



THE DOE RUN COMPANY

2022

Sustainability
Report



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2022 Letter from the CEO

<https://doerun.com/media/news/2022-letter-from-the-ceo/>

Dear Stakeholders:

Welcome to The Doe Run Company's 14th annual Sustainability Report. Here, you will find information on how we balance our social, economic and environmental responsibilities while delivering a sustainable supply of select minerals, metals and services that meet the changing needs of a growing world population.

2022 marked my first year as both president and CEO of this nearly 160-year-old company. It was a challenging year stemming from a post-COVID-19 environment, including growing pressures from rising costs, supply chain challenges, workforce availability and volatility in commodity prices. Despite these challenges, we made significant capital investments in our operations in order to properly position the company for sustainable operations and growth. In addition, I have tasked our human resources department with ensuring that we provide more training and development opportunities for each of our employees.



**Doe Run president and CEO,
Matthew Wohl**

Putting Employees First

As a natural resources company, our most valuable resource is our people. One of our goals is to be a preferred employer. Overall, Doe Run already provides wages well above average in the communities in which we operate, as well as comprehensive health benefits, but we understand that an employee's experience at work is more than compensation and benefits. This past year, we surveyed our employees to understand what we are doing well and how we can help them feel more engaged. One of the biggest takeaways is that employees want to know more about all aspects of our business. So the Executive Team has been making frequent visits to locations and departments outside of their areas of responsibility in order to create opportunities for informal dialogue. I personally had the pleasure of visiting our operations over 50 times in 2022. The feedback has been positive, and we are looking forward to continuing these conversations.

We also worked to address employee informational needs by expanding employee communications, providing regular company-wide updates in monthly employee meetings, and building out our electronic communications opportunities. We intend to conduct follow-up surveys to measure the impact of these initiatives and identify other ways to support employees.

Employee skill development is another area of emphasis. One such example is our **Mobile Equipment Training (MET)** program. Today's new employees often have less experience with hands-on trades and equipment use compared with previous generations. In response, our safety

department developed the MET program, a more sophisticated training for new employees using heavy mobile equipment. This program graduated 72 employees in its inaugural year and has been expanded in 2023. Already, we are seeing a decline in equipment damage.

Keeping employees safe at work is our most basic tenet. Working safely is integral to our ability to deliver the metals and minerals our customers need. Employees completed 37,690 hours of total training in 2022, much of which covered health and safety topics. We are proud that our employees continue to meet notable safety milestones at several locations.

While we recognize these safety achievements, we know we must do better. In 2022, we tragically lost a valued coworker and friend in a fatality at one of our mines. We are redoubling safety education to prevent accidents like this in the future.

Government-Funded Opportunities for Advancement of Critical Minerals

Over the past several years, our federal government has taken steps to acknowledge and address the nation's growing dependence on foreign sources for critical minerals. In 2022, the U.S. Geological Survey (USGS) published the **"2022 Final List of Critical Minerals."** The list includes 50 mineral commodities as critical (an expansion from 35 in 2018). The U.S. is 100% reliant on net imports for 15 minerals, 12 of which are on the critical minerals list. China and Canada supplied the largest number of these nonfuel mineral commodities.

Many of these critical minerals are foundational to a carbon-neutral energy future, as they support electrification. These include antimony (83% imported), cobalt (76% imported), nickel (56% imported), tin (77% imported) and zinc (76% imported). Doe Run has access to these five critical minerals in our mineral resource or in the materials we recycle.

Although copper and lead are not identified as critical, they are essential to the electrification of the U.S. energy market. To meet global copper requirements, the National Mining Association estimates we will need to produce the same amount of copper in the next 25 years as humanity has produced in the last 5,000. The U.S. imports 41% of the domestic demand for copper. Lead demand in the U.S. is largely met through the recycling of lead batteries, yet lead imports are rising. In 2022, the U.S. imported 42% of the lead it used – the highest in several years. Surprisingly, the U.S. has no strategic stockpile for lead.

These aforementioned seven minerals, as well as non-metallic minerals, place Missouri in the top 10 states for total mineral value produced in the U.S. Armed with this information, the company spent untold hours with federal and state elected officials and regulators explaining how Doe Run can help the nation reduce its dependence on foreign minerals and metals through U.S. domestic resources. Many of these opportunities come from the advancement of technologies homegrown

from Doe Run's technology center or from our mineral holdings not currently under production. As money becomes available through federal and state programs, Doe Run's government relations team is submitting applications for funding these exciting projects. We are also working closely with Missouri University of Science and Technology on supporting their critical minerals research funding opportunities.

Market Outlook

Doe Run produces lead, copper and zinc concentrates, which are primarily sold on the international market. We also produce lead and lead alloys, which are sold domestically to battery manufacturers, the construction industry, the U.S. government (e.g., specialty nuclear cask pours produced by our subsidiary Fabricated Products, Inc.), defense contractors and others. Demand for lead, copper and zinc is largely tied to the energy sector, and in the case of lead, the battery industry. Lead batteries are used in nearly every vehicle in the world and provide back-up power to data centers, cell towers, and financial and medical institutions.

In 2022, global refined lead consumption was 13.7 million metric tons.

What does the future hold for lead? In order to transition to renewable and non-carbon energy sources, battery energy storage is projected to grow dramatically. By 2030, the global battery market will reach 3 terawatt-hours (TWH) and \$440 billion, according to the **Consortium for Battery Innovation**. Driving this growth is not only vehicle electrification, but also wind and solar energy storage used to supplement the electric grid. Demand for battery power in these applications will continue to grow as battery power can help utilities level their load and decrease outages.

In order to reach zero carbon targets by 2050, the world will need a wide variety of available energy storage technologies. Compounding the competition for energy storage minerals is the fact that the green revolution is taking place across the globe at the same time. Unlike the relatively slow expansion of the industrial revolution, countries are actively competing to secure the minerals they require to expand their renewable energy infrastructure.

One thing is clear: it will take a variety of battery chemistries and other energy storage technologies to meet global carbon reduction goals. Lead batteries will no doubt capture a portion of this market, providing tremendous growth opportunities for the industry. Lead batteries are affordable, reliable, safe and sustainable. Their 99% recycle rate means over 3 billion pounds of lead batteries are recycled at 10 recycling centers across the U.S. every year.

According to **2021 research commissioned by Battery Council International**, the production and recycling of lead batteries in the U.S. provided a total domestic economic impact of \$32.9 billion, which was responsible for supporting nearly 121,000 domestic jobs and \$8.5 billion in labor income.

When deployed in hybrid vehicles with start-top technology, these lead batteries are helping to reduce greenhouse gas emissions by 6.7 million tons annually in the U.S. We are proud that Doe Run is a significant contributor to this industry and the energy-storage solutions it provides.

Preparing Our Business for the Future

Key to supporting lead's role in a more sustainable future is advancing the sustainability of our lead recycling process, such as advancing technologies that can recover valuable minerals from mining and smelting byproducts, as well as from mineral concentrates. Doe Run is working on proprietary technologies in both areas.

On the remediation front in 2022, Doe Run invested approximately \$2 million toward repurposing the Herculaneum smelter. Yard remediation continued in St. Francois County, with our Soil & Land Services subsidiary completing a record number of yards in 2022. Homeowners and community members praised the work, sharing feedback through comments and letters of support.

While we address these historical projects, we are also looking to the future of Missouri's lead industry. The Viburnum Trend is one of the world's largest lead mining districts, and it continues to produce. We have completed extensive exploration in the northwestern portion of the Viburnum Trend, as well as in the Higdon Mine portion of our land holdings, to further define deposits of cobalt, nickel and copper.

While there are certainly challenges operating a mining and metal recycling company today, we are optimistic knowing that the minerals and metals we supply are critical to fulfilling society's needs for essential products that help support a more sustainable world.

I hope you will review our Sustainability Report in full to learn more about Doe Run's progress, and I invite you to share any comments with me [via this survey](#). We value your feedback.

Sincerely,
Matthew D. Wohl

Share Your Feedback on Our Report.

Online Survey →

Maintaining the Forest for Future Generations

<https://doerun.com/media/news/maintaining-the-forest-for-future-generations/>



Doe Run owns 35,000 acres of beautiful forest lands that provide highly desired timber and shelter for native wildlife.

The Doe Run Company is committed to sustainably and responsibly caring for our 35,000 acres of private forested land.

Missouri has 15 million acres of forest. Approximately one third of the state is composed of woodlands, boasting an abundance of walnut, pine, white oak and red cedar trees. These forests provide scenic views and a habitat for native wildlife. **They also add almost \$10 billion annually to Missouri's economy** through the collection and processing of trees into wood products, generating employment for individuals statewide.

“Many people might be surprised to hear that cutting down trees improves the environment, but actually forests need to be thinned out at times so the remaining trees can have better access to sunlight and nutrients in the soil,” said Dave Patterson, Doe Run’s forestry management coordinator. “We are mindful of how to best clear trees while maintaining the amount of cover and availability of food sources for wildlife.”

Dave's love for the outdoors began at an early age while growing up in the Arkansas Ozarks. He spent his youth hunting and fishing, so it was only natural that he attended forestry school at University of Arkansas at Monticello. There, he studied dendrology, the scientific study of trees and their traits, and silviculture, the technique and science of forest management. That knowledge – along with his nearly 30 years of experience with Doe Run – guides his approach to caring for Doe Run's woodlands, primarily located north of Viburnum to south of Bunker in the heart of the Missouri Ozarks.

In order to manage 35,000 acres of forest effectively, Dave and his team first organized the property into 40-acre sections. They then divided those sections of land into smaller sections called stands. Each person on Dave's team is assigned a particular stand to evaluate. They inventory the trees in each stand, assessing factors like species type, diameter, height, condition, as well as the health of the overall stand, which helps them provide recommendations for the best approach for each stand.

Dave also manages tree populations based on the surrounding environment. Erosion is an issue in Southeast Missouri, so at Doe Run we use techniques such as single tree selection harvesting, which is a sustainable and effective forest management practice that reinforces conservation efforts used by the neighboring **L-A-D Foundation's Pioneer Forest**. This method of tree harvesting allows us to create a cutting cycle rotation of 15 to 20 years and the ability to adjust this cycle if necessary.

Replenishing harvested trees is important for a variety of creatures that call the forest home, from milkweed bugs to chickadees to black bears. We follow best practices to preserve the forest habitat for our local wildlife populations. Throughout his career at Doe Run, Dave estimates he and the Doe Run team have planted more than 500,000 trees and supervised the natural regrowth of thousands more.

“When we cut trees in certain areas, we must think about how it will affect the animal population by reducing the cover and food sources available. To compensate, we create food plots in areas where we removed many oak trees, which were a source of food for wildlife. This is meant to provide a supplementary food source for the animals.”

– Dave Patterson, Doe Run's forestry management coordinator

Supporting Missouri's Economy

When the time comes for trees to be cleared for the health of the forest, the harvested trees are used as timber. Doe Run follows a very prescribed procedure to identify those trees that need to be cut down (species that are over-mature and trees that are diseased or insect-infested). Once the timber is gathered, it is loaded onto trucks and delivered to mills, eventually becoming a variety of everyday products, like cabinetry, flooring, railroad ties, pallets, and wine and spirits barrels. In fact, Missouri's white oak trees are a highly sought-after commodity for barrel-making because they contain the natural chemical tylosis, which helps create an impermeable seal when made into barrels. It takes, on average, nearly 100 years for a white oak tree to grow large enough to make a barrel.

In nearby Salem, Missouri, the Independent Stave Company (ISC) has been producing barrels for over 100 years. Today, it is the largest barrel manufacturer in the world. ISC uses white oak from Doe Run's property, among others, to produce barrels for distillers and wine producers across the U.S. and in more than 40 other countries.

Upon the arrival of the timber, experienced loggers at ISC's mill meticulously inspect each tree to guarantee that only the finest grade is selected for use in the crafting of airtight barrels. After selection, the logs are sliced into boards. Next, the boards travel to ISC's cooperage in Lebanon, Missouri. Here, they undergo a steam bath, which initiates the formation process. It can take anywhere from one to two years until the barrels are suitable for containing bourbon, spirits and wine.

"In order to protect our future business and the future of our planet, we must keep collaborating with conscientious landowners who implement forest management, like Doe Run," said Chad Cook, log buyer and manager at ISC. "We have to do everything in our power to ensure that the next generation has enough healthy, mature trees to harvest, as well as to maintain the natural beauty of our region."



From barrels to beautiful furniture, sustainably sourced timber supports Missouri's economy and protects our precious forests.

Preparing a Former Industrial Site for New Purpose

<https://doerun.com/media/news/preparing-a-former-industrial-site-for-new-purpose/>



Doe Run's former smelter site along with its more than 2-miles of river frontage offer a strategic location for commercial business opportunities.

