FEDERAL SIGNAL CORP /DE/
Form 10-Q
May 02, 2019
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q
(Mark One)
x QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended March 31, 2019
OR
.. TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to
Commission file number: 1-6003

FEDERAL SIGNAL CORPORATION
(Exact name of registrant as specified in its charter)

Delaware	36-1063330
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
1415 West 22nd Street, Oak Brook, Illinois	60523
(Address of principal executive offices)	(Zip code)

Registrant's telephone number including area code: (630) 954-2000

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes þ No ¨
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes þ No ¨
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	þ	Accelerated filer	¨
Non-accelerated filer	¨	Smaller reporting company	¨
Emerging growth company ¨			

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ¨
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No þ

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $1.00 per share	FSS	New York Stock Exchange

As of April 30, 2019, the number of shares outstanding of the registrant's common stock was 60,287,734.

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FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q ("Form 10-Q") is being filed by Federal Signal Corporation and its subsidiaries (referred to collectively as the "Company," "we," "our" or "us" herein, unless the context otherwise indicates) with the United States ("U.S.") Securities and Exchange Commission (the "SEC"), and includes comments made by management that may contain words such as "may," "will," "believe," "expect," "anticipate," "intend," "plan," "project," "estimate" and "objective" terminology, or the negative thereof, concerning the Company's future financial performance, business strategy, plans, goals and objectives. These expressions are intended to identify forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the Private Securities Litigation Reform Act of 1995.

Forward-looking statements include information concerning the Company's possible or assumed future performance or results of operations and are not guarantees. While these statements are based on assumptions and judgments that management has made in light of industry experience as well as perceptions of historical trends, current conditions, expected future developments and other factors believed to be appropriate under the circumstances, they are subject to risks, uncertainties and other factors that may cause the Company's actual results, performance or achievements to be materially different.

These risks and uncertainties, some of which are beyond the Company's control, include the risk factors described under Part I, Item 1A, Risk Factors, of the Company's Annual Report on Form 10-K for the year ended December 31, 2018, which was filed with the SEC on February 28, 2019, and as updated in Part II, Item 1A, Risk Factors of this Form 10-Q. These factors may not constitute all factors that could cause actual results to differ materially from those discussed in any forward-looking statement. The Company operates in a continually changing business environment and new factors emerge from time to time. The Company cannot predict such factors, nor can it assess the impact, if any, of such factors on its results of operations, financial condition or cash flow. Accordingly, forward-looking statements should not be relied upon as a predictor of actual results. The Company disclaims any responsibility to update any forward-looking statement provided in this Form 10-Q.

ADDITIONAL INFORMATION

The Company is subject to the reporting and information requirements of the Exchange Act and, as a result, is obligated to file Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other reports and information with the SEC, as well as amendments to those reports. The Company makes these filings available free of charge through our website at www.federalsignal.com as soon as reasonably practicable after such materials are filed with, or furnished to, the SEC. Information on our website does not constitute part of this Form 10-Q.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited).

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

	Three Months Ended March 31,	
(in millions, except per share data)	2019	2018
Net sales	$273.8	$249.7
Cost of sales	203.5	187.8
Gross profit	70.3	61.9
Selling, engineering, general and administrative expenses	43.9	41.8
Acquisition and integration-related expenses	0.6	0.5
Operating income	25.8	19.6
Interest expense	2.0	2.5
Other expense, net	0.4	0.1
Income before income taxes	23.4	17.0
Income tax expense	5.9	4.1
Net income	$17.5	$12.9
Earnings per share:		
Basic	$0.29	$0.22
Diluted	$0.29	$0.21
Weighted average common shares outstanding:		
Basic	60.1	59.8
Diluted	61.2	60.8

See notes to condensed consolidated financial statements.

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FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (Unaudited)

	Three Months Ended March 31,	
(in millions)	2019	2018
Net income	$17.5	$12.9
Other comprehensive (loss) income:		
Change in foreign currency translation adjustment	—	2.0
Change in unrecognized net actuarial loss and prior service cost related to pension benefit plans, net of income tax expense of $0.2 and $0.2, respectively	0.2	0.1
Change in unrealized gain on derivatives, net of income tax (benefit) expense of ($0.2) and $0.2, respectively	(0.5)	0.8
Total other comprehensive (loss) income	(0.3)	2.9
Comprehensive income	$17.2	$15.8

See notes to condensed consolidated financial statements.

