

The Doe Run Company • 2019 Sustainability Report

Performance Data

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.

(in µg/dL)	2017	2018	2019
Southeast Missouri Mining and Milling Division (SEMO), including remediation and demonstration plant	8.10	6.51	5.05 ⁽²⁾
Metals Division (Resource Recycling, Herculaneum, Glover) ⁽³⁾	13.35	10.12	10.34
Corporate Headquarters ⁽⁴⁾	N/A	N/A	N/A
Fabricated Products Inc. (FPI)	6.80 ⁽⁵⁾	7.40 ⁽⁵⁾	6.70
Average	9.64	7.63	7.36

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 ug/dL)	2017	2018	2019
SEMO, including remediation and demonstration plant	5 ⁽⁶⁾	4 ⁽⁶⁾	1 ⁽⁶⁾
Metals Division (Resource Recycling, Herculaneum, Glover) ⁽³⁾	26 ⁽⁶⁾	11 ⁽⁶⁾	10 ⁽⁶⁾
Corporate Headquarters ⁽⁴⁾	N/A	N/A	N/A
FPI	1	1 ⁽⁵⁾	1
Total	32⁽⁶⁾	16⁽⁶⁾	12⁽⁶⁾

Total Lost-Time Accidents

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.

(number of employees)	2017	2018	2019
SEMO (includes remediation and demonstration plant, and in 2017 and 2018 includes Glover)	3	3	4
Metals Division (Resource Recycling, Herculaneum, Glover 2019)	4	5	3
Corporate Headquarters	0	0	0
FPI	0	0	0
Total number of work-related fatalities, companywide	0	0	1
Total	7	8	7

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)	2017	2018	2019
SEMO (includes remediation and demonstration plant, and in 2017 and 2018 includes Glover)	21	23	21
Metals Division (Resource Recycling, Herculaneum, Glover 2019)	29	21	32
Corporate Headquarters	0	0	0
FPI	0	1	0
Total	50	45	53

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)	2017	2018	2019
SEMO (includes Glover 2017 and 2018)	3.0	3.2	3.4
Metals Division (Resource Recycling, Herculaneum, Glover in 2019)	11.3	5.7	6.6
Corporate Headquarters	0.0	0.0	0.0
FPI	0.0	2.4	0.0
Total Company	4.2	3.8	4.8

- (1) The OSHA General Industry Lead Standard is written in units of μg of Pb/100g of whole blood. Doe Run reports their blood lead values in μg of Pb/dL of whole blood, and all values in this report are presented as $\mu\text{g}/\text{dL}$. The conversion used is $1 \mu\text{g}/100\text{g} = 1.05 \mu\text{g}/\text{dL}$.
- (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.
- (6) Significant reductions in blood-lead levels >19 resulted from continued focus on employee hygiene and housekeeping procedures, and equipment changes at Resource Recycling and SEMO.

Workforce Summary

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

(number of employees) ⁽¹⁾	2017	2018	2019
Southeast Missouri Mining and Milling Division (SEMO)	705	727	724
Metals Division (Resource Recycling, Herculanum)	322	329	324
Corporate Headquarters	142	150	135
Fabricated Products Inc. (FPI)	40	39	38
Total Number of Employees⁽¹⁾	1,209	1,245	1,221

2019 Male and Female Employees by Division (Calendar Year)

(number of employees)	2017		2018		2019	
	Male	Female	Male	Female	Male	Female
SEMO	656	49	671	56	670	55
Metals Division	301	21	306	23	307	23
Corporate Headquarters	87	55	98	52	96	53
FPI	34	6	34	5	34	5
Total Number of Employees⁽²⁾	1,078	131	1,109	136	1,107	136

Number of Employees by Employment Type (Calendar Year)

(number of positions)	2017	2018	2019
Permanent Hourly Positions	854	871	850
Permanent Salary Positions	351	367	371
Temporary Positions	0	4	0
Contracted Positions	4	3	0
Total Number of Employees⁽¹⁾	1,209	1,245	1,221

2019 Male and Female Employees by Employment Type (Calendar Year)

(number of employees)	2017		2018		2019	
	Male	Female	Male	Female	Male	Female
Permanent Hourly Positions	832	22	850	21	848	21
Permanent Salary Positions	242	109	254	113	257	114
Temporary Positions	0	0	2	2	2	1
Contracted Positions	4	0	3	0	0	0
Total Number of Employees⁽²⁾	1,078	131	1,109	136	1,107	136

(1) Employee counts for G4-10 include all categories of employees as of January 1, 2020.

(2) Male and female employee counts are representative of all those employed full-time by Doe Run during 2019, and may not match the total number of employees at year-end.

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

Total number⁽¹⁾ and rate⁽²⁾ of new employee hires entering employment during the reporting period broken down by gender.

	2017		2018		2019	
	Number	Rate	Number	Rate	Number	Rate
Male	129	87.8%	159	89.8%	134	84.3%
Female	18	12.2%	18	10.2%	25	15.7%
Total Number of Employees	147⁽³⁾		177⁽³⁾		159⁽³⁾	

(1) Employee counts exclude hiring and termination of temporary employees. Historically, the majority of the hourly workforce has been drawn from the temporary pool of employees.

(2) The rate is calculated by dividing the hires by gender by the total number of hires.

(3) Increased hiring year-over-year reflects new hires primarily replacing those who retired or left voluntarily.

Employees Leaving by Gender (Calendar Year)

Total number⁽¹⁾ and rate⁽²⁾ of employees leaving employment during the reporting period broken down by gender.

	2017		2018		2019	
	Number	Rate	Number	Rate	Number	Rate
Male	109	90.8%	132	89.8%	145	86.8%
Female	11	9.2%	15	10.2%	22	13.2%
Total Number of Employees	120		147		167	

(1) Employee counts exclude hiring and termination of temporary employees. Historically, the majority of the hourly workforce has been drawn from the temporary pool of employees.

(2) The rate is calculated by dividing the terminations by gender by the total number of terminations.

New Employee Hires by Age Group (Calendar Year)

Total number⁽¹⁾ and rate⁽²⁾ of new employee hires entering employment during the reporting period broken down by age group.

	2017		2018		2019	
	Number	Rate	Number	Rate	Number	Rate
30 or younger	65	44.2%	85	48.0%	82	51.6%
31 to 40	45	30.6%	45	25.4%	43	27.0%
41 to 50	26	17.7%	29	16.4%	16	10.1%
51 and above	11	7.5%	18	10.2%	18	11.3%
Total Number of Employees	147⁽³⁾		177⁽³⁾		159⁽³⁾	

- (1) Employee counts exclude hiring and termination of temporary employees. Historically, the majority of the hourly workforce has been drawn from the temporary pool of employees.
- (2) The rate is calculated by dividing hires by age group by the total number of hires.
- (3) New hires primarily replaced those who retired or left voluntarily.

Employees Leaving by Age Group (Calendar Year)

Total number⁽¹⁾ and rate⁽²⁾ of employees leaving employment during the reporting period broken down by age group.

	2017		2018		2019	
	Number	Rate ⁽³⁾	Number	Rate ⁽³⁾	Number	Rate ⁽³⁾
30 or younger	18	15.0%	40	27.2%	35	21.0%
31 to 40	35	29.2%	34	23.1%	33	19.8%
41 to 50	20	16.7%	23	15.7%	33	19.8%
51 and above	47	39.2%	50	34.0%	66	39.5%
Total Number of Employees	120		147		167	

- (1) Employee counts exclude hiring and termination of temporary employees. Historically, the majority of the hourly workforce has been drawn from the temporary pool of employees.
- (2) The rate is calculated by dividing the terminations by age group by the total number of terminations.
- (3) Doe Run continues to strive to accurately measure its environmental, economic and social data. Due to rounding, some percentage totals may not always equal 100%, but are accurate.

Workforce Training

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

(number of training hours)	2017	2018	2019
Total number of training hours	16,146 ⁽¹⁾	31,245	15,148⁽³⁾
Total number of employees ⁽¹⁾	1,208	1,245	1,235
Average number of training hours per employee	13.36⁽¹⁾	25.09⁽²⁾	12.27

(1) Training hours for 2017 are a conservative estimate due to changes in the training hours recording system.

(2) 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.

(3) Hours reported for 2019 cover only environmental, health and safety training. Additional skills and leadership training, as well as new hire onboarding, took place, but were not recorded.

Environmental Performance

Indicator Key

Numbers within each green circle represent the quantifiable GRI indicators included in our Level C report. See the full GRI Index for details.

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

Units and Substances Key

Metric Ton(s): mt

Source (mt)	2017	2018	2019
Slag	12,317	3,467	120 ⁽¹⁾
Batteries (mt of Pb)	97,929	107,928	106,120
Lead-Bearing Material	44,422	44,731	43,136
Iron-Containing Material	6,643	14,028	17,569
Total Materials Used	161,311	170,154	166,935

(1) Decrease in 2019 is due to ceasing the use of primary slag.

Environmental Performance

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

Units and Substances Key

Gigajoule(s): GJ

Direct Non-Renewable Energy Source⁽¹⁾	2017	2018	2019
Coke	416,868 ⁽²⁾	483,741	534,908
Explosives	25,773	24,836	24,350
Natural Gas	197,148 ⁽²⁾	237,801	242,640
Petroleum Fuel	270,620	280,588	273,890
Propane	507,154 ⁽²⁾	614,485	590,101⁽³⁾
Total Direct Energy Consumption⁽¹⁾	1,417,563⁽²⁾	1,641,451	1,665,889
Indirect Non-Renewable Energy Source	2017	2018	2019
Electricity	1,417,864	1,447,947	1,512,100⁽⁴⁾
Total Energy Use	2,835,427⁽²⁾	3,089,398	3,177,989

(1) Annual variations reflect changes in production requirements year to year.

(2) Some 2017 data has been corrected here.

(3) Variances in production at Resource Recycling and a warmer winter resulted in decreased use of propane.

(4) Increased rainfall in 2019 resulted in increased electricity use at Doe Run's water treatment plants.

Environmental Performance

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

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

Division	Units	2017	2018	2019
Southeast Missouri Mining and Milling Division (SEMO)	GJ/mt Ore milled	0.3 ⁽²⁾	0.3	0.3
Metals Division (Resource Recycling and Herculaneum) ⁽¹⁾	GJ/mt Pb produced	6.7 ^(2,3)	8.5	9.3
Fabricated Products Inc. (FPI)	GJ/mt Pb produced	3.5 ^(2,3)	4.4	4.8

(1) Fluctuations in energy intensity relate to production parameters and the relationship between blast furnace and reverb furnace metal production.

(2) 2017 values were previously reported to two decimal places.

(3) Some 2017 data has been corrected here.

Environmental Performance

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

Units and Substances Key

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

	2017	2018	2019
Scope 1 (direct emissions of Greenhouse Gases, Carbon Disclosure Project, e.g., direct combustion of fuels)	104,816	115,896	124,430 ⁽¹⁾

(1) Increase is primarily due to higher consumption of coke at Resource Recycling.

Environmental Performance

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

Units and Substances Key

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

	2017	2018	2019
Scope 2 (emissions from direct purchase of energy, e.g., electricity)	319,052	330,370	356, 371⁽¹⁾

(1) Increased rainfall in 2019 resulted in increased electricity use at Doe Run's water treatment plants.

Environmental Performance

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

Units and Substances Key

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

	2017	2018	2019
Scope 3 (indirect emissions from transportation and employees' commute, etc.)	20,057	16,795	14,972⁽¹⁾

(1) Commuter mileage and business travel was reduced in 2019.

Environmental Performance

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

305-4 (EN18) Greenhouse Gas Emission Intensity

Division	Units	2017	2018	2019
Southeast Missouri Mining and Milling Division (SEMO)	mt CO ₂ e/mt Ore milled	0.05	0.05	0.06
Metals Division (Resource Recycling, Herculaneum)	mt CO ₂ e /mt Pb produced	0.77	0.80	0.70
Fabricated Products Inc. (FPI)	mt CO ₂ e /mt Pb produced	0.15	0.18 ⁽¹⁾	0.38⁽²⁾

(1) The reported value in 2018 was calculated using short tons and was underreported. The value has been corrected here.

(2) The increase is due to changes in product mix.

Environmental Performance

Units and Substances Key

Metric Ton(s): mt

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

Source (mt by type and weight)	2017	2018	2019
Ammonia (NH ₃)	0.12	0.12	0.05
Antimony (Sb)	0.00	0.00	0.00
Arsenic (As)	0.29	0.31	0.36
Cadmium (Cd)	0.19	0.20	0.21
Carbon Monoxide (CO) ⁽¹⁾	13,584.00	21,919.00	13,552.00
Copper (Cu)	0.22	0.18	0.21
Hazardous Air Pollutants (HAP)	0.94	0.89	0.89
Lead (Pb)	4.45	4.47	4.99
Nickel (Ni)	0.03	0.04	0.04
Nitrogen Oxides (NO _x) ⁽²⁾	40.00	55.00	42.96
Particulate Matter (PM)	151.00	206.00	189.00
Sulfur Dioxide (SO ₂) ⁽³⁾	2,374.00	2,130.00	2,590.00
Sulfuric Acid (H ₂ SO ₄) ⁽⁴⁾	1.82	0.74	0.65
Volatile Organic Compounds (VOC)	9.40	10.20	10.00
Zinc (Zn)	0.67	0.57	0.91
Total	16,167.00	24,328.00	16,392.27

- (1) A different measurement method was used to calculate carbon monoxide emissions in 2018, resulting in higher calculated emissions.
- (2) Annual nitrogen oxides variations reflect changes in production requirements year to year.
- (3) This figure fluctuates with production and with emission factor measurements. Both were up for a portion of 2019.
- (4) Decrease in sulfuric acid in 2018 and 2019 is due to an updated stack test emission factor.

Environmental Performance

Units and Substances Key

ppb: parts per billion

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

Source (average ppb/year) ⁽¹⁾	2017	2018	2019
Lead	25 ⁽²⁾	15	12
Zinc	230 ⁽²⁾	241 ⁽²⁾	302 ⁽³⁾
Copper	3	3	2
Total water discharge (million gallons/year)	18,304⁽²⁾	19,943⁽²⁾	27,857

(1) All data sources represented are reported in average ppb/year to be consistent with permit reporting requirements.

(2) 2017 and 2018 data have been corrected here.

(3) In 2019, fluctuation in zinc discharge is due to increased rainfall at historic properties, differences in treatment methods and historic materials metal content.

Environmental Spending

EN31 Total Fiscal Environmental Spending

	2017	2018	2019
Total Capital Spending and Operating Expense	48,248,765	39,422,485	36,972,565
Remediation Spending ⁽¹⁾			
Historic Properties	4,544,150	6,424,264	3,141,743⁽²⁾
Operating Properties	5,001,595	5,057,746	2,541,314⁽³⁾
Total Remediation Spending	9,545,745	11,482,010	5,683,057
Total Fiscal Environmental Spending, Including Remediation	57,794,509	50,904,495	42,655,622

(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.

Economic Impact

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

(dollars in thousands)	2017	2018	2019
Property Taxes	\$6,188	\$1,962 ⁽¹⁾	\$6,799
Compensation	\$127,361	\$121,362	\$120,632
Community Investment ⁽²⁾	\$182	\$178	\$164
Environmental Spending	\$57,795	\$50,904	\$42,656⁽³⁾
Research and Development	\$2,095	\$2,533	\$3,564
Royalties to Governments	\$9,236	\$9,303	\$7,430
Capital Spending (excluding environmental capital expenditures)	\$21,371	\$46,908 ⁽⁴⁾	\$34,107

- (1) Lower property tax spending in 2018 is due to overpaying taxes from 2011 through 2017.
- (2) Community investment includes donations, scholarships and tuition reimbursement.
- (3) Decrease in environmental spending in 2019 is due to the completion of several remediation projects at historic properties.
- (4) Higher investment in mine development and mobile equipment was made in 2018.