplies and donations to charitable organizations and families throughout the region. Learn more about our [community outreach](#).

For many years, Doe Run has hosted events that celebrate more than 300 years of mining in Southeast Missouri. Because of the pandemic, the annual Old Miners Days and Fall Rocks events were canceled in 2020 to keep our community safe. We look forward to when we can once again gather with our neighbors to celebrate our rich mining history.

VisioFroth Technology Increases Zinc Recovery

<https://doerun.com/media/news/visiofroth-technology-increases-zinc-recovery/>



A Brushy Creek Mill employee oversees the zinc flotation process, utilizing new VisioFroth technology to recover more zinc from our ore.

Two of our seven core values are stewardship – conserving, managing and making the most of the natural resources in our care; and sustainability – balancing social, environmental and economic considerations with a relentless focus on improving our processes. The introduction of VisioFroth™ technology at one of our mills helps us deliver on both.

Doe Run primarily produces lead concentrates from our mines. However, galena, the mineral form of lead, is often co-located with zinc and copper mineralization. Zinc is well-known as an important dietary mineral, and it is also one of the most versatile metals known to mankind. Zinc is:

- Critical in modern technologies, such as lasers, satellites and electronic circuitry.
- Used to protect against rust and corrosion on thousands of products, from the world's tallest skyscrapers to automobiles.
- Used in die casts, making it a part of nearly all manufactured products.
- Important in battery production.

In response to the ongoing drive for improved mineral recovery and return on investment, Doe Run piloted the VisioFroth technology in our zinc circuit at Brushy Creek in 2020.

“One thing is certain, the global economy needs zinc. By extracting more zinc from the earth’s minerals, we are making the most of the resources in our care while also meeting the global demand for zinc.”

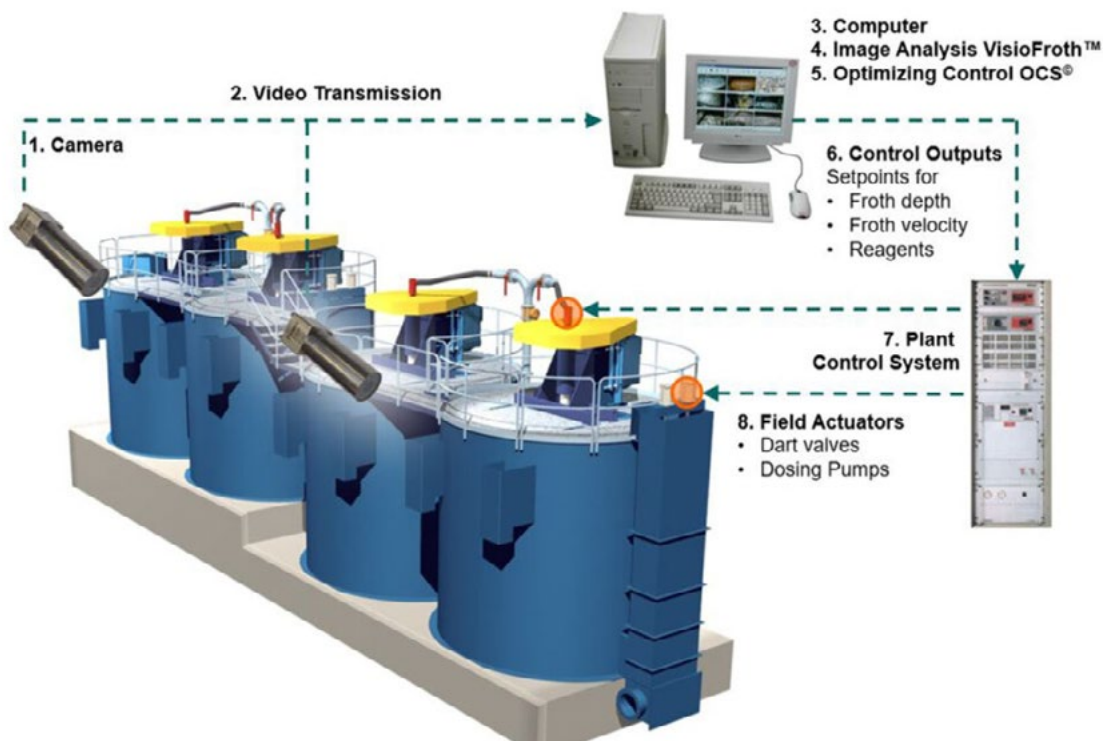
– Brad Bunn, senior metallurgical engineer at Brushy Creek Mill

Improving Zinc Recovery

During the milling process, ore is crushed and ground before proceeding to a flotation process, which separates the copper, zinc and lead. “In order to separate lead, zinc and copper from our ore, we use a series of flotation cells and different reagents to alternatively float or depress minerals,” stated Brad Bunn, senior metallurgical engineer at the Brushy Creek Mill. “The reagents allow selected minerals to attach to air bubbles, which are produced by the flotation machines. The mineral-coated bubbles flow out of the flotation cell and the minerals are recovered through a settling and filtration process.”

Designed to help mill operators maximize mineral recovery, the VisioFroth technology uses remote camera monitoring to capture images of the mineral froth as it moves through the concentrator cells. This digital data is then analyzed for froth velocity, color and texture; bubble size and distribution; and bubble stability versus collapse rate by VisioFroth software and immediately shared with the operator.

VisioFroth Zinc Recovery Process



“VisioFroth provides us better visibility and analysis of the flotation process,” said Brad. “Combined with its software, it provides real-time data and notifies the operator if adjustments are necessary to achieve optimal recovery.”

No pilot program is without some challenges, which is why collaboration across teams is so important. Early in the process, we realized that we needed more consistent lighting in order to capture high quality images. The mill’s maintenance team fashioned a stainless steel hood on which to mount the VisioFroth camera. The hood provides consistent illumination and improved image quality.

Since the installation and commissioning of the technology, zinc recovery has improved significantly, and the consumption of copper solution required in the zinc circuit has dramatically declined, which saves in operating costs. We are evaluating adding VisioFroth technology to our other mills.

Performance Data

<https://doerun.com/sustainability/performance-data/>

Environmental Performance

301-2 (EN2) Direct Recycled Input Materials (Fiscal Year)

Units and Substances Key

Metric Ton(s): mt

| Source (mt) | 2018 | 2019 ⁽¹⁾ | 2020 |
|-----------------------------|----------------|---------------------|----------------|
| Slag | 3,467 | 4,903 | 7,368 |
| Batteries (mt of Pb) | 107,928 | 91,051 | 87,466 |
| Lead-Bearing Material | 44,731 | 46,511 | 38,867 |
| Iron-Containing Material | 14,028 | 11,382 | 11,589 |
| Total Materials Used | 170,154 | 153,847 | 145,290 |

(1) 2019 data has been corrected here.

302-1 (EN3) Energy Consumption (Calendar Year)

Units and Substances Key

Gigajoule(s): GJ

| Direct Non-Renewable Energy Source | 2018 | 2019 | 2020 |
|--|--------------------------------|--------------------------------|------------------|
| Coke | 483,741 | 534,908 | 560,110 |
| Explosives | 27,415 ⁽¹⁾ | 27,239 ⁽¹⁾ | 30,499 |
| Natural Gas | 137,746 ⁽¹⁾ | 131,598 ⁽¹⁾ | 130,942 |
| Petroleum Fuel | 280,588 | 273,890 | 256,341 |
| Propane | 614,485 | 590,101 | 564,155 |
| Total Direct Energy Consumption⁽¹⁾ | 1,543,975⁽¹⁾ | 1,557,736⁽¹⁾ | 1,542,047 |
| Indirect Non-Renewable Energy Source | 2018 | 2019 | 2020 |
| Electricity | 1,447,947 | 1,512,100 | 1,538,055 |
| Total Energy Use | 2,991,922⁽¹⁾ | 3,069,836⁽¹⁾ | 3,080,102 |

(1) 2018 and 2019 data for explosives and natural gas has been corrected here.