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FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS

(in millions, except per share data)	March 31, 2019 (Unaudited)	December 31, 2018
ASSETS		
Current assets:		
Cash and cash equivalents	$ 22.7	$ 37.4
Accounts receivable, net of allowances for doubtful accounts of $1.4 and $1.6, respectively	139.4	124.4
Inventories	169.0	157.3
Prepaid expenses and other current assets	9.1	9.4
Total current assets	340.2	328.5
Properties and equipment, net of accumulated depreciation of $118.3 and $116.0, respectively	63.4	62.0
Rental equipment, net of accumulated depreciation of $34.2 and $30.0, respectively	107.4	96.6
Operating lease right-of-use assets	25.5	—
Goodwill	374.7	375.1
Intangible assets, net of accumulated amortization of $15.5 and $13.4, respectively	141.3	143.1
Deferred tax assets	12.0	12.5
Deferred charges and other long-term assets	5.3	5.6
Long-term assets of discontinued operations	0.4	0.4
Total assets	$ 1,070.2	$ 1,023.8
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term borrowings and finance lease obligations	$ 0.2	$ 0.2
Accounts payable	72.9	66.1
Customer deposits	11.4	10.1
Accrued liabilities:		
Compensation and withholding taxes	18.2	29.5
Other current liabilities	60.6	52.7
Current liabilities of discontinued operations	0.2	0.2
Total current liabilities	163.5	158.8
Long-term borrowings and finance lease obligations	216.6	209.9
Long-term operating lease liabilities	21.0	—
Long-term pension and other postretirement benefit liabilities	56.0	54.6
Deferred gain	—	6.8
Deferred tax liabilities	49.3	46.3
Other long-term liabilities	14.1	15.9
Long-term liabilities of discontinued operations	1.3	1.4
Total liabilities	521.8	493.7
Stockholders' equity:		
Common stock, $1 par value per share, 90.0 shares authorized, 66.5 and 66.4 shares issued, respectively	66.5	66.4
Capital in excess of par value	218.4	217.0
Retained earnings	451.7	432.5
Treasury stock, at cost, 6.3 and 6.2 shares, respectively	(90.6)	(88.5)
Accumulated other comprehensive loss	(97.6)	(97.3)
Total stockholders' equity	548.4	530.1

Total liabilities and stockholders' equity	$ 1,070.2	$ 1,023.8

See notes to condensed consolidated financial statements.

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FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)

	Three Months Ended March 31,	
(in millions)	2019	2018
Operating activities:		
Net income	$17.5	$12.9
Adjustments to reconcile net income to net cash (used for) provided by operating activities:		
Depreciation and amortization	9.5	8.6
Deferred financing costs	0.1	0.1
Deferred gain	—	(0.4)
Stock-based compensation expense	1.4	0.8
Pension expense, net of funding	(0.1)	(1.1)
Changes in fair value of contingent consideration and deferred payment	0.3	0.3
Deferred income taxes	1.2	0.7
Changes in operating assets and liabilities	(38.7)	(11.6)
Net cash (used for) provided by operating activities	(8.8)	10.3
Investing activities:		
Purchases of properties and equipment	(4.5)	(3.0)
Proceeds from sales of properties and equipment	—	0.1
Proceeds from acquisition-related activity	—	3.0
Net cash (used for) provided by investing activities	(4.5)	0.1
Financing activities:		
Increase (decrease) in revolving lines of credit, net	5.5	(8.6)
Purchases of treasury stock	(1.0)	—
Redemptions of common stock to satisfy withholding taxes related to stock-based compensation	(1.1)	(0.1)
Cash dividends paid to stockholders	(4.8)	(4.2)
Proceeds from stock-based compensation activity	—	0.1
Other, net	—	0.1
Net cash used for financing activities	(1.4)	(12.7)
Effects of foreign exchange rate changes on cash and cash equivalents	—	0.2
Decrease in cash and cash equivalents	(14.7)	(2.1)
Cash and cash equivalents at beginning of year	37.4	37.5
Cash and cash equivalents at end of period	$22.7	$35.4

See notes to condensed consolidated financial statements.

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FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (Unaudited)

(in millions)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total
Balance at January 1, 2019	$ 66.4	$ 217.0	$ 432.5	$ (88.5)	$ (97.3)	$ 530.1
Net income			17.5			17.5
Total other comprehensive loss					(0.3)	(0.3)
Cash dividends declared ($0.08 per share)			(4.8)			(4.8)
Impact of adoption of ASU 2016-02			6.5			6.5
Stock-based payments:						
Stock-based compensation		1.4				1.4
Stock option exercises and other	—	0.1		(0.2)		(0.1)
Performance share unit transactions	0.1	(0.1)		(0.9)		(0.9)
Stock repurchase program				(1.0)		(1.0)
Balance at March 31, 2019	$ 66.5	$ 218.4	$ 451.7	$ (90.6)	$ (97.6)	$ 548.4

(in millions)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total
Balance at January 1, 2018	$ 66.1	$ 207.7	$ 346.6	$ (86.1)	$ (76.9)	$ 457.4
Net income			12.9			12.9
Total other comprehensive income					2.9	2.9
Cash dividends declared ($0.07 per share)			(4.2)			(4.2)
Stock-based payments:						
Stock-based compensation		0.9				0.9
Stock option exercises and other	—	0.2		(0.2)		—
Balance at March 31, 2018	$ 66.1	$ 208.8	$ 355.3	$ (86.3)	$ (74.0)	$ 469.9

See notes to condensed consolidated financial statements.