In the late 1700s, the bluffs along the Mississippi River were utilized for forming lead shot, and easy river access made Herculaneum, Missouri, a prime location for shipping lead shot down the Mississippi to supply markets in Europe. Lead production was expanded by Moses Austin from 1809 to 1821. After a period of inactivity, the St. Joseph Lead Company (Doe Run's predecessor) opened a smelter at the site in 1892.

In the century that followed, the plant became a global supplier of high-purity lead metal, bringing commerce, jobs and economic vitality to the region. Today, the former smelter site is being transformed to bring jobs in shipping, warehousing, distribution and manufacturing to this premium Midwest location.

“When we closed our Herculaneum smelter in 2013, we had already envisioned what this site could become, especially with its prime access to river, road and rail transportation,” said Chris Neaville, Doe Run’s business development director. “We introduced our early concepts for a port development as Riverview Commerce Park. In 2011, the Jefferson County Port Authority prepared a study outlining the vision for this site as a major intermodal port and transportation hub. Soon after, a first dock was established and then a second to ship sand and other materials. In 2022, we reached a milestone when the Jefferson County Port Authority was granted \$25 million by the Missouri legislature for the expansion of the Herculaneum Port.”



Chris Neaville, Doe Run’s business and asset development director, plays an essential role in unlocking the potential of this Herculaneum site.

This effort is foundational to the larger goal of securing Jefferson County’s position as a major transportation hub and obtaining further funding to leverage the assets of this site for future commerce.

This cooperative effort between public and private sectors has the potential to create 2,706 permanent jobs and 9,919 construction-related jobs in Jefferson County.¹

A Unique Site

Doe Run’s 500 contiguous acres with more than two miles of river frontage are foundational to what has potential to become a larger Jefferson County mega site of over 2,100 contiguous acres. The Herculaneum site’s size and proximity to Interstate 55 and its connection access to two class-A rail systems and the Mississippi River waterfront make it an ideal hub for shipping, manufacturing and distribution. An existing proposed master plan outlines the infrastructure improvements required for a state-of-the-art intermodal rail and river terminal complex. The proposed expanded port could serve businesses in neighboring Missouri counties of St. Louis, Ste. Genevieve, St. Francois, Washington, Franklin, Perry, Cape Girardeau, Scott, Mississippi, St. Charles, Warren and Lincoln.

“This site offers shippers the ability to circumvent ports on the east and west coasts, which have experienced tremendous backlogs in recent years. From there, products can be moved by rail or highway, or continue on water.”

– Jim McNichols, executive director at the Jefferson County Port Authority

Preparing the Site for Economic Growth

Upon the closure of the Herculaneum primary smelter, Doe Run submitted site-closure and redevelopment plans to the U.S. Environmental Protection Agency and Missouri Department of Natural Resources. Over the past 20 years, we have invested \$60 million in removal, cleanup and property acquisition to prepare the site for redevelopment. In 2022 alone, Doe Run invested approximately \$2 million in site improvements, including:

- Relocated refinery operations to our secondary smelter in Boss, Missouri.
- Removed the refinery building, baghouses and concrete foundations.
- Commenced excavation and relocation of 220,000 tons of slag on the north portion of the property to the permitted slag storage on the south portion of the property. The slag is a byproduct of the smelting process left over from pre-1950 operations, and it can contain valuable metals, including critical minerals, such as cobalt and nickel, that may be reprocessed for metal recovery. Relocating it to one place will provide ease of access to the material in the future.
- Completed design and initiated permitting process for a portable water treatment plant to treat surface and rainwater on-site.

Neaville added, “Identifying a location like Herculaneum with the physical assets of river, rail and highway access, and that already has utilities and zoning in place for development, is practically unheard-of today.”

¹ *Jefferson County Ports Phase II Master Plan, March 2011, page 82*

Heavy Equipment Training Above and Below Ground

<https://doerun.com/media/news/heavy-equipment-training-above-and-below-ground/>



Doe Run's Mobile Equipment Training (MET) program instructors train new employees on heavy equipment used above and below ground.

Like the rest of the mining industry, Doe Run's workforce demographics are changing. Today's new employees often have less experience with hands-on trades and equipment use compared with previous generations. By improving upon the sophistication of our training programs, we are introducing new employees to the technical skills needed for a successful career at Doe Run.

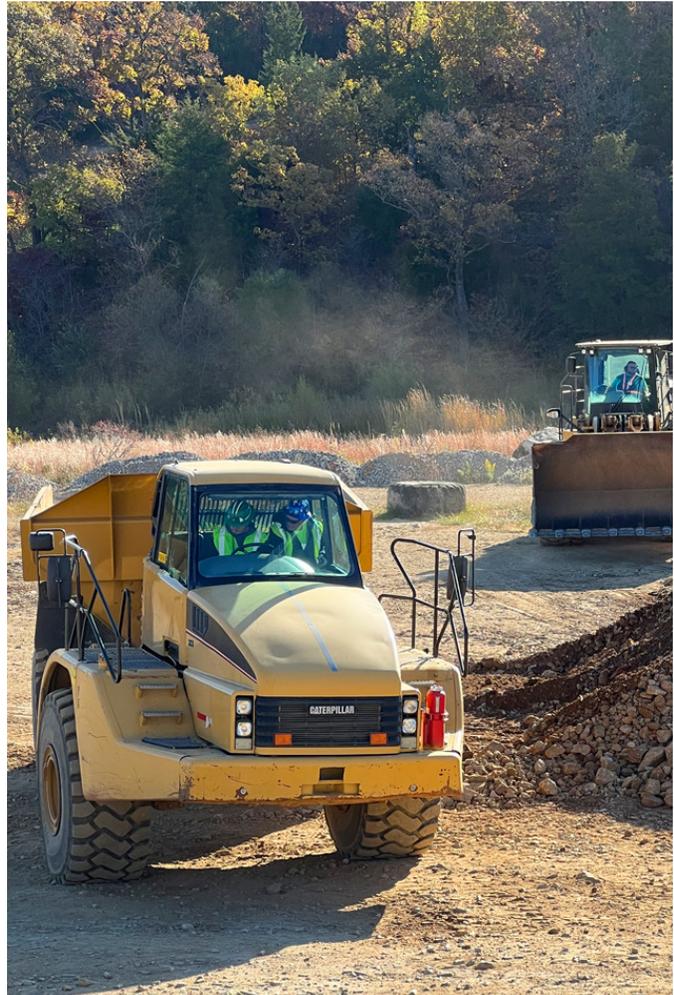
One of these training initiatives is the Mobile Equipment Training (MET) program, in which experienced equipment operators train employees on the heavy equipment used both above and below ground.

“A part of our safety culture includes documenting near-misses and incidents that may not result in injury but could involve equipment damage,” said Kevin James, environmental health and safety manager at Doe Run. “These insights helped us design a training program to give employees thorough instruction and practice operating equipment appropriately.”

Safety specialists from each mine and mill location gathered their equipment incident reports and the data was thoroughly analyzed to determine the type of equipment involved, the location and operator’s level of experience. The resulting stats were organized by location and equipment type. Using this data, the Doe Run safety specialists worked over a two-month period to create the MET program. Each step of the way, the safety specialists coordinated with operations and maintenance teams at the mine sites to make sure the curriculum was on target.

Prior to any hands-on training, students are instructed on the fundamentals of operating the equipment through classroom training. Instructors cover basic components of the equipment, its capabilities, operating techniques and the steps in conducting a pre-shift inspection of the equipment. Upon completion of the classroom session, each employee takes a written test over the material.

Once the employee passes their written exam, they move on to the hands-on portion of training. Employees learn how to inspect, maintain and troubleshoot a haul truck and loader from experienced maintenance personnel.



The MET program includes navigating on obstacle courses designed to mimic the challenges equipment operators may encounter underground.

After a full day of maintenance and familiarization, the employees are introduced to the obstacle course. The obstacle course simulates what drivers would encounter below ground in the mines. Old heavy equipment tires are used to mimic mine walls and create even more constrained spaces than drivers will experience once underground. Instructors have also built mock “headings” (the face of the mine where new ore will be recovered) to simulate areas in which drivers must maneuver their truck and loader. Other course elements include a simulated three-tiered haul road complete with varying slopes and inclines, tight turns, and wet areas.

Once drivers have successfully completed the above-ground training, they move underground in an area without active mining. Here, they master the challenge of driving in the dark and learning the importance of headlights to not only navigate but also to communicate with other drivers. They also perform daily pre-shift inspections of equipment, including tire pressure, brakes and engine oil level, under the supervision of instructors.

Driving the front-end loader underground is the most challenging of the hands-on lessons, as it involves constant multitasking by the driver. This includes:

1. Filling the loading bucket with up to 30,000 pounds of ore without spinning the tires.
2. Turning the loader to orient it in line with the haul truck.
3. Keeping the loading bucket high enough to clear the side of the haul truck when dumping the ore into the back of the truck.
4. Safely backing the loader from the truck when loading is complete.
5. Keeping the work area free of debris.
6. Being efficient with maneuvering loads.

During the training, students spent 10 hours a day for 10 days learning to safely operate equipment. The training is followed by task training and ride-alongs at the employees’ assigned mine. Since its launch in April 2022, 118 new employees have been trained in the MET program.

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)	2020	2021	2022
Slag	7,368	7,433	5,299
Batteries (mt of Pb)	87,466	83,706	78,962
Lead-Bearing Material (mt of Pb)	38,867	31,103	36,519
Iron-Containing Material	11,589	11,991	12,263
Total Recycled Inputs⁽¹⁾	145,290	134,233	133,043

(1) Materials used vary annually with market demand and plant operating conditions.

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

Units and Substances Key

Gigajoule(s): GJ

Direct Non-Renewable Energy Source	2020	2021	2022
Coke	560,110	540,977	419,493
Explosives	30,499	28,832	27,723
Natural Gas	130,942	65,210 ⁽¹⁾	9,928 ⁽¹⁾
Petroleum Fuel	256,341	253,057	254,615
Propane	564,155	610,002	616,098 ⁽²⁾
Total Direct Energy Consumption⁽¹⁾	1,542,047	1,498,078	1,327,857

Indirect Non-Renewable Energy Source	2020	2021	2022
Electricity	1,538,055	1,518,487	1,495,295
Total Energy Use	3,080,102	3,016,565	2,823,152

(1) 2021 and 2022 drop in natural gas usage is due to the shutdown of the Herculaneum refinery.

(2) 2022 increase in propane usage from 2021 is due to colder weather.

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	2020	2021	2022
Southeast Missouri Mining and Milling Division (SEMO)	GJ/mt Ore milled	0.34	0.35	0.35
Metals Division ⁽¹⁾	GJ/mt Pb produced	12.1	10.7	11.4⁽¹⁾
Fabricated Products Inc. (FPI)	GJ/mt Pb produced	1.1	1.1	1.1

(1) Metals Division included the Herculaneum Facility in 2020 and 2021. Herculaneum ceased refining and metal production in mid-2021.

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

Units and Substances Key

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

	2020	2021	2022
Scope 1 (direct emissions of Greenhouse Gases, Carbon Disclosure Project, e.g., direct combustion of fuels)	109,775	117,374 ⁽¹⁾	104,810⁽²⁾

(1) Due to a conversion error, coke was underreported in 2021. Corrected value reported above.

(2) Coke consumption decreased from 2021 to 2022 due to reduced operation of the blast furnace.

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

Units and Substances Key

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

	2020	2021	2022
Scope 2 (emissions from direct purchase of energy, e.g., electricity)	349,287	344,106	342,644

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

Units and Substances Key

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

	2020	2021	2022
Scope 3 (indirect emissions from transportation and employees' commute, etc.)	24,948 ⁽¹⁾	26,359 ⁽¹⁾	24,935

(1) Due to a conversion factor error, commuter data was underreported in 2020 and 2021. Corrected values are reported above.

305-4 (EN18) Greenhouse Gas Emission Intensity

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	2020	2021	2022
Southeast Missouri Mining and Milling Division (SEMO)	mt CO ₂ e/mt Ore milled	0.06	0.06	0.06
Metals Division	mt CO ₂ e /mt Pb produced	0.8	1.3 ⁽¹⁾	1.2
Fabricated Products Inc. (FPI)	mt CO ₂ e /mt Pb produced	0.13	0.16	0.15

(1) Due to a conversion error, coke was underreported in 2021. Corrected value reported above.

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

Units and Substances Key

Metric Ton(s): mt

Source (mt by type and weight)	2020	2021	2022
Ammonia (NH ₃)	0.05	0.04	0.00
Antimony (Sb)	0.00	0.00	0.00
Arsenic (As)	0.32	0.32	0.27
Cadmium (Cd)	0.04	0.03	0.03
Carbon Monoxide (CO)	16,348.00	13,884.28	19,245.52⁽¹⁾
Copper (Cu)	0.19	0.18	0.17
Hazardous Air Pollutants (HAP)	0.75	0.74	0.82
Lead (Pb)	4.45	3.21	3.26
Nickel (Ni)	0.03	0.03	0.01
Nitrogen Oxides (NO _x)	35.42	36.97	29.30
Particulate Matter (PM)	194.82	191.06	151.28
Sulfur Dioxide (SO ₂)	2,388.33	2,373.25	2,024.54
Sulfuric Acid (H ₂ SO ₄)	0.55	0.55	0.29
Volatile Organic Compounds (VOC)	9.19	8.82	9.12
Zinc (Zn)	0.59	0.55	0.65
Total	18,982.73	16,500.03	21,465.26

(1) Year-to-year carbon monoxide emissions are typical based upon blast furnace operations.

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

Units and Substances Key

parts per billion: ppb

Source (average ppb)	2020	2021	2022
Lead	5	6	4
Zinc	168	141	188
Copper	2	2	1
Total water discharge (million gallons/year)	21,373	22,107	22,708

Environmental Spending

EN31 Total Fiscal Environmental Spending

	2020	2021	2022
Total Capital Spending and Operating Expense	\$33,345,224	\$45,245,647	\$42,969,473
Remediation Spending ⁽¹⁾			
Historic Properties	\$1,838,434	\$3,594,810	\$6,139,667
Operating Properties	\$1,595,273	\$1,727,752	\$5,802,410
Total Remediation Spending	\$3,433,707	\$5,322,562	\$11,942,077
Total Fiscal Environmental Spending, Including Remediation	\$36,778,931	\$50,568,209	\$54,911,550

(1) Remediation spending fluctuates based on completed work each year.

Workforce Summary

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

(number of employees) ⁽¹⁾	2020	2021	2022
Southeast Missouri Mining and Milling Division (SEMO)	675	689	698
Metals Division (Resource Recycling, Herculanenum)	312	321	311
Corporate and Other Non-Operations Employees	123	171 ⁽²⁾	180 ⁽²⁾
Fabricated Products Inc. (FPI)	35	33	39
Total Number of Employees⁽¹⁾	1,145	1,214	1,228

Male and Female Employees by Division (Calendar Year)

(number of employees)	2020		2021		2022	
	Male	Female	Male	Female	Male	Female
SEMO	621	54	637	52	637	61
Metals Division	288	24	293	28	283	28
Corporate and Other Non-Operations Employees	88	35	120	51	129	51
FPI	32	3	30	3	36	3
Total Number of Employees⁽¹⁾	1,029	116	1,080	134	1,085	143

Number of Employees by Employment Type (Calendar Year)

(number of positions)	2020	2021	2022
Permanent Hourly Positions	815	839	853
Permanent Salary Positions	327	366	366
Temporary Positions	2	8 ⁽³⁾	9
Contracted Positions	1	1	1
Total Number of Employees⁽¹⁾	1,145	1,214	1,228

Male and Female Employees by Employment Type (Calendar Year)

(number of employees)	2020		2021		2022	
	Male	Female	Male	Female	Male	Female
Permanent Hourly Positions	795	20	818	21	827	26
Permanent Salary Positions	231	96	255	111	252	114
Temporary Positions	2	0	6	2	5	3
Contracted Positions	1	0	1	0	1	0
Total Number of Employees⁽¹⁾	1,029	116	1,080	134	1,085	143

(1) Employee counts for G4-10 include all categories of employees as of the end of the calendar year.

(2) Increase represents additional remediation staff, employees reassigned to corporate and expanding internships in Exploration department. After closing Herculanenum in 2021, any remaining employees are also counted here as part of the remediation staff.

(3) Increase represents expanding internships in Exploration department.

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.

	2020		2021		2022	
	Number	Rate	Number	Rate	Number	Rate
Male	113	91.1%	242	84.6%	248	87.3%
Female	11	8.9%	44	15.4%	36	12.7%
Total Number of Employees	124⁽²⁾		286		284	

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

(2) 2020 new employee hires were reduced due to overall staffing reduction.

Employees Leaving by Gender (Calendar Year)

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

	2020		2021		2022	
	Number	Rate	Number	Rate	Number	Rate
Male	151	83.4%	206	88.4%	239	88.8%
Female	30	16.6%	27	11.6%	30	11.2%
Total Number of Employees	181		233		269	

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

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.

	2020		2021		2022	
	Number	Rate	Number	Rate	Number	Rate
30 or younger	70	56.4%	138	48.2%	136	47.9%
31 to 40	30	24.2%	68	23.8%	74	26.1%
41 to 50	13	10.5%	46	16.1%	45	15.8%
51 and above	11	8.9%	34	11.9%	29	10.2%
Total Number of Employees	124⁽²⁾		286		284	

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

(2) 2020 new employee were reduced due to overall staffing reduction.

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.

	2020		2021		2022	
	Number	Rate	Number	Rate	Number	Rate
30 or younger	45	24.9%	68	29.2%	101	37.5%
31 to 40	37	20.4%	54	23.2%	62	23.1%
41 to 50	19	10.5%	30	12.9%	50	18.6%
51 and above	80	44.2%	81	34.7%	56	20.8%
Total Number of Employees	181		233		269	

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

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 has reduced its medical reassignment maximum limit to 25µg/dL. If any Doe Run employee has a blood-lead level that reaches 25 µg/dL, they are temporarily reassigned to duties with lower exposures to lead.

(in µg/dL)	2020	2021	2022
Southeast Missouri Mining and Milling Division (SEMO)	6.68	6.13	6.68
Metals Division	10.46	10.58	11.35
Corporate and Other Non-Operations Employees	N/A ⁽²⁾	3.32	3.52
Fabricated Products Inc. (FPI)	5.60	6.10	5.90
Average⁽³⁾	8.53	7.29	7.64

Employee Blood-Lead Data

Doe Run monitors and reports the number of employees with a blood-lead level 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 25 µg/dL. If any Doe Run employee has a blood-lead level that reaches 25 µg/dL, they are temporarily reassigned to duties with lower exposures to lead.

(number of employees with blood-lead levels >19 µg/dL)	2020	2021	2022
SEMO	1	2	4
Metals Division	13	18	15
Corporate and Other Non-Operations Employees	N/A ⁽²⁾	0	0
FPI	0	0	0
Total	14	20	19

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)	2020	2021	2022
SEMO	5	5	1
Metals Division	2	4	3
Corporate and Other Non-Operations Employees	0	0	0
FPI	0	0	0
Total	7	9	4
Total number of work-related fatalities, companywide	0	0	1

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)	2020	2021	2022
SEMO	32	27	24
Metals Division	16	29	24
Corporate and Other Non-Operations Employees	0 ⁽²⁾	2	6
FPI	0	1	2
Total	48	59	56

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)	2020	2021	2022
SEMO	4.64	3.73	3.29
Metals Division	5.28	10.15	7.33
Corporate and Other Non-Operations Employees	0.00 ⁽²⁾	1.90	3.85
FPI	0.00	3.69	5.03
Total Company	3.31	5.24	4.47

- (1) The OSHA General Industry Lead Standard is written in units of μg of Pb/100g of whole blood. The conversion used is $1 \text{ ug}/100\text{g} = 1.05 \text{ }\mu\text{g}/\text{dL}$.
- (2) 2020 data reflects only employees working at corporate headquarters.
- (3) Average is calculated based on the number of employees who receive testing.

Workforce Training

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

Hours reported cover only environmental, health and safety training. Additional skills and leadership training, as well as new hire onboarding, took place, but were not recorded.

(number of training hours)	2020	2021	2022
Total number of training hours	15,914	15,343	37,690⁽¹⁾
Total number of employees	1,145	1,214 ⁽²⁾	1,228
Average number of training hours per employee	13.90	12.64⁽²⁾	30.69

- (1) Training hours increased due to a change in the annual training schedule, as well as additional safety training and education in mobile equipment and HAZWOPER, as well as new hire safety and environmental training.
- (2) The total number of employees was reported inconsistently in 2021. It has been updated with the correct employee total and average number of training hours per employee.

Economic Impact

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

(dollars in thousands)	2020	2021	2022
Property taxes	\$6,869	\$6,675	\$6,635
Compensation	\$115,154	\$115,027	\$120,107
Community investment ⁽¹⁾	\$173	\$155	\$111
Environmental spending	\$36,779	\$50,568	\$54,912
Research and development	\$4,494	\$3,562	\$5,548
Royalties to governments	\$6,819	\$9,110	\$9,933
Capital spending (excluding environmental capital expenditures)	\$14,783	\$18,778	\$32,583

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

Management Approaches

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

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

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. We demonstrate this in part by providing higher-than-average local wages, sourcing materials from local vendors where possible, supporting community organizations, and including the concerns of the community in our decision-making process. When we honor our commitments, we build trust with our stakeholders, including those in the communities in which we operate.

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.
- Hiring locally where possible, and paying higher-than-average local wages overall.
- Paying royalties to governments and private landholders, as well as our fair share of taxes.
- Supporting educational opportunities through a STEM curriculum in area schools, tours when possible, 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 company 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. We do this by paying our employees overall higher-than-average local wages, offering tuition reimbursement opportunities and providing affordable health benefits. As the largest employer in the area, it is important to the local economy that we continue to provide quality jobs and remain a sustainable company that can employ the next generation.

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 (see Management Approach to Health and Safety), to ensure we are meeting those principles.

Our employee handbook outlines our business code of conduct, hiring practices, time and attendance policies, anti-harassment policies, compensation and pay practices, benefit and leave policies, and much more for employees. We provide helpful resources, such as the EthicsPoint 24-Hour Hotline, which allows employees to report anything that might be illegal or unethical, or violations 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 ideas is encouraged.

Building a culture of respect and investment in our people is a strategic priority, but it's increasingly important as the entire mining industry faces a growing demand for talent to replace retiring employees. How we attract, build and retain top talent will directly impact our long-term success as a company and an industry. That is why we aim to be viewed as a preferred employer 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. Because we operate in a heavy industrial environment, we have inherent safety risks. Safety is a foundational value. Our employees, their families, local communities and the government want to know how we are meeting our safety goals. We share updates internally on a monthly basis, report incidents according to regulatory requirements and share our annual results in this Sustainability Report.

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, build 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, as well as annual refreshers and/or continuing education as needed. In 2022, employees participated in more than 37,000 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 progress is measured to the microgram, or one millionth of a gram. The lead industry voluntarily self-monitors and self-reports on employees' blood-lead concentrations in micrograms of lead per deciliter of whole blood ($\mu\text{g}/\text{dL}$). 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 15-19 $\mu\text{g}/\text{dL}$ (mildly elevated) and employees whose levels are greater than 19 $\mu\text{g}/\text{dL}$ (moderately elevated). 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 whose levels exceed 25 $\mu\text{g}/\text{dL}$ are temporarily reassigned to a job area with reduced exposure. By comparison, the adjusted OSHA standard for medical reassignment of an employee is 53 $\mu\text{g}/\text{dL}$.

We use a variety of 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 pre-shift equipment inspections and daily 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 gone 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

We report on our environmental performance each year for the sake of transparency regarding potential environmental impacts and to inform our neighbors and other stakeholders about our efforts to minimize such impacts.

Doe Run's mining, milling and recycling activities involve permitted emissions into the environment, which is why we have robust management systems in place to mitigate any potential impact to the environment and maintain permit compliance. Such emissions 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 and prevent emissions in order to ensure a safe work environment and to meet regulatory requirements with respect to water, air, and soil quality. Water released from our property must meet limits established in facility-specific operating permits. Air emissions also must meet standards. Doe Run uses baghouses, scrubbers, ventilation systems and enclosures, among other methods, to manage these emissions. Our air emissions are regularly monitored and reported, and ambient conditions are evaluated by air monitors designed to measure concentrations on-site as well as beyond our property line. We also use a system that enables us to monitor air emissions continuously.

The vast majority of our emissions are caused by the discharge of tailings (ground-up rock that is the byproduct of milling and mining, from which we have effectively removed the minerals) to land in permanent permitted areas on our property.

To further monitor and improve in this area, we maintain International Organization for Standardization (ISO) environmental management certifications covering multiple facilities.

Energy

Our Sustainability Principles reflect that Doe Run is a steward of not only the minerals we extract, but also the energy we use in our operations. Energy consumption constitutes 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, grinding mills, hoisting equipment, air scrubbers, baghouses,

and water treatment. Total energy consumption includes electricity, fuels (i.e., furnace coke, diesel, propane, gasoline), and explosives. The electricity we use is purchased from our local utilities, which generates the majority of its electricity from fossil fuels. Energy usage and costs are tracked monthly for each of the operations.

Because fossil fuels produce carbon emissions, we continue to explore other ways to conserve energy and use cleaner energy options for the good of the environment, society and the health of the company. We have 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 continuously. We also installed an electric underground haulage 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.

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. By using recycled materials, we support a more circular economy and reduce overall waste to landfills.

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 steps we take to address those concerns. 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 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 can be reused again and again, as part of a circular economy. Additionally, active Doe Run facilities work to continuously improve processes to minimize waste generation through programs, such as recycling of cardboard and shrink wrap from raw material packaging.

We measure all materials we use so we can better evaluate purchasing habits, material sourcing and product options, among other material needs. 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 can improve efficiencies throughout our supply chain and responsibly 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 possible.

Water

In Southeast Missouri, 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 are dedicated to protecting water quality. We work to ensure that water emitted from our operations safely meets permit levels before being returned to the environment.

We measure our water discharge data to track our progress in returning clean water to the environment. Approximately 62 million gallons of water come into contact with our operations every day, naturally flowing through our mines, falling as rain on our property or used in our processes. We pump water that comes from the mines and mills to large tailings storage facilities on our property, where it is temporarily stored prior to treatment in site-specific water treatment 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 that of municipal water treatment plants, to sufficiently remove metals and impurities. We monitor the water to ensure it meets regulatory requirements administered by the State of Missouri, prior to discharging to local waterways.

Our water management approach with these high-tech facilities allows Doe Run to process and discharge water more efficiently and meet 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 – they 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 greatly improved water quality in streams and created stormwater diversions to manage water quality. We have also capped slag and chat piles, and have taken other measures to reduce wind and water erosion, to limit or prevent such materials from being carried 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 our business and our reputation. By operating a responsible business, we are able to continue to protect our shared environment, employ our people, support our local economy, and provide necessary minerals and metals to a global society.

Our commitment to conduct business in a manner that adheres to all applicable laws and regulations is stated in our Employee Handbook and Standards of Business Code of Conduct.

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 nine 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 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 facilities are subject to regulation by, among others, the federal Mine Safety and Health Administration, the Missouri Department of Natural Resources and the United States Environmental Protection Agency. These agencies conduct inspections on a regular basis.

Financial Management

Doe Run generates financial value by mining and milling lead, copper, and zinc ore; producing concentrates; manufacturing lead products; and recovering lead metal through the recycling of 8 million lead batteries each year. As a major employer in the region, our business has an impact on the community and local economy, as well as the local suppliers and nonprofits who rely on our partnership.

We engage in a rigorous annual planning process 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 our stakeholders by reinvesting in our business and employees, protecting the environment, and improving the local economy.

Doe Run takes this approach in order to appropriately allocate resources to each of our priorities, balancing the changing needs of each one.

- We strive to ensure that we invest sufficiently in the community, through 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 in which we live and operate, and invest significant resources into monitoring, mitigating and improving our impact on the environment.

Doe Run follows rigorous procedures for its internal control systems. Read more about these procedures in the **corporate governance** section of the report.

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 an eight-member executive team.¹ The team consists of the president and chief executive officer; executive vice president – finance, chief financial officer and treasurer; vice president of operations and chief operating officer; vice president – law and general counsel; vice president – sales and marketing; vice president – exploration and strategic planning; vice president – environmental, health and safety; and vice president – human resources. The executive team is 75% male and encompasses an age range of 39 to 65 years. The team is 100% Caucasian. Their compensation is determined using market-based data and standard industry practices.

The executive team members were selected for their roles based on their depth of experience and competencies relevant to our business, including mining, metallurgy, geology, engineering, environmental management, regulatory compliance, law, human resources and financial management. They lead these areas of the organization through a lens of sustainability, addressing relevant environmental, social and economic impacts.

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, and its goals and performance. The executive team regularly consults with stakeholders, including employees, customers, legislators, regulators and community members, to understand their needs and potential business impacts.

The executive team is actively involved in reviewing each division's production, workforce, environmental, health and safety performance, as well as broader economic performance by division and for the company and its subsidiaries. These topics are reviewed by the team at least weekly and often daily.

Executives receive base and variable compensation. Base compensation is based on years of experience, competitive market analysis and areas of responsibility. Variable or performance-based compensation is based on performance against established metrics that are set at the start of each fiscal year.

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 continually. Many of the projects are reported on in the Sustainability Report, which is prepared by a team of employees across all divisions, as assigned by the executive team. The full executive team reviews and approves Doe Run's Sustainability Report.

In addition, a Sustainability Governance Committee provides recommendations to the executive team related to sustainability matters. The Sustainability Governance Committee is chaired by the vice president – environmental, health and safety. The Committee includes other executive and senior leader-level employees from across the organization.

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, inventory, purchasing and sales transactions. In addition, the legal department reviews contracts for legal risks to the business, and our standard vendor setup packet identifies any personal relationships to Doe Run employees that could pose a conflict 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 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 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 subcontractor, 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 Process**, 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 and ongoing dialogue with local communities. Stakeholders can share concerns or feedback with the company through any of these forums or by contacting **communityinfo@doerun.com**.

When we receive community concerns, we investigate the source of the concern and take appropriate measures to address those concerns as promptly as possible.

- As part of its Employee Handbook, which covers company policies, procedures and practices, Doe Run also provides a Standards of Business Conduct. This handbook includes our ethics policy, practices to avoid and address conflicts of interest, and how to report suspicious activities, among other information. These policies are reviewed at onboarding, and employees acknowledge their receipt of the handbook on an annual basis.
- In addition to providing on-site HR support, 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 resolve issues as discreetly 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. Employees receive updated versions of the Employee Handbook and Standards of Business Conduct as revisions are made, and also can access these documents online.

Doe Run is committed to providing good-paying jobs in our communities. Our average wage is higher than the average wage in the Missouri counties in which we operate and those from which we draw the majority of our employees, as well as higher than the average Missouri wage overall. All salaried positions are typically reviewed for compensation over a three-year cycle for competitive purposes. Compensation equity is reviewed as a part of that analysis and also reviewed with promotions. Benefits are reviewed annually.

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 maintained relationships with several industry-related trade associations in 2022. 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 *Executive team composition as of June 1, 2023. See the current executive team [here](#).*

Reporting Practice

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

Taking into consideration 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, which may include 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, local education and health care access, Doe Run's environmental responsibility, the safety of Doe Run operations, and the company's involvement in the community. Responses also showed an interest in understanding Doe Run's tax appeals.

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 this 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 that in addition to our shareholder and employees, our stakeholders consist of the following: community groups and leaders; neighboring property owners and residents; retired employees; local, state and federal government; business groups; nearby schools; customers; 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.
- Provide feedback mechanism via annual Sustainability Report.
- Maintain ongoing engagement through a number of community events.
- Maintain involvement in various community organizations, including Viburnum Economic Development Area Corporation, Viburnum Lions Club, Salem Chamber of Commerce, Council for a Healthy Dent County, Reynolds County Rotary Club, local school district organizations and community sports teams.
- Support local nonprofits through donations, including Ellington Chamber of Commerce, Salem Area Community Betterment Association, Bunker Lions Club, Bunker Fire Department, Valley Lions Club, Disabled Citizens Alliance for Independence Food Pantry, Bunker Mission, Advantage Home Care, local churches and other organizations.
- Share company updates via news releases and annual Sustainability Report.
- Provide free tours annually during Old Miners Day in Viburnum, Mo., and community education at Fall Rocks event in Park Hills, Mo.

Neighboring Property Owners and 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

- Communicate directly with impacted residents if or when a situation arises.
- Share company updates via direct communication with community leaders, news releases, local newspaper and radio interviews, and annual Sustainability Report.
- Provide free tours annually during Old Miners Day.

Employees

Key Interests and Concerns

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

Engagement Methods

- Conduct employee surveys, most recently in 2022, 2017, 2014 and 2012.
- Hold monthly safety/communications meetings with hourly employees.
- Hold informal meetings between executives and employees outside of the departments they oversee to create opportunities for employees to ask questions.
- Hold regular employee meetings with managers.
- Establish cascading process to share information with employees and to surface feedback from employees.
- Publish and mail regular employee newsletter to share company updates.
- Gather informal information at annual company-sponsored events, including Old Miners' Day and Fall Rocks.
- Regularly post company updates to LinkedIn.
- Publish intranet articles and banners.
- Share frequent employee updates on monitors at Doe Run facilities where employees don't have regular computer access.

Local, State and Federal Government and Regulatory Agencies

Key Interests and Concerns

These 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

- Host Doe Run Day at the Capitol to interact with legislators in Jefferson City, Mo., most recently in 2020, 2017 and 2015.
- Regularly host legislators, policymakers and their staffs on tours of Doe Run operations.
- Host Environmental Protection Agency/Missouri Department of Natural Resources tours of Doe Run operations, most recently in May 2022 and July 2021.
- Meet regularly with federal and state legislators and regulators to provide updates on company operations, environmental performance and future plans.
- Regularly host community leaders, including local university administrators, professors and students, on tours of operations.

- Post online annual Sustainability Reports with detailed data on environmental, health and safety performance.
- Meet regularly with Missouri Department of Natural Resources, EPA Region 7, U.S. Forest Service, U.S. Fish and Wildlife, and Bureau of Land Management to address legacy issues and ongoing operations.

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, Salem Chamber of Commerce, and Associated Industries of Missouri.
- Share company updates via news releases, LinkedIn 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 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 curriculum and materials to local school districts.
- 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, LinkedIn and the annual Sustainability Report.
- 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.

Customers

Key Interests and Concerns

Seek information related to the quality of our products, customer service and business continuity.

Engagement Methods

- Maintain ongoing conversations between customers and sales, customer service, production and planning, and transportation personnel.
- Provide a quality and service response program.
- Engage with customers at conferences and tradeshow.
- Visit customer facilities.

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 with **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.

General Disclosures

2-1	Organizational details	The company operates in the United States and is headquartered in St. Louis, Missouri. The Doe Run Resources Corporation is a corporation, which is an indirect subsidiary of The Renco Group, Inc.
2-2	Entities included in the organization's sustainability reporting	All operations
2-3	Reporting period, frequency and contact point	Doe Run reports annually on a calendar year basis (fiscal year reporting is noted where appropriate). The previous report was published in July 2022. Any questions regarding reporting can be sent to Tammy Stankey, director of communications, at corporateinfo@doerun.com .
2-4	Restatements of information	All significant restatements of data and information provided in earlier reports are noted in the particular report section in footnotes.
2-5	External assurance	The report is not externally assured.
2-6	Activities, value chain and other business relationships	What We Do
2-7	Employees	Workforce Summary
2-8	Workers who are not employees	Workforce Summary
2-9	Governance structure	Corporate Governance
2-10	Nomination and selection of the highest governance body	Corporate Governance
2-11	Chair of the highest governance body	Corporate Governance
2-12	Role of the highest governance body in overseeing the management of impacts	Corporate Governance
2-13	Delegation of responsibility for managing impacts	Corporate Governance

2-14	Role of the highest governance body in sustainability reporting	Corporate Governance
2-15	Conflicts of interest	Corporate Governance
2-16	Communication of critical concerns	Corporate Governance Employment Management Approach
2-17	Collective knowledge of the highest governance body	Corporate Governance
2-18	Evaluation of the performance of the highest governance body	Corporate Governance
2-19	Remuneration policies	As a privately held company, Doe Run does not disclose this information.
2-20	Process to determine remuneration	As a privately held company, Doe Run does not disclose this information.
2-21	Annual total compensation ratio	Not reported
2-22	Statement on sustainable development strategy	Letter from the CEO
2-23	Policy commitments	Corporate Governance
2-24	Embedding policy commitments	Doe Run's Employee Handbook and provisions in contracts address the company's policy commitments.
2-25	Process to remediate negative impacts	Corporate Governance
2-26	Mechanisms for seeking advice and raising concerns	Corporate Governance
2-27	Compliance with laws and regulations	In 2022, Doe Run paid \$784,771 to settle allegations of non-compliance of environmental laws and regulations, stemming from a 2019 agreement with the Missouri Department of Natural Resources. Doe Run also paid \$92,389.67 in fines related to allegations of non-compliance of Mining Safety and Health Administration regulations in 2022.
2-28	Membership association	The Doe Run Company participated on the boards and/or committees for a variety of industry organizations in 2022, including: International Lead Association International Zinc Association Battery Council International Consortium of Battery Innovation Society of Mining, Metallurgy and Exploration
2-29	Approach to stakeholder engagement	Reporting Practice
2-30	Collective bargaining agreements	The company has no union employees.

Material Topics

3-1	Process to determine material topics	Reporting Practice
3-2	List of material topics	Reporting Practice
3-3	Management of material topics	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	Preparing a Former Industrial Site for New Purpose
204-1 (G4-EC9)	Proportion of spending on local suppliers at significant locations of operation	In 2022, Doe Run supported Missouri businesses by spending more than \$202 million with 643 Missouri vendors. This accounts for 40% 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

Employment

401-1 (G4-LA2)	New employee hires and employee turnover	Workforce Summary (Partially Disclosed)
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Occupational Health and Safety Management

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

404-1 (G4-LA9)	Average hours of training per year per employee	Workforce Training (Partially Disclosed)
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Local Communities

413-1 (G4-SO1)	Local community engagement, impact assessments, and development programs	All operations implement a localized community engagement plan.
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THE
DOE RUN
COMPANY

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