302-3 (EN5) Energy Intensity of All Sources (Calendar Year)

Units and Substances Key

Metric Ton(s): mt

Gigajoule(s): GJ

Ore: Ore milled at mining operations

Pb: Lead produced at alloying, casting, and secondary smelting and fabricating operations

| Division | Units | 2018 | 2019 | 2020 |
|---|-------------------|--------------------|---------------------|------|
| Southeast Missouri Mining and Milling Division (SEMO) | GJ/mt Ore milled | 0.3 | 0.3 | 0.3 |
| Metals Division (Resource Recycling and Herculeaneum) | GJ/mt Pb produced | 9.4 ⁽¹⁾ | 10.5 ⁽¹⁾ | 12.1 |
| Fabricated Products Inc. (FPI) | GJ/mt Pb produced | 1.1 ⁽¹⁾ | 1.2 ⁽¹⁾ | 1.1 |

(1) 2018 and 2019 data for Metals Division and FPI has been corrected here.

305-1 (EN15) Total Direct Greenhouse Gas Emissions (Calendar Year)

Units and Substances Key

Metric Ton(s) of Carbon Dioxide Equivalent (mt CO_{2e})

| | 2018 | 2019 | 2020 |
|---|------------------------|------------------------|---------|
| Scope 1 (direct emissions of Greenhouse Gases, Carbon Disclosure Project, e.g., direct combustion of fuels) | 115,896 ⁽¹⁾ | 124,430 ⁽¹⁾ | 109,775 |

(1) 2018 and 2019 data for explosives has been corrected here.

305-2 (EN16) Total Indirect Greenhouse Gas Emissions (Calendar Year)

Units and Substances Key

Metric Ton(s) of Carbon Dioxide Equivalent (mt CO_{2e})

| | 2018 | 2019 | 2020 |
|---|---------|---------|---------|
| Scope 2 (emissions from direct purchase of energy, e.g., electricity) | 330,370 | 356,371 | 349,287 |

305-3 (EN17) Other Relevant Indirect Greenhouse Gas Emissions (Calendar Year)

Units and Substances Key

Metric Ton(s) of Carbon Dioxide Equivalent (mt CO₂e)

| | 2018 | 2019 | 2020 |
|---|--------|--------|-----------------------------|
| Scope 3 (indirect emissions from transportation and employees' commute, etc.) | 16,795 | 14,972 | 19,341⁽¹⁾ |

(1) In 2020, we applied a new methodology to calculate Scope 3 emissions. This new methodology captured commuter data that was not included in 2018 and 2019. Had we applied this method in 2018 and 2019, the values would have been similar to 2020.

305-4 (EN18) Greenhouse Gas Emission Intensity (Calendar Year)

Units and Substances Key

Metric Ton(s): mt

Carbon Dioxide Equivalent: CO₂e

Ore: Ore milled at mining operations

Pb: Lead produced at alloying, casting, and secondary smelting and fabricating operations

| Division | Units | 2018 | 2019 | 2020 |
|---|--------------------------------------|---------------------|---------------------|---------------------------|
| Southeast Missouri Mining and Milling Division (SEMO) | mt CO ₂ e/mt Ore milled | 0.05 | 0.06 | 0.06 |
| Metals Division (Resource Recycling and Herculaneum) | mt CO ₂ e /mt Pb produced | 0.80 | 0.70 | 0.50 |
| Fabricated Products Inc. (FPI) | mt CO ₂ e /mt Pb produced | 0.18 ⁽¹⁾ | 0.38 ⁽¹⁾ | 0.13⁽¹⁾ |

(1) The fluctuation from year to year is due to changes in product mix.

305-7 (EN21) Significant Air Emissions (Calendar Year)

Units and Substances Key

Metric Ton(s): mt

| Source (mt by type and weight) | 2018 | 2019 | 2020 |
|---|------------------|------------------|------------------|
| Ammonia (NH ₃) | 0.12 | 0.05 | 0.05 |
| Antimony (Sb) | 0.00 | 0.00 | 0.00 |
| Arsenic (As) | 0.31 | 0.36 | 0.32 |
| Cadmium (Cd) | 0.20 | 0.21 | 0.04 |
| Carbon Monoxide (CO) ⁽¹⁾ | 21,919.00 | 13,552.00 | 16,348.00 |
| Copper (Cu) | 0.18 | 0.21 | 0.19 |
| Hazardous Air Pollutants (HAP) | 0.89 | 0.89 | 0.75 |
| Lead (Pb) | 4.47 | 4.99 | 4.45 |
| Nickel (Ni) | 0.04 | 0.04 | 0.03 |
| Nitrogen Oxides (NO _x) | 55.00 | 42.96 | 35.42 |
| Particulate Matter (PM) | 206.00 | 189.00 | 195.00 |
| Sulfur Dioxide (SO ₂) | 2,130.00 | 2,590.00 | 2,388.00 |
| Sulfuric Acid (H ₂ SO ₄) | 0.74 | 0.65 | 0.55 |
| Volatile Organic Compounds (VOC) | 10.20 | 10.00 | 9.19 |
| Zinc (Zn) | 0.57 | 0.91 | 0.59 |
| Total | 24,328.00 | 16,392.27 | 18,983.73 |

(1) An alternative method of calculation was used in 2018, which may have overestimated emissions.

306-1 (EN22) Total Water Discharge (Calendar Year)

Units and Substances Key

ppb: parts per billion

| Source (average ppb) | 2018 | 2019 | 2020 |
|---|---------------|---------------|---------------|
| Lead | 15 | 12 | 5 |
| Zinc | 241 | 302 | 168 |
| Copper | 3 | 2 | 2 |
| Total water discharge (million gallons/year) | 19,943 | 27,857 | 21,373 |

Environmental Spending

EN31 Total Fiscal Environmental Spending (Fiscal Year)

| | 2018 | 2019 | 2020 |
|---|-------------------|--------------------------|--------------------------------|
| Total Capital Spending and Operating Expense | 39,422,485 | 36,972,565 | 33,345,224 |
| Remediation Spending ⁽¹⁾ | | | |
| Historic Properties | 6,424,264 | 3,141,743 ⁽²⁾ | 1,838,434⁽⁴⁾ |
| Operating Properties | 5,057,746 | 2,541,314 ⁽³⁾ | 1,595,373⁽⁴⁾ |
| Total Remediation Spending | 11,482,010 | 5,683,057 | 3,433,707⁽⁴⁾ |
| Total Fiscal Environmental Spending, Including Remediation | 50,904,495 | 42,655,622 | 36,778,931 |

- (1) Remediation spending fluctuates based on completed work each year.
- (2) The reduction in spending at historic properties remediation is due to the completion of a project in Oklahoma in 2018.
- (3) The reduction in remediation spending at operating properties is due to the completion of demolition activities at Herculaneum.
- (4) Reduced spending in 2020 represents approved postponement of some remediation projects in light of the pandemic.

Workforce Summary

G4-10 (102-8) Number of Employees by Division (Calendar Year)

| (number of employees) ⁽¹⁾ | 2018 | 2019 ⁽²⁾ | 2020 |
|---|--------------|---------------------|----------------------------|
| Southeast Missouri Mining and Milling Division (SEMO) | 727 | 724 | 675 |
| Metals Division (Resource Recycling, Herculanium) | 329 | 326 | 312 |
| Corporate Headquarters | 150 | 139 | 123 |
| Fabricated Products Inc. (FPI) | 39 | 38 | 35 |
| Total Number of Employees⁽¹⁾ | 1,245 | 1,227 | 1,145⁽³⁾ |

Male and Female Employees by Division (Calendar Year)

| (number of employees) | 2018 | | 2019 ⁽²⁾ | | 2020 | |
|--|--------------|------------|---------------------|------------|--------------|------------|
| | Male | Female | Male | Female | Male | Female |
| SEMO | 671 | 56 | 663 | 61 | 621 | 54 |
| Metals Division | 306 | 23 | 300 | 26 | 288 | 24 |
| Corporate Headquarters | 98 | 52 | 96 | 43 | 88 | 35 |
| FPI | 34 | 5 | 34 | 4 | 32 | 3 |
| Total Number of Employees⁽³⁾ | 1,109 | 136 | 1,093 | 134 | 1,029 | 116 |

Number of Employees by Employment Type (Calendar Year)

| (number of positions) | 2018 | 2019 | 2020 |
|--|--------------|--------------|--------------|
| Permanent Hourly Positions | 871 | 850 | 815 |
| Permanent Salary Positions | 367 | 371 | 327 |
| Temporary Positions | 4 | 0 | 2 |
| Contracted Positions | 3 | 0 | 1 |
| Total Number of Employees⁽¹⁾ | 1,245 | 1,221 | 1,145 |

Male and Female Employees by Employment Type (Calendar Year)

| (number of employees) | 2018 | | 2019 | | 2020 | |
|--|--------------|------------|----------------------------|--------------------------|--------------|------------|
| | Male | Female | Male | Female | Male | Female |
| Permanent Hourly Positions | 850 | 21 | 829 ⁽²⁾ | 21 | 795 | 20 |
| Permanent Salary Positions | 254 | 113 | 258 ⁽²⁾ | 112 ⁽²⁾ | 231 | 96 |
| Temporary Positions | 2 | 2 | 4 ⁽²⁾ | 0 ⁽²⁾ | 2 | 0 |
| Contracted Positions | 3 | 0 | 2 ⁽²⁾ | 1 ⁽²⁾ | 1 | 0 |
| Total Number of Employees⁽³⁾ | 1,109 | 136 | 1,093⁽²⁾ | 134⁽²⁾ | 1,029 | 116 |

(1) Employee counts for G4-10 include all categories of employees as of December 31.

(2) 2019 data has been corrected here.

(3) Decrease due to staffing reductions in June 2020.

LA1 (401-1) New Employee Hires by Gender (Calendar Year)

Total number⁽¹⁾ and rate of new employee hires entering employment during the reporting period broken down by gender. New hires do not necessarily represent an increase in workforce.

| | 2018 | | 2019 | | 2020 | |
|----------------------------------|------------|-------|------------|-------|--------------------------|--------------|
| | Number | Rate | Number | Rate | Number | Rate |
| Male | 159 | 89.8% | 134 | 84.3% | 113 | 91.1% |
| Female | 18 | 10.2% | 25 | 15.7% | 11 | 8.9% |
| Total Number of Employees | 177 | | 159 | | 124⁽²⁾ | |

(1) Employee counts exclude hiring and termination of temporary employees.

(2) Decrease in total number of new hires due to hiring slow down after reduction in force in June 2020.

Employees Leaving by Gender (Calendar Year)

Total number⁽¹⁾ and rate of employees leaving employment during the reporting period broken down by gender.

| | 2018 | | 2019 | | 2020 | |
|----------------------------------|------------|-------|------------|-------|--------------------------|--------------|
| | Number | Rate | Number | Rate | Number | Rate |
| Male | 132 | 89.8% | 145 | 86.8% | 151 | 83.4% |
| Female | 15 | 10.2% | 22 | 13.2% | 30 | 16.6% |
| Total Number of Employees | 147 | | 167 | | 181⁽²⁾ | |

(1) Employee counts exclude hiring and termination of temporary employees.

(2) Increase in employees leaving due to staffing reductions in June 2020.

New Employee Hires by Age Group (Calendar Year)

Total number⁽¹⁾ and rate of new employee hires entering employment during the reporting period broken down by age group. New hires do not necessarily represent an increase in workforce.

| | 2018 | | 2019 | | 2020 | |
|----------------------------------|------------|-------|------------|-------|--------------------------|--------------|
| | Number | Rate | Number | Rate | Number | Rate |
| 30 or younger | 85 | 48.0% | 82 | 51.6% | 70 | 56.5% |
| 31 to 40 | 45 | 25.4% | 43 | 27.0% | 30 | 24.2% |
| 41 to 50 | 29 | 16.4% | 16 | 10.1% | 13 | 10.5% |
| 51 and above | 18 | 10.2% | 18 | 11.3% | 11 | 8.9% |
| Total Number of Employees | 177 | | 159 | | 124⁽²⁾ | |

(1) Employee counts exclude hiring and termination of temporary employees.

(2) Decrease in total number of new hires due to staffing reductions in June 2020.

Employees Leaving by Age Group (Calendar Year)

Total number⁽¹⁾ and rate of employees leaving employment during the reporting period broken down by age group.

| | 2018 | | 2019 | | 2020 | |
|----------------------------------|------------|-------|------------|-------|--------------------------|--------------|
| | Number | Rate | Number | Rate | Number | Rate |
| 30 or younger | 40 | 27.2% | 35 | 20.9% | 45 | 24.9% |
| 31 to 40 | 34 | 23.1% | 33 | 19.8% | 37 | 20.4% |
| 41 to 50 | 23 | 15.7% | 33 | 19.8% | 19 | 10.5% |
| 51 and above | 50 | 34.0% | 66 | 39.5% | 80 | 44.2% |
| Total Number of Employees | 147 | | 167 | | 181⁽²⁾ | |

(1) Employee counts exclude hiring and termination of temporary employees.

(2) Increase in employees leaving due to staffing reductions in June 2020.

Health and Safety Performance

403-1 (LA6) Occupational Safety and Health

Employee Blood-Lead Average

The adjusted Occupational Health and Safety Administration's (OSHA) standard for medical reassignment of an employee is 53 micrograms of lead per deciliter of whole blood ("µg/dL").⁽¹⁾ Doe Run sets its maximum limit at 30 µg/dL. If any employee has a blood-lead average that reaches 30 µg/dL, they are temporarily reassigned to other work. No employees had averages that reached 30 µg/dL in 2020.

| (in µg/dL) | 2018 | 2019 | 2020 |
|---|---------------------|---------------------|--------------|
| Southeast Missouri Mining and Milling Division (SEMO) | 6.51 | 5.05 ⁽²⁾ | 6.68 |
| Metals Division ⁽³⁾ | 10.12 | 10.34 | 10.46 |
| Corporate Headquarters ⁽⁴⁾ | N/A | N/A | N/A |
| Fabricated Products Inc. (FPI) | 7.40 ⁽⁵⁾ | 6.70 | 5.60 |
| Average | 7.63 | 7.36 | 8.53 |

Employee Blood-Lead Data

Doe Run monitors and reports the number of employees with a blood-lead average greater than 19 µg/dL in the calendar year. The adjusted OSHA standard for medical reassignment of an employee is 53 µg/dL.⁽¹⁾ Doe Run sets its maximum limit at 30 µg/dL.

| (# of employees with blood-lead levels >19 µg/dL) | 2018 | 2019 | 2020 |
|---|------------------|------------------|------------|
| SEMO | 4 | 1 ⁽²⁾ | 1 |
| Metals Division ⁽³⁾ | 11 | 10 | 13 |
| Corporate Headquarters ⁽⁴⁾ | N/A | N/A | N/A |
| FPI | 1 ⁽⁵⁾ | 1 | 0 |
| Total | 16 | 12 | 14 |

Total Lost-Time Accidents and Fatalities

According to OSHA, lost time is defined as a nonfatal traumatic injury that causes any loss of time from work beyond the day or shift it occurred, or a nonfatal nontraumatic illness/disease that causes disability at any time. According to the Mine Safety and Health Administration (MSHA), lost time is defined as days which the employee would have worked, but could not because of an occupational injury or an occupational illness. A fatality is not counted as a lost-time accident.

| (number of injuries) | 2018 | 2019 | 2020 |
|---|-------------|-------------|-------------|
| SEMO | 3 | 4 | 5 |
| Metals Division | 5 | 3 | 2 |
| Corporate Headquarters | 0 | 0 | 0 |
| FPI | 0 | 0 | 0 |
| Total | 8 | 7 | 7 |
| Total number of work-related fatalities, companywide | 0 | 1 | 0 |

Total OSHA Recordables and MSHA Reportables

Total OSHA recordables and MSHA reportables are incidents that require lost time, restricted duty, prescription medication, involve broken bones or stitches, involve imbedded matter in the eye, or burns of a defined size and severity.

| (number of incidents) | 2018 | 2019 | 2020 |
|------------------------------|-------------|-------------|-------------|
| SEMO | 23 | 21 | 32 |
| Metals Division | 21 | 32 | 16 |
| Corporate Headquarters | 0 | 0 | 0 |
| FPI | 1 | 0 | 0 |
| Total | 45 | 53 | 48 |

Total Case Incident Rate (TCIR)

TCIR is the number of OSHA recordable and MSHA reportable incidents per 200,000 personnel hours worked. OSHA recordables and MSHA reportables are incidents that require lost time, restricted duty, prescription medication, involve broken bones or stitches, involve imbedded matter in the eye, or burns of a defined size and severity.

| (TCIR rate) | 2018 | 2019 | 2020 |
|------------------------|-------------|-------------|-------------|
| SEMO | 3.2 | 3.4 | 4.64 |
| Metals Division | 5.7 | 6.6 | 5.28 |
| Corporate Headquarters | 0.0 | 0.0 | 0.00 |
| FPI | 2.4 | 0.0 | 0.00 |
| Total Company | 3.8 | 4.8 | 3.31 |

- (1) The OSHA General Industry Lead Standard is written in units of μg of Pb/100g of whole blood. The conversion used is $1 \text{ ug}/100\text{g} = 1.05 \mu\text{g}/\text{dL}$.
- (2) 2019 data represents only mandated testing, due to a change in providers.
- (3) Glover is included in the Metals Division for blood-lead data only due to the nature of their work.
- (4) Employees at corporate headquarters are not required to be tested.
- (5) Due to an analytical testing issue at an outside lab, FPI blood-lead data is reported as of July 31, 2018. All other 2018 blood-lead data is representative of the full calendar year.

Workforce Training

404-1 (LA9) Average Hours of Training Per Employee (Calendar Year)

| (number of training hours) | 2018 | 2019 | 2020 |
|--|----------------------------|-------------------------------|----------------------------|
| Total number of training hours | 31,245 | 15,148 ⁽²⁾ | 15,914 |
| Total number of employees | 1,245 | 1,227 | 1,145 |
| Average number of training hours per employee | 25.09⁽¹⁾ | 12.35^(2, 3) | 13.90⁽²⁾ |

- (1) In 2018, leadership development training was conducted for all employees with direct reports, which accounts for increased hours. Additionally, an increase in new hires resulted in more new employee trainings.
- (2) Hours reported for 2019 and 2020 cover only environmental, health and safety training. Additional skills and leadership training, as well as new hire onboarding, took place, but were not recorded.
- (3) 2019 data has been corrected here.

Economic Impact

201-1 (EC1) Financial Highlights (Fiscal Year)

| (dollars in thousands) | 2018 | 2019 | 2020 |
|---|------------------------|-------------|------------------|
| Property Taxes | \$1,962 ⁽¹⁾ | \$6,799 | \$6,869 |
| Compensation | \$121,362 | \$120,632 | \$115,154 |
| Community Investment ⁽²⁾ | \$178 | \$164 | \$173 |
| Environmental Spending ⁽³⁾ | \$50,904 | \$42,656 | \$36,779 |
| Research and Development | \$2,533 | \$3,564 | \$4,494 |
| Royalties to Governments | \$9,303 | \$7,430 | \$6,819 |
| Capital Spending (excluding environmental capital expenditures) | \$46,908 | \$34,107 | \$14,783 |

(1) Lower property tax spending in 2018 is due to an appeal of taxes from 2011 through 2017.

(2) Community investment includes donations, scholarships and tuition reimbursement.

(3) Decrease in environmental spending is due to the completion of several remediation projects at historic properties.

Management Approaches

<https://doerun.com/sustainability/management-approaches/>

Read below to learn more about how we manage our social, environmental and economic commitments.

Social

Environmental

Economic

Social

Community Engagement

Doe Run operates with the consent of the community. We recognize the importance of their goodwill and the responsibility we have to operate safely, economically, soundly and in an environmentally sustainable manner. Our local communities expect us to be a fair and responsible community member that provides jobs at a fair rate, sources materials from local vendors where possible, supports community organizations, and includes the concerns of the community in our decision-making process.

When we developed our Sustainability Principles, it was important to us that we address being a good neighbor, specifically:

- We respect community values, priorities and interests in our business decisions.
- We provide enduring benefits that enhance our communities.
- We maximize the economic benefits we provide to our stakeholders.

Each of our operations has community engagement plans that guide community outreach, communication and support. We are able to provide both immediate and lasting benefits to the community by:

- Purchasing locally wherever possible.
- Providing supplier procurement programs that help local vendors operate more sustainably.
- Hiring locally where possible, and paying higher-than-average wages.
- Paying royalties to governments and private landholders, as well as our fair share of taxes.
- Supporting educational opportunities through STEM curriculum in area schools, tours, internships, summer jobs, doctoral candidate projects, and academic scholarships.
- Providing donations to local charities that improve the quality of life for people in our community.

We also aim to share information in a transparent and proactive manner. Although we are a privately held company, we choose to report annually on our social, economic and environmental performance in our Sustainability Report, so community members, customers, legislators and other stakeholders know how we are doing. We also regularly conduct community surveys to determine the interests, concerns and disposition toward our operations of those living nearest to our operations. In this way, we can adjust our community engagement and communications efforts to better meet the community's needs.

By sharing information openly, being an active member and supporter of the community, living in and near the communities in which we operate, and engaging in two-way dialogue, we believe we can support the sustainability of the local communities, and produce and deliver our products more efficiently.

Employment

The Doe Run Company's values – safety, integrity, collaboration, respect, stewardship and sustainability – affirm our organization's culture and commitment to sound and ethical business practices. This starts with how we treat our employees and employee candidates. Our goal is to attract and retain the best employees in order to help us achieve our goals, so it is important that we strive to respect and invest in our people and consider workforce and industry best practices.

Our approach to employment and workers follows the principles of equal employment opportunity and affirmative action in all employment policies and practices, including our recruiting, hiring, compensation, benefits, transfers, training, promotions, company-sponsored events, and other employment activities. We track and report on employment rates annually, as well as employee health and safety monthly to ensure we're meeting those principles.

An employee handbook outlines our business code of conduct, hiring practices, time and attendance policies, anti-harassment policies and procedures, compensation and pay practices, benefit and leave policies, and much more for employees. We provide helpful resources, such as the Your Voice 24-Hour Hotline to support all employees if they would like to report anything that might be illegal, unethical or a violation of company policy. We introduce all new employees to these materials during orientation, and regularly review them with employees when and if changes are made to a policy, or if a need is identified.

We support a culture of respect, continuous improvement and safety by identifying competencies that are aligned directly to our values and have built them into our talent management practices. We assess and review talent for our critical positions companywide on an annual basis, and offer tools for learning to plan for succession and prepare our workforce for future success. We recognize and respect that every employee has a voice and opinion that matters; diversity in experience, thought and idea is encouraged.

Building a culture that respects and invests in our people is a strategic priority, but it's increasingly important as the entire mining industry faces a growing demand for talent. Employment in the mining sector is expected to grow by more than 13% by 2029, according to the Bureau of Labor Statistics. How we attract, build and retain top talent will directly impact our long-term success as a company and an industry. That's why we aim to be viewed as an employer of choice by promoting a culture of safety and environmental compliance, teamwork and collaboration, fairness and consistency, oversight and standardization, communication, and advocacy.

Health and Safety

We depend on one another to operate safely and to protect each other, the community and the environment. Safety is our most foundational value and our employees, their families, local communities and the government want to know how we are meeting our safety goals.

Doe Run's approach to employee health and safety includes continual training and protective standards that meet or exceed industry and regulatory expectations. Training is critical to helping us keep our employees safe and is required to meet certain compliance and regulatory guidelines, as well as to cover essential work-related skills, techniques and knowledge. We ensure that our employees possess the right skills to help our business succeed, and conduct refreshers to address changes in guidelines, technology, processes, etc.

As a part of training, Doe Run also provides employee development opportunities, which are important to help employees perform their best, develop new skills and enable the company to thrive. We believe this approach fosters greater employee satisfaction, so that they stay with us, become great at what they do and help others become so, too.

We track our training hours for each employee, along with course titles and dates of completion. This data is collected by the training facilitator/subject matter expert, verified and entered into our training database. Supervisors are responsible for confirming that all employees receive required trainings, annual refreshers and/or continuing education, as needed. In 2020, employees participated in approximately 16,000 hours of environmental, health and safety training.

Doe Run also tracks and reports on key health and safety metrics on a monthly and annual basis to identify opportunities for improvement. We track our workforce's blood-lead levels (the trace amount of lead the body may absorb through exposure), accidents and incident rates. Monthly reports are shared all the way up through the executive level.

Our mining, milling and recycling activities have the potential for employees to be exposed to airborne lead particles. Doe Run employees are trained in proper lead handling and personal hygiene processes to reduce their exposure. Personal protective equipment, like respirators, are worn in areas of exposure, and employees who work in certain areas are required to wash thoroughly and change clothes and shoes before eating or going home each day.

Doe Run's standards for workforce exposure to lead are more stringent than government requirements, and monthly progress is measured to the microgram, one millionth of a gram. The lead industry voluntarily self-monitors and self-reports the number of employees tested with greater than 19 micrograms of lead per deciliter of whole blood ("µg/dL"). Doe Run reports this information in our Sustainability Report. In addition, on a monthly basis, we track and monitor internally those employees whose blood-lead levels are greater than 14 µg/dL. Doe Run counsels employees who cross a certain threshold to identify particular areas of exposure, and work on individualized plans to address those areas. Employees who exceed 30 µg/dL are temporarily reassigned to a job area with reduced exposure. By comparison, the adjusted OSHA standard for medical reassignment of an employee is 53 µg/dL.

Safety is a core value. We use a variety of mining and manufacturing tools to assist in identifying safety improvement opportunities, and we involve employees to develop solutions to address them. Some examples of routine safety steps employees take include daily work inspections of their

work areas to identify any potential hazards and reporting near misses – situations that could have resulted in an accident but did not – to help prevent potential injuries.

Doe Run has won the prestigious Sentinels of Safety mine safety award 28 times and has operations that have surpassed decades without a lost-time incident. We also have two award-winning mine rescue teams that undergo monthly training and compete in mine rescue competitions to keep skills sharp in case they need to aid employees during a real mine emergency. Safely returning our workers home to their families and loved ones at the end of each day is the ultimate goal of our safety and training programs.

Environmental

Emissions

One of the reasons we report on our environmental performance each year is to be transparent in our environmental impacts and to keep our neighbors and other stakeholders informed of our efforts to minimize the environmental impact of our operations.

Doe Run's mining, milling and recycling activities have the potential to result in releases to the air, water or land. Our releases are monitored and reported, as appropriate, to regulatory bodies, including the Missouri Department of Natural Resources and the United States Environmental Protection Agency.

We have a number of measures in place to minimize, treat or prevent releases in order to meet permitted levels. For example, water released from our property must meet limits established in facility-specific operating permits. Doe Run has eight water treatment plants, including five at its mines in the Viburnum Trend and one each at Resource Recycling, Herculaneum and Glover that treat and release water. Air emissions also must meet standards. Doe Run utilizes baghouses, scrubbers, ventilation systems and enclosures to manage these emissions. Our air emissions are regularly monitored and reported, including by air monitors designed to measure concentrations beyond our property line. The vast majority of our land releases are made up of tailings (ground-up rock that is the byproduct of milling and mining), which are stored in permitted areas of our property.

We also use an environmental management system that enables us to monitor air emissions and adjust our processes in real time to reduce our impact. To further monitor and improve in this area, we maintain International Organization for Standardization (ISO) environmental management certifications at all of our active facilities.

Energy

When we created our Sustainability Principles, we considered how Doe Run must be a steward of not only the minerals we extract, but also the energy we use in our operations. Energy consumption is one of our largest operating costs for both the mining and metals divisions. Doe Run is one of the largest electricity consumers in Missouri because electric motors run much of our operations, including conveyors, pumps, ventilation fans, rock crushers and hoisting equipment. Total energy consumption includes electricity, fuels (furnace coke, diesel, propane, gasoline), and explosives. Most of the energy consumed is derived from fossil fuels, which produce carbon emissions. Energy usage and costs are tracked and reported monthly for each of the operations. Historically, energy consumption has increased with expansion of the operations over time and is directly proportional to production trends.

To reduce carbon and other emissions, the mining division uses bio-diesel underground where practical. We continue to explore other ways to conserve energy and use cleaner energy options for the good of the environment, society and the bottom line.

We formed an energy team in 2016 with members from both the mining and metals divisions. The team was charged with evaluating energy efficiency and conservation opportunities. The team initiated several energy efficiency projects, including LED lighting replacements, installing variable-frequency drives on vent fan motors, and installing shut-off switches on pumps that do not need to run constantly. We also installed an electric underground hauling system to significantly reduce the use of diesel trucks above ground at one of our sites. As mines age, transportation efficiency over longer haul distances becomes even more important. Conserving energy, reducing costs and/or looking for alternative energy sources are critical to the future of our mines and the economic value they bring our stakeholders.

Members of that team are exploring new ways to improve energy efficiency and hope to have some exciting projects in 2021.

Materials

One of our Sustainability Principles is to “minimize the impact of our operations on the environment.” Understanding our product streams, as well as the amount of materials we are able to recycle through our process, helps us measure and manage the resources we consume.

Our stakeholders care about the environment and jobs, so effectively managing natural resources and providing value to the local community by sourcing locally are two examples of why this matters to our stakeholders. Another important topic for our industry is the reuse of materials to limit waste, which is why we report on 301-1 (EN2). We recycle an average of 8.5 million batteries per year, along with other lead-bearing materials, at our Resource Recycling facility. These materials are sourced from battery manufacturers and other business partners. The recovered materials are able to be reused again and again, as part of a circular economy.

We measure all materials we use so we can better evaluate things, like purchasing habits, material sourcing and product options. We continue to look for opportunities for improvement, such as sourcing more materials locally (which can reduce shipping impacts) and choosing alternative renewable materials where feasible.

Doe Run utilizes this data to inform our purchasing decisions, evaluate contracts and select vendors who share our vision for sustainability. By working together, we are able to improve efficiencies throughout our supply chain and source cost-effective materials. Preferences are put on materials that deliver value to the organization, support jobs in local communities and have as little environmental impact as is possible.

Water

Water is particularly important in Southeast Missouri, where many creeks, streams and river tributaries run near our operations. These waterways provide recreation for the community, and responsible use of these resources is important to us, as well as our neighbors.

We measure our water discharge data to track our progress in returning clean water to the environment. Approximately 59 million gallons of water come in contact with our operations every

day, naturally flowing through our mines, falling as rain on our property or used in our process. We pump water that comes from the mines and mills to large tailings storage facilities on our property, where lead, zinc and copper particles can settle out of the water. At some locations, we are able to pump mine water directly to our mills for use in the milling process first, then discharge the process water to the tailings storage facilities.

Five water treatment plants process water from mine tailings storage facilities and three water treatment plants cover our Herculaneum, Glover and Resource Recycling facilities. Our water treatment plants use a chemical technology, similar to municipal water treatment plants, to remove metals and impurities. We monitor the water to ensure it meets permit limits, then discharge it into local streams.

Since overhauling our water management approach with these high-tech facilities, Doe Run has been able to process and discharge water more efficiently and meet more stringent water quality standards. The water treatment plants have also increased our capacity to handle high surges of water in the event of heavy storms.

At Fabricated Products, Inc. – a wholly owned subsidiary of Doe Run – we rely on two retention basins to collect rainwater runoff at the lead fabrication plant in Casa Grande, Arizona. This reduces the load on the municipal storm water and sewer system.

Additionally, we keep the quality of water in mind when remediating historic mine sites. At some remediation sites, we have rerouted streams and created stormwater diversions to manage water quality. We also sometimes cap slag and chat piles, so wind and water erosion cannot carry these particles into nearby water sources.

Economic

Compliance

Our activities are subject to a wide range of laws and regulations governing worker health and safety, land use, environmental protections, and many other areas. Compliance in this regulatory environment is crucial to securing our license to operate and protecting our reputation.

Our commitment to conduct business in a manner that adheres to all applicable laws and regulations is stated in our Business Code of Conduct and supported by our policies and standards.

We also participate in key voluntary compliance and reporting programs to demonstrate our commitment to transparency and good governance. We hold International Organization for Standardization (ISO) certifications at 10 of our facilities to help us maintain environmental (ISO 14001) and product (ISO 9001) quality standards. These sites undergo third-party certification to ensure ISO standards are met. Our Environmental Management System (EMS) follows ISO standards to help Doe Run ensure that measures are properly implemented to meet environmental regulations. Within this program is the Environmental Task Management System (ETMS), which integrates our environmental tasks into a calendar system with reminders that allows us to track the completion of reoccurring tasks, such as sampling events. This system is critical to our ability to manage compliance efforts and meet ISO standards.

In addition to internal efforts to verify performance, regulators in each regulatory regime in which we operate closely monitor our activities. Sites are frequently inspected by state and federal government agencies that review our operational, health and safety, and environmental performance. Our mines in the U.S. are subject to regulation by the federal Mine Safety and Health Administration (MSHA). MSHA personnel conduct inspections on a regular basis.

Some of these inspections may result in alleged violations, which may result in citations and orders. These citations and orders may result in fines or penalties. We take these alleged violations seriously and work with the issuing agency to resolve any issues.

Financial Management

Doe Run generates financial value by mining and milling lead, copper, and zinc ore, producing concentrates, and recovering lead metal through the recycling of nearly 8.5 million lead batteries each year.

We engage in a rigorous planning process each year in which we allocate the resources generated by the business. During that process, we try to balance our investments in a way that is most fair to all of our stakeholders by reinvesting in our business and employees, protecting the environment, improving the local economy, and providing a return to our investors.

Doe Run takes this approach in order to appropriately allocate resources to each of our priorities, balancing the changing needs of each one. This will allow us to continue serving a valuable role in the community for years to come.

- We strive to ensure that we invest sufficiently in the community, through paying taxes and royalties, donating to local causes, and paying fair wages to employees.
- It is important that we continue to reinvest in our operations to ensure our long-term sustainability.
- We are also committed to the environment we live and operate in, and invest significant resources into monitoring, mitigating and improving our impact on the environment.

Doe Run follows rigorous procedures for its internal control systems. These procedures include conscientious design of systems, with a focus on segregation of duties wherever practicable, and proper documentation and annual testing of the operations of these systems. Doe Run also undergoes external audits by an independent accounting firm, which adheres to **Generally Accepted Auditing Standards (GAAS)** as established by the **American Institute of Certified Public Accountants**. Doe Run has written procedures and policies in place to ensure the accuracy and completeness of our financial records and the effectiveness of our internal control systems, particularly in such areas as accounting, purchasing, vendor receipts and customer transactions. In addition, the legal department reviews contracts for business risks and potential conflicts of interest. The decision to take these steps is consistent with our desire to conduct business ethically and responsibly.

Corporate Governance

<https://doerun.com/sustainability/corporate-governance/>

The Doe Run Resources Corporation, doing business as The Doe Run Company (Doe Run), is ultimately held by the private, New York-based **The Renco Group, Inc.**

As a global supplier of lead, copper, and zinc concentrates and lead metals and alloys, Doe Run is guided by a seven-member executive team.[1] The team consists of the president and chief executive officer; vice president – finance and HR, chief financial officer and treasurer; vice president – law and general counsel; vice president – sales and marketing; vice president – exploration, research and technical development; vice president – environmental affairs; and vice president and general manager, Metals Division. The executive team is 100% male and encompasses an age range of 46-65 years. The team is 86% Caucasian and includes one person of Hispanic heritage. Their compensation is determined using market-based data and standard industry practices.

These individuals are responsible for setting the business strategy and organizational structure of Doe Run, as well as the company's economic, social, and environmental policies, goals and performance. On a regular basis, they review each division's environmental, health and safety performance, as well as broader economic performance by division and for the company and its subsidiaries.

As a part of our annual profit planning process, the executive team sets company goals and identifies projects, including those that further implement sustainability in the company's operations. Company projects must align to company goals and have specific metrics. Company projects are reviewed continuously. Many of the projects are reported upon in the Sustainability Report, which is prepared by a team of employees across all divisions, as assigned by the executive team. The president and CEO; vice president – environmental affairs; vice president – law and general counsel; and vice president – finance and HR, CFO and treasurer review and approve Doe Run's Sustainability Report. Other executives and senior leaders may review sections pertaining to their areas of responsibility.

In addition, a Sustainability Governance Committee provides recommendations to the executive team related to sustainability matters. The Sustainability Governance Committee is led by the vice president – environmental affairs and includes employees from each of the company's divisions, as well as those representing environmental, health and safety and communications departments.

Policies, Procedures and Practices

Doe Run's board of directors expects management to keep pace with best practices in corporate governance. To accomplish this goal, Doe Run utilizes a stringent set of corporate governance policies, procedures and practices to ensure that the business is properly directed, administered and controlled. For example:

- Doe Run follows rigorous procedures for our internal control systems. These procedures include conscientious design of systems, with a focus on segregation of duties wherever

practicable, and proper documentation and annual testing of the operations of these systems. Doe Run also undergoes external audits, including testing of internal controls, by an independent accounting firm, which is required to adhere to **Generally Accepted Auditing Standards (GAAS)** as established by the **American Institute of Certified Public Accountants**. Doe Run has written procedures and policies in place to ensure the accuracy and completeness of our financial records and the effectiveness of our internal control systems, particularly in such areas as accounting, purchasing, vendor receipts and customer transactions. In addition, the legal department reviews contracts for business risks and potential conflicts of interest. The decision to take these steps is consistent with our desire to conduct business ethically and responsibly. Following this control framework also supports our efforts to maintain **International Organization for Standardization (ISO)** certifications at **several operating sites**, including the Herculaneum site, Resource Recycling facility and the Vancouver, Washington-based Fabricated Products Inc. site, which are all certified under the ISO 9001 Quality Management program. This certification verifies that strong, quality procedures are in place. Doe Run's Sweetwater Mine and Mill, Fletcher Mine and Mill, Brushy Creek Mine and Mill, Buick Mine and Mill, Casteel Mine, Mine 29, and Resource Recycling facility hold ISO 14001 certification, which focuses on environmental management. Specifics related to these certifications are included on our **website**.

- As a federal sub-contractor, Doe Run adheres to the requirements of the Office of Federal Contract Compliance Programs (OFCCP). In doing so, Doe Run develops annual affirmative action plans, which support the principles of equal employment opportunity and affirmative action in all of our vendor agreements, as well as employment policies and practices, including recruiting, hiring, compensation, benefits, transfers, training, promotions, social recreation programs, company-sponsored events, and in other terms and conditions of employment.
- Doe Run strives to maintain open communication with important audiences both inside and outside the company. As described within the Reporting Practice, Doe Run holds regular meetings with employees and engages in ongoing conversations with external stakeholders. We also periodically survey employees and community stakeholders. Through our corporate office, Doe Run provides our operating sites with guidance and education about community engagement. Sites then implement programs based on the specific needs of local communities. These programs include regular community outreach, facility tours, public meetings and ongoing dialogue with local communities. You can share feedback with the company through any of these forums, or by contacting **communityinfo@doerun.com**.
- We also provide our employees with a mechanism by which they can anonymously share issues or concerns via a hotline system managed by an outside third party. Once an employee makes a report, the third-party firm notifies human resources and legal department leadership. Timely investigations are conducted for all reports made to the hotline. Any necessary communication between the reporter and the company is handled through the third-party system, unless an employee elects otherwise, to handle resolving issues as discretely as possible.

Those interested in employment can begin learning about the company's expectations, values and sustainability policy from our website, recruitment ads, new-hire orientation and leadership development programs. In addition, the company's Standards of Business Conduct and Company Values, Vision, Mission and Business Strategy are reviewed formally during the onboarding process and throughout our leadership development programs. Prior to joining Doe Run, employees receive

the Doe Run Employee Handbook and Standards of Business Conduct to review, and have the opportunity to ask questions. Employees are required to sign an acknowledgment that they have received and reviewed these documents. Employees receive updated versions of the Employee Handbook and Standards of Business Conduct as revisions are made, and also can access these documents online.

Our core values are defined by the executive team and reinforced daily in conversations, business processes, as part of employee development, as well as throughout our internal and external communications.

We believe we can enhance the quality of life for our stakeholders through:

- **Safety:** Protecting one another.
- **Integrity:** Demonstrating transparency and honesty in all we say and do.
- **Collaboration:** Working together with employees, and external stakeholders, to realize shared goals.
- **Respect:** Recognizing that every employee has a voice and opinion that matters; diversity of experience, thought and ideas is encouraged.
- **Stewardship:** Conserving, managing and making the most of the natural resources in our care.
- **Sustainability:** Balancing social, environmental and economic considerations with a relentless focus on improving our processes.

To ensure that we stay current on corporate governance and corporate responsibility trends, we maintain memberships in several industry-related trade associations. These **associations** support and educate members about such issues as community engagement, environmental stewardship and sustainability. Company leaders hold executive committee and/or **board positions** in many of these organizations.

We believe that corporate governance is an evolving process. We are committed to continuous improvement in setting sustainability targets and in our reporting, so we can continue to operate responsibly and with integrity.

[1] As this 2020 report was being finalized, Doe Run made changes to the executive team by promoting some members and adding others. See the current executive team [here](#).

Reporting Practice

<https://doerun.com/sustainability/reporting-practice/>

Based on the Global Reporting Initiative (GRI) definition of materiality, The Doe Run Company (Doe Run) determines what information to include in its Sustainability Report based on a variety of methods, including quantitative and qualitative research, one-on-one conversations, community meetings, tours, online surveys, and special events. We include progress we have made on projects, processes or challenges that have significant economic, environmental and social impact (both positive and negative) on our company, our stakeholders and the industries that depend on lead-based products.

Doe Run initially adopted the GRI framework in 2009 as a response to research that indicated audiences wanted to know more about the company, its efforts to operate safely and its investments to limit its environmental impact. The executive team reviews and implements programs and processes to further implement sustainability in the company's operations. Each year, the executive team assigns individuals from the various divisions to collect data and prepare the company's Sustainability Report.

Doe Run continues to refine the topics we cover in our Sustainability Reports based on what our stakeholders consider material.

Over the past decade, we have periodically conducted quantitative and qualitative research within the Missouri communities in which we operate. The research identified the major issues facing citizens in the community during that time. Some of the most common responses we have heard over the years include the state of the local economy, the availability of good jobs, Doe Run's environmental responsibility, the safety of Doe Run operations, and the company's involvement in the community. Responses also showed concern about Doe Run's **tax appeal** in Reynolds and Iron Counties.

- Based on these insights and ongoing conversations with our stakeholders, Doe Run prioritized which aspects and data indicators are material both inside and outside the organization, and should be the focus of the 2020 report:
- Community involvement at all operations
- Employee health and safety at all operations
- Environmental capital investment and performance, which relates to all operations
- Remediation progress and land conservation
- Workforce data for all operations
- Direct economic impact from all operations and indirect economic impact from operations and supply chain

Identification and Selection of Stakeholders

Based on input and continued dialogue with our employees, communities, industry groups and regulatory bodies, we've determined our stakeholders consist of the following: community groups and leaders; property owners; neighboring residents; current and retired employees; local, state and federal government; business groups; nearby schools; and industry organizations.

Stakeholder Groups

Community Groups and Leaders

Key Interests and Concerns

Seek information related to local jobs, taxes and other support.

Engagement Methods

- Host an online survey available through our sustainability website each year.
- Conducted community surveys in 2017, 2014 and 2012.[1]
- Provide feedback mechanism via annual Sustainability Report.
- Maintain ongoing engagement through a number of community events (our typical public events did not take place in 2020 due to the COVID-19 pandemic).
- Maintain involvement in various community organizations, including Viburnum Economic Development Area Corporation, Viburnum Lions Club, Washington County Chamber of Commerce, Salem Chamber of Commerce, Sustaining Partners of Salem (The Community Resource Center), Reynolds County Rotary Club, Crawford County Relay for Life, Teen Challenge of St. Louis, Salem Civic Theatre Fund, the United Way of Greater St. Louis, local school district organizations, and community sports teams.
- Share company updates via news releases and annual Sustainability Report.
- Provide free tours annually during Old Miners' Days (canceled in 2020 due to the pandemic).

[1] The decline in phone landlines has made phone surveys no longer practical. We solicit feedback through online and in-person surveys to supplement other engagement methods.

Property Owners and Neighboring Residents

Key Interests and Concerns

Seek information related to the potential impact of Doe Run's operations on their land, such as environmental precautions, traffic, noise, etc. Also interested in employee safety.

Engagement Methods

- Conducted community surveys in 2017, 2014 and 2012.[1]
- Communicate directly with nearby residents if a situation arose.
- Share company updates via news releases, local newspaper and radio interviews, and annual Sustainability Report.
- Provide free tours annually during Old Miners' Days (canceled in 2020 due to the pandemic).

[1] The decline in phone landlines has made phone surveys no longer practical. We solicit feedback through online and in-person surveys to supplement other engagement methods.

Employees

Key Interests and Concerns

Seek information about business goals, operational performance, employee training, and health and safety.

Engagement Methods

- Conducted employee surveys in 2017, 2014 and 2012.
- Hold regular meetings with hourly employees.
- Hold regular employee meetings with managers.
- Established cascading process to share information with employees and to surface feedback from employees.
- Publish regular employee newsletter mailed to homes to share company updates.
- Gather informal information at annual company-sponsored events, including Old Miners' Days and Fall Rocks (canceled in 2020 due to the COVID-19 pandemic).

Local, State and Federal Government and Regulatory Agencies

Key Interests and Concerns

Both groups seek information about operational performance, specifically around environmental impact and health and safety. Local and state government is also deeply interested in the company's economic impact, including jobs and taxes.

Engagement Methods

- Hosted Doe Run Day at the Capitol to interact with legislators in Jefferson City, Missouri, in 2020, 2017 and 2015.
- Hosted a legislator tour of Doe Run operations in June 2019.
- Meet regularly with federal and state legislators to provide updates on company operations, environmental performance and future plans.
- Regularly invite elected and regulatory officials to tour operations.
- Post online annual Sustainability Reports with detailed data on environmental, health and safety performance.
- Meet regularly to address legacy issues and ongoing operations with Missouri Department of Natural Resources, EPA Region 7, U.S. Forest Service and Natural Resources Trustees.

Business Groups

Key Interests and Concerns

Seek information related to the company's economic impact in the area, including supplier partnerships.

Engagement Methods

- Maintain involvement with local business groups, including Viburnum Economic Development Area Corporation, Viburnum Lions Club, Washington County Chamber of Commerce, Salem Chamber of Commerce, and Associated Industries of Missouri.
- Share company updates via news releases and the annual Sustainability Report.

Nearby School Districts and Colleges

Key Interests and Concerns

Seek information related to funding that benefits schools. Also seek information to inform and educate students about mining and minerals, and training for students who want to enter the mining profession.

Engagement Methods

- Maintain ongoing partnerships with local colleges, such as the Missouri University of Science and Technology, Southwest Baptist College and Mineral Area College, including scholarships and/or donations toward key programs.
- Provide financial support for STEM-related education in **local schools**, including materials that encourage active learning, creative problem-solving and enhanced curriculum at area school districts and scholarships for students studying STEM fields.
- Offer minerals education programs at local school districts (canceled in 2020 due to the COVID-19 pandemic).
- Offer internships and job training.
- Engage in informal conversations with teachers and administrators through involvement in mineral education workshops, Career Days and other partnerships with schools.
- Share company updates via news releases and the annual Sustainability Report.

Industry Organizations

Key Interests and Concerns

Seek information and best practices related to economic, environmental and social performance.

Engagement Methods

- **Hold multiple board or executive committee positions** on industry trade associations.
- Assist industry organizations, and their educational campaigns, such as **Essential Energy Everyday**, with initiatives to further the industry.

Open communication with our internal and external stakeholders helps us share achievements and challenges. It also helps Doe Run understand what actions and information our stakeholders desire from us. We strive to maintain open communication with stakeholders both inside and outside the company. Our Sustainability Reports and our online survey are two channels for this communication.

To share feedback with Doe Run, contact communityinfo@doerun.com, and please consider answering a few questions via our [online survey](#).

GRI Index

<https://doerun.com/sustainability/gri-index/>

This report contains Standard Disclosures from the GRI Sustainability Reporting Guidelines. A list of the reported Standard Disclosures is listed below. All information is fully disclosed, unless otherwise indicated.

Organizational Profile

| | | |
|----------------|---|---|
| 102-1 (G4-3) | Name of the organization | The Doe Run Resources Corporation/DBA The Doe Run Company |
| 102-2 (G4-4) | Primary brands, products, and services | What We Do |
| 102-3 (G4-5) | Location of the organization's headquarters | St. Louis, Missouri, United States |
| 102-4 (G4-6) | Countries where the organization operates | United States |
| 102-5 (G4-7) | Nature of ownership and legal form | The Doe Run Resources Corporation is a corporation, which is an indirect subsidiary of The Renco Group, Inc. |
| 102-6 (G4-8) | Markets served | Primary customers served include battery manufacturers in the U.S.; concentrates are sold globally. What We Do |
| 102-7 (G4-9) | Scale of the reporting organization | What We Do Financial Highlights As a private company, net sales, net revenue and total capitalization is proprietary information and viewed as business confidential. |
| 102-8 (G4-10) | Total workforce by employment type, employment contract, and region, broken down by gender | Workforce Summary |
| 102-9 (G4-12) | Organization's supply chain | Doe Run partners with its local vendors to create a more sustainable supply chain and support local economic vitality where possible. Its supplier practices guided more than \$164 million in spending to Missouri-based suppliers in 2020, representing 43% of Doe Run's overall supplier spending. |
| 102-10 (G4-13) | Significant changes during the reporting period | 2020 Letter from the CEO |

| | | |
|----------------|---|--|
| 102-12 (G4-15) | Externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses | The Doe Run Company, through its membership with the International Lead Association, subscribes to the principles of the Shared Lead Action 21 Program . We aim for the safe production and use of lead now and in the future while safeguarding human health and limiting operational impact on the natural environment. In addition, many of Doe Run's operations have achieved and maintain ISO certifications to minimize our environmental impact. |
| 102-13 (G4-16) | Memberships of associations or organizations | The Doe Run Company participates on the boards and/or committee activities for a variety of industry organizations, including: International Lead Association International Zinc Association Battery Council International Consortium of Battery Innovation Society of Mining, Metallurgy and Exploration |

Strategy

| | | |
|---------------|--|---------------------------------|
| 102-14 (G4-1) | Statement from the most senior decision-maker of the organization | 2020 Letter from the CEO |
| 102-15 (G4-2) | Description of key impacts, risks and opportunities | 2020 Letter from the CEO |

Ethics and Integrity

| | | |
|----------------|---|--------------------|
| 102-16 (G4-56) | Organization's values, principles, standards and norms of behavior | Core Values |
|----------------|---|--------------------|

Governance

| | | |
|----------------|--|-----------------------------|
| 102-18 (G4-34) | Governance structure of the organization | Corporate Governance |
| 102-19 (G4-35) | Process for delegating authority to address economic, environmental and social topics | Corporate Governance |
| 102-20 (G4-36) | Position responsible for economic, environmental and social topics | Corporate Governance |

| | | |
|----------------|---|--|
| 102-22 (G4-38) | Composition of the company's highest governing body | Corporate Governance (Partially Disclosed) |
| 102-23 (G4-39) | Indicate whether the Chair of the highest governance body is also an executive officer | No |
| 102-26 (G4-42) | Report the highest governance body's and executives' roles in developing, approving and updating the organization's purpose, mission, strategies, policies and goals related to sustainability | Corporate Governance |
| 102-32 (G4-48) | Highest position that formally reviews and approves the sustainability report | President and CEO |

Stakeholder Engagement

| | | |
|----------------|---|---|
| 102-40 (G4-24) | List of stakeholder groups engaged by the organization | Reporting Practice |
| 102-41 (G4-11) | Percentage of total employees covered by collective bargaining agreements | Only 0.16% of employees are covered under collective bargaining agreements. |
| 102-42 (G4-25) | Basis for identification and selection of stakeholders with whom to engage | Reporting Practice |
| 102-43 (G4-26) | Approach to stakeholder engagement | Reporting Practice |
| 102-44 (G4-27) | Key topics and concerns that have been raised through stakeholder engagement | Reporting Practice |

Reporting Practice

| | | |
|----------------|--|---|
| 102-45 (G4-17) | Entities included in the organization's consolidated financial statements or equivalent documents | All Doe Run entities have been reported. What We Do |
| 102-46 (G4-18) | Process for defining report content | Reporting Practice |
| 102-47 (G4-19) | Material aspects identified for defining report content | Reporting Practice |

| | | |
|----------------|--|---|
| 102-48 (G4-22) | Restatements of information provided in previous reports, and the reasons for such | Total Water Discharge |
| 102-49 (G4-23) | Report significant changes from previous reporting periods in the Scope and Aspect Boundaries | None |
| 102-50 (G4-28) | Reporting period | 2020 Calendar (Fiscal year reporting is noted where appropriate) |
| 102-51 (G4-29) | Date of most recent previous report | Published in August 2020 |
| 102-52 (G4-30) | Reporting cycle | Annual |
| 102-53 (G4-31) | Contact point | corporateinfo@doerun.com |
| 102-54 (G4-32) | Reporting in accordance with GRI Standards | This report contains Standard Disclosures from the GRI Sustainability Reporting Guidelines. |
| 102-55 (G4-32) | GRI Content Index | The GRI content index is outlined on this page. |

Management Approach

| | | |
|-------------------------|--|------------------------------|
| 103-1 (G4-20 and G4-21) | Explanation of materials topics and their boundaries | Management Approaches |
| 103-2 | Explanation of how the organization manages each topic | Management Approaches |
| 103-3 | Explanation of how the organization evaluates the management approach | Management Approaches |

Economic

| | | |
|----------------|--|--|
| 201-1 (G4-EC1) | Direct economic value generated and distributed | Financial Highlights (Partially Disclosed) |
| 203-1 (G4-EC7) | Development and impact of infrastructure investments and services supported | Supporting Students in Southeast Missouri Remediation Progress |
| 204-1 (G4-EC9) | Proportion of spending on local suppliers at significant locations of operation | In 2020, Doe Run supported Missouri businesses by spending more than \$164 million with 678 Missouri vendors. This accounts for 43% of total company spending. |

Environmental

| | | |
|-----------------|--|---|
| 301-2 (G4-EN2) | Percentage of materials used that are recycled input materials | Environmental Performance |
| 302-1 (G4-EN3) | Energy consumption within the organization | Environmental Performance |
| 302-3 (G4-EN5) | Energy intensity | Environmental Performance |
| 305-1 (G4-EN15) | Direct greenhouse gas (GHG) emissions (Scope 1) | Environmental Performance |
| 305-2 (G4-EN16) | Energy indirect greenhouse gas (GHG) emissions (Scope 2) | Environmental Performance |
| 305-3 (G4-EN17) | Other indirect greenhouse gas (GHG) emissions (Scope 3) | Environmental Performance |
| 305-4 (G4-EN18) | Greenhouse gas (GHG) emissions intensity | Environmental Performance |
| 305-7 (G4-EN21) | NOx, SOx, and other significant air emissions | Environmental Performance |
| 306-1 (G4-EN22) | Total water discharge by quality and destination | Environmental Performance |
| 307-1 (G4-EN29) | Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations | Doe Run paid \$2,000 to settle allegations of non-compliance of environmental laws and regulations in 2020. |

Employment

| | | |
|----------------|---|--|
| 401-1 (G4-LA2) | New employee hires and employee turnover | Workforce Summary (Partially Disclosed) |
|----------------|---|--|

Occupational Health and Safety

| | | |
|----------------|---|--|
| 403-1 (G4-LA6) | Type and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and by gender | Health and Safety Performance (Partially Disclosed) |
|----------------|---|--|

Training and Education

| | | |
|----------------|--|--|
| 404-1 (G4-LA9) | Average hours of training per year per employee by gender and employee category | Workforce Summary (Partially Disclosed) |
|----------------|--|--|

Local Communities

| | | |
|----------------|---|---|
| 413-1 (G4-SO1) | Local community engagement, impact assessments, and development programs | All operations implement a localized community engagement plan. Supporting Students in Southeast Missouri |
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Socioeconomic Compliance

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|---------------------------|---|--|
| 419-1 (G4-SO8 and G4-PR9) | Non-compliance with laws and regulations in the social and economic area | In 2020, Doe Run paid \$62,090 in fines related to allegations of noncompliance with social laws and regulations. Doe Run paid no (\$0) significant fines for noncompliance concerning provision and use of products and services in 2020. (Partially disclosed) |
|---------------------------|---|--|

THE
DOE RUN
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