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FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization and Description of the Business

Federal Signal Corporation was founded in 1901 and was reincorporated as a Delaware corporation in 1969. References herein to the "Company," "we," "our" or "us" refer collectively to Federal Signal Corporation and its subsidiaries. Products manufactured and services rendered by the Company are divided into two reportable segments: Environmental Solutions Group and Safety and Security Systems Group. The individual operating businesses are organized as such because they share certain characteristics, including technology, marketing, distribution and product application, which create long-term synergies. These segments are discussed in Note 11 – Segment Information.

Basis of Presentation and Consolidation

The accompanying unaudited condensed consolidated financial statements represent the consolidation of Federal Signal Corporation and its subsidiaries included herein and have been prepared by the Company pursuant to the rules and regulations of the United States ("U.S.") Securities and Exchange Commission (the "SEC"). Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. generally accepted accounting principles ("GAAP") have been condensed or omitted pursuant to such rules and regulations, although the Company believes that the disclosures presented herein are adequate to ensure the information presented is not misleading. Except as otherwise noted, these condensed consolidated financial statements have been prepared in accordance with the Company's accounting policies described in the Company's Annual Report on Form 10-K for the year ended December 31, 2018, and should be read in conjunction with those consolidated financial statements and the notes thereto.

These condensed consolidated financial statements include all normal and recurring adjustments that we considered necessary to present a fair statement of our results of operations, financial condition and cash flow. Intercompany balances and transactions have been eliminated in consolidation.

The results reported in these condensed consolidated financial statements should not be regarded as necessarily indicative of results that may be expected for the entire year. While we label our quarterly information using a calendar convention whereby our first, second and third quarters are labeled as ending on March 31, June 30 and September 30, respectively, it is our longstanding practice to establish interim quarterly closing dates based on a 13-week period ending on a Saturday, with our fiscal year ending on December 31. The effects of this practice are not material and exist only within a reporting year.

Recent Accounting Pronouncements and Accounting Changes

In February 2016, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") No. 2016-02, Leases ("Topic 842"), which supersedes the lease accounting requirements in Accounting Standards Codification ("ASC") 840, Leases ("Topic 840"). Topic 842 requires organizations that are lessees in operating lease arrangements to recognize right-of-use assets and lease liabilities on the balance sheet and requires disclosure of key qualitative and quantitative information about leasing arrangements by both lessors and lessees. The Company adopted Topic 842 effective January 1, 2019, using the alternative transition method outlined in ASU No. 2018-11, Leases (Topic 842): Targeted Improvements, which permits application of the new guidance at the beginning of the period of adoption, with comparative periods continuing to be reported under Topic 840. See Note 3 – Leases for further discussion.

No other new accounting pronouncements issued, but not yet adopted, are expected to have a material impact on the Company's results of operations, financial position or cash flow.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect (i) the reported amounts of assets and liabilities, (ii) the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and (iii) the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

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FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

Significant Accounting Policies

Following the adoption of Topic 842, the Company's lease accounting policy is and will be disclosed as a significant accounting policy. See Note 3 – Leases for further discussion. There have been no other changes to the Company's significant accounting policies as disclosed in the Company's Annual Report on Form 10-K for the year ended December 31, 2018.

NOTE 2 – REVENUE RECOGNITION

The following table presents the Company's Net sales disaggregated by geographic region, based on the location of the end customer, and by major product line:

	Three Months Ended March 31,	
(in millions)	2019	2018
Geographic Region:		
U.S.	$204.8	$196.6
Canada	44.4	32.4
Europe/Other	24.6	20.7
Total net sales	$273.8	$249.7
Major Product Line:		
Environmental Solutions		
Vehicles and equipment [(a)]	$173.7	$155.6
Parts	31.1	29.8
Rental income [(b)]	9.6	7.8
Other [(c)]	5.1	3.4
Total	219.5	196.6
Safety and Security Systems		
Public safety and security equipment	32.4	30.6
Industrial signaling equipment	13.8	13.2
Warning systems	8.1	9.3
Total	54.3	53.1
Total net sales	$273.8	$249.7

(a) Includes net sales from the sale of new and used vehicles and equipment, including sales of rental equipment.
(b) Represents income from vehicle and equipment lease arrangements with customers.
(c) Primarily includes revenues from services such as maintenance and repair work and the sale of extended warranty contracts.

Contract Balances

The Company recognizes contract liabilities when cash payments, such as customer deposits, are received in advance of the Company's satisfaction of the related performance obligations. Contract liabilities are recognized as Net sales when the related performance obligations are satisfied, which generally occurs within three to six months of the cash receipt. Contract liability balances are not materially impacted by any other factors. The Company's contract liabilities were $13.5 million and $12.1 million, as of March 31, 2019 and December 31, 2018, respectively. Contract assets, such as unbilled receivables, were not material as of any of the periods presented herein.

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FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

NOTE 3 – LEASES

Impact of the Adoption of Topic 842

On January 1, 2019, the Company adopted Topic 842, using the alternative transition method under ASU 2018-11, which permits application of the new guidance at the beginning of the period of adoption, with comparative periods continuing to be reported under Topic 840. