The Doe Run Company • 2017 Sustainability Report

Performance Data

THE DOE RUN COMPANY

Economic Impact

Indicator Key

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

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

(dollars in thousands)	2015	2016	2017
Property Taxes	$6,727	$6,818	**$6,188**
Compensation	$131,424	$114,005	**$127,361**
Community Investment[1]	$197	$211	**$182**
Environmental Spending	$60,981[2]	$70,482[2]	**$57,795[3]**
Research and Development	$1,564	$1,405	**$2,095**
Royalties to Governments	$10,108	$7,924	**$9,236**
Capital Spending (excluding environmental capital expenditures)	$12,350	$24,165	**$21,371**

(1) Includes donations, scholarships and tuition reimbursement.
(2) Environmental spending totals for 2015 and 2016 were updated from previous reports to include operating expenses not previously included and remove the double counting of some expenses between divisions.
(3) Decrease in environmental spending is due to the completion of several environmental projects at Southeast Missouri Mining and Milling Division and Metals Division.

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Environmental Performance

301-1 (EN1) Materials Consumed (Fiscal Year)

Units and Substances Key

Metric Ton(s): mt

Direct/Indirect Source (mt)	**2015**	**2016**	**2017**
Direct Materials Used	43,084	31,489	**34,117**
Indirect Materials Used	43,711	54,043	**48,850**
Total Materials Used	**86,795**	**85,532**	**82,967**
Renewable/Non-Renewable Source (mt)			
Renewable Materials Used	101	97	**84**
Non-Renewable Materials Used	86,528	85,435	**82,883**
Total Materials Used	**86,795**	**85,532**	**82,967**

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

Units and Substances Key

Metric Ton(s): mt

Source (mt)	**2015**	**2016**	**2017**
Slag	20,600	13,480	**12,317**
Batteries (mt of Pb)	97,582	86,091	**97,929**
Lead-Bearing Material	37,582	36,622	**44,422**
Iron-Containing Material	13,906	8,812	**6,643**
Total Materials Used	**169,670**[(1)]	**145,005**[(1)]	**161,311**[(1)]
Percentage of materials used that are recycled input materials	**66%**	**63%**	**65%**

(1) Overall fluctuation in materials recycled reflects the availability of materials.

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Environmental Performance

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

Units and Substances Key

Gigajoule(s): GJ

Direct Non-Renewable Energy Source	2015	2016	2017
Coke	472,232	529,612	**452,607**[1]
Explosives	28,275	24,486	**25,773**
Natural Gas	151,726	131,663	**110,580**
Petroleum Fuel	277,685	265,809	**270,620**
Propane	532,992	486,552	**506,716**
Total Direct Energy Consumption	**1,462,910**	**1,438,122**	**1,366,296**

Indirect Non-Renewable Energy Source	2015	2016	2017
Electricity	1,409,784	1,434,721	**1,417,864**
Total Energy Use	**2,953,694**	**2,872,843**	**2,782,034**

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

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	2015	2016	2017
Southeast Missouri Mining and Milling Division (SEMO)	GJ/mt Ore milled	0.28	0.35	**0.28**
Metals Division (Resource Recycling and Herculaneum)	GJ/mt Pb produced	9.00	10.40	**7.50**[1]
Fabricated Products Inc. (FPI)	GJ/mt Pb produced	1.20	1.40	**0.90**

(1) Reduction due to changes in the battery breaker process at Resource Recycling.

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Environmental Performance

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

Units and Substances Key

Metric Ton(s) of Carbon Dioxide Equivalent: mt CO_2e

	2015	2016	2017
Scope 1 (direct emissions of Greenhouse Gases, Carbon Disclosure Project, e.g., direct combustion of fuels)	154,411	144,778	**102,913**

(1) Overall reduction in 2016 is due to reduced fuel needs due to curtailed production and a warmer winter than usual.
(2) Reduction in 2017 is due to variable production requirements at Resource Recycling.

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

Units and Substances Key

Metric Ton(s) of Carbon Dioxide Equivalent: mt CO_2e

	2015	2016	2017
Scope 2 (emissions from direct purchase of energy, e.g., electricity)	289,612	293,131	**319,052[(1)]**

(1) Year over year totals do not show significant change when accounting for accepted methodology practices.

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

Units and Substances Key

Metric Ton(s) of Carbon Dioxide Equivalent: mt CO_2e

	2015	2016	2017
Scope 3 (indirect emissions from transportation and employees' commute, etc.)	11,275	13,197	**20,057[(1)]**

(1) Increase in 2017 is due to increased miles traveled by employees on company business expenses.

Environmental Performance

305-4 (EN18) Greenhouse Gas Emission Intensity

Units and Substances Key

Metric Ton(s): mt
Carbon Dioxide Equivalent: CO_2e
Ore: Ore milled at mining operations
Pb: Lead produced at alloying, casting, and secondary smelting and fabricating operations

Division	Units	2015	2016	2017
Southeast Missouri Mining and Milling Division (SEMO)	mt CO_2e/mt Ore milled	0.05	0.06	**0.05**
Metals Division (Resource Recycling, Herculaneum)	mt CO_2e /mt Pb produced	1.10	1.40	**0.80**(1)
Fabricated Products Inc. (FPI)	mt CO_2e /mt Pb produced	0.08	0.09	**0.08**

(1) Reduction in 2017 is due to variable production requirements at Resource Recycling.

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Environmental Performance

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

Units and Substances Key

Metric Ton(s): mt

Source (mt by type and weight)	**2015**	**2016**	**2017**
Ammonia (NH_3)	0.06	0.06	**0.12**
Antimony (Sb)	0.00	0.00	**0.00**
Arsenic (As)	0.25	0.26	**0.29**
Cadmium (Cd)	0.18	0.17	**0.19**
Carbon Monoxide (CO)(1)	11,406.00	15,497.00	**13,584.00**
Copper (Cu)	0.42	0.33	**0.22**
Hazardous Air Pollutants (HAP)	0.65	1.08	**0.94**
Lead (Pb)	5.70	5.10	**4.45**
Nickel (Ni)	0.03	0.03	**0.03**
Nitrogen Oxides (NO_X)	43.00	36.00	**40.00**
Particulate Matter (PM)	178.00	199.00	**151.00**
Sulfur Dioxide (SO_2)	25,39.00	2,199.00	**2,374.00**
Sulfuric Acid (H_2SO_4)	2.40	2.60	**1.82**
Volatile Organic Compounds (VOC)	9.40	8.00	**9.40**
Zinc (Zn)	1.20	0.85	**0.67**
Total	**14,187.00**	**17,950.00**	**16,167.00**

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

Environmental Performance

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

Units and Substances Key

Parts per billion: ppb

Source (average ppb/year)[1]	2015	2016	2017
Lead	132	56[2]	**25[2]**
Zinc	431	336[2]	**231[2]**
Copper	6	4[2]	**3[2]**
Total water discharge (million gallons/year)	**19,333**	**19,837**	**18,321**

(1) All data sources represented are reported in average ppb/year to be consistent with permit reporting requirements.
(2) The final of five SEMO water treatment plants was put into operation in August 2017. These plants helped reduce the metals contained in water discharges.

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Environmental Spending

EN31 Total Fiscal Environmental Spending

	2015	2016	2017
Total Capital Spending and Operating Expense	**47,991,176**[1]	**60,525,088**[1]	**48,248,765**
Remediation Spending			
Historic Properties	4,299,618	1,065,582[2]	**4,544,150**
Operating Properties	8,690,056	8,891,423	**5,001,595**[3]
Total Remediation Spending	**12,989,674**	**9,957,005**	**9,545,745**
Total Fiscal Environmental Spending, Including Remediation	**60,980,850**[1]	**70,482,093**[1]	**57,794,509**

(1) 2015 and 2016 capital and operating costs were updated from previous reports to include operating expenses not previously included and remove the double counting of some expenses.
(2) Remediation spending decreased in 2016 following the completion of major projects on historic properties in Jasper County in 2015.
(3) Remediation spending decreased in 2017 at Herculaneum as the remediation work progresses.

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Workforce Summary

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

(number of employees)[1]	2015	2016	2017
Southeast Missouri Mining and Milling Division (SEMO)	800	700	**705**
Metals Division (Resource Recycling, Herculaneum)	312	313	**322**
Corporate Headquarters[2]	124	130	**142**
Fabricated Products Inc. (FPI)	42	41	**40**
Total Number of Employees[1]	**1,278**	**1,184**	**1,209**

2017 Male and Female Employees by Division (Calendar Year)

	2015		2016		2017	
(number of employees)	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
SEMO	733	67	652	48	**656**	**49**
Metals Division	293	19	296	17	**301**	**21**
Corporate Headquarters	74	50	76	54	**87**	**55**
FPI	36	6	35	6	**34**	**6**
Total Number of Employees	**1,136**	**142**	**1,059**	**125**	**1,078**	**131**

Number of Employees by Employment Type (Calendar Year)

(number of positions)	2015	2016	2017
Permanent Hourly Positions	898	846	**854**
Permanent Salary Positions	375	331	**351**
Temporary Positions	1	3	**0**
Contracted Positions	4	4	**4**
Total Number of Employees	**1,278**	**1,184**	**1,209**

2017 Male and Female Employees by Employment Type (Calendar Year)

	2015		2016		2017	
(number of employees)	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
Permanent Hourly Positions	874	24	822[2]	24	**832**	**22**
Permanent Salary Positions	257	118	232[2]	99[2]	**242**	**109**
Temporary Positions	1	0	1	2	**0**	**0**
Contracted Positions	4	0	4	0	**4**	**0**
Total Number of Employees	**1,136**	**142**	**1,059**	**125**	**1,078**	**131**

(1) Employee counts for G4-10 include all categories of employees.
(2) In 2017, the Remediation Department headcount was moved from SEMO division to Corporate Headquarters.

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401-1 (LA1) 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.

	2015		2016		2017	
	Number	**Rate**	**Number**	**Rate**	**Number**	**Rate**
Male	22	91.7%	85[3]	96.6%	**129[3]**	**87.8%**
Female	2	8.3%	3[3]	3.4%	**18[3]**	**12.2%**
Total Number of Employees	**24**		**88**		**147**	

(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 in 2016 and 2017 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.

	2015		2016		2017	
	Number	**Rate**	**Number**	**Rate**	**Number**	**Rate**
Male	138	91.4%	132	86.8%	**109**	**90.8%**
Female	13	8.6%	20	13.1%	**11**	**9.2%**
Total Number of Employees	**151**		**152**		**120**	

(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.

	2015		2016		2017	
	Number	**Rate**	**Number**	**Rate**	**Number**	**Rate**
30 or younger	14	58.3%	47	53.4%	**65**	**44.2%**
31 to 40	3	12.5%	16	18.2%	**45**	**30.6%**
41 to 50	4	16.7%	18	20.5%	**26**	**17.7%**
51 and above	3	12.5%	7	8.0%	**11**	**7.5%**
Total Number of Employees	**24[3]**		**88[4]**		**147[4]**	

(1) Employee counts for LA1 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) Reduced hiring in 2015 reflects the company's adjustment to market conditions.
(4) New hires primarily replaced those who retired or left voluntarily.

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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.

	2015		2016		2017	
	Number	**Rate**	**Number**	**Rate**	**Number**	**Rate**
30 or younger	14	9.3%	20	13.1%	**18**	**15.0%**
31 to 40	30	19.9%	27	17.6%	**35**	**29.2%**
41 to 50	31	20.5%	29	19.0%	**20**	**16.7%**
51 and above[3]	76	50.3%	76	50.3%	**47**	**39.2%**
Total Number of Employees	**151**		**152**		**120**	

(1) Employee counts for LA1 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) In 2015, 54% of departures reflect retirement. In 2016, 55% of departures reflect retirement. In 2017, 79% of departures reflect retirement.

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 percent, but are accurate.

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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)	2015	2016	2017
Southeast Missouri Mining and Milling Division (SEMO), including remediation and demonstration plant	9.67	8.28	**8.10**
Metals Division (Resource Recycling, Herculaneum, Glover)[2]	15.01	14.83	**13.35**
Corporate Headquarters[3]	N/A	N/A	**N/A**
Fabricated Products Inc. (FPI)	7.40	7.80	**7.10**
Average	**11.02**	**10.20**	**9.59**

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)	2015	2016	2017
SEMO	38	23	**5[4]**
Metals Division (Resource Recycling, Herculaneum, Glover)[2]	148	134	**26[4]**
Corporate Headquarters[3]	N/A	N/A	**N/A**
FPI	2	2	**1**
Total	**188**	**159**	**32[4]**

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)	2015	2016	2017
SEMO (includes Glover)	3	7	3
Metals Division (Resource Recycling, Herculaneum)	7	6	4
Corporate Headquarters	0	0	0
FPI	0	0	0
Total number of work-related fatalities, companywide	**1**	**0**	**0**
Total	**11**	**13**	**7**

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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)	2015	2016	2017
SEMO (includes Glover)	33	33	**21**
Metals Division (Resource Recycling, Herculaneum)	44	34	**29**
Corporate Headquarters	0	0	**0**
FPI	0	1	**0**
Total	**77**	**68**	**50**

Total Case Incident Rate (TCIR)

TCIR is the number of OSHA recordable and MSHA reportable incidents per 200,000 personnel hours worked. OSHA recordables 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)	2015	2016	2017
SEMO (includes Glover)	3.6	4.3	**3.0**
Metals Division (Resource Recycling, Herculaneum)	12.2	9.7	**11.26**
Corporate Headquarters	0	0	**0**
FPI	0	2.4	**0**
Total Company	**5.6**	**5.5**	**4.18**

(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 µg/dL. The conversion used is 1 µg/100g = 1.05 ug/dL
(2) Glover is included in the Metals Division for blood-lead data only due to the nature of their work.
(3) Employees at corporate headquarters are not required to be tested.
(4) Significant reductions in blood-lead level >19 resulted from continued focus on employee hygiene and housekeeping procedures, and equipment changes at Resource Recycling.

404-1 (LA9) Workforce Training

Average Hours of Training Per Employee (Calendar Year)

(number of training hours)	2015	2016	2017
Total number of training hours	22,237	16,745[(2)]	**16,146**
Total number of employees[(1)]	1,364	1,333	**1,208**
Average number of training hours per employee	**16.30**	**12.56[(2)]**	**13.36[(2,3)]**

(1) Total number of employees reflects total number of employees who received training during annual training periods and may not reflect year-end employee counts.
(2) Training hours for 2016 and 2017 are a conservative estimate due to changes in the training hours recording system.
(3) In 2017, emphasis was placed on developing new leadership development programs to be executed in 2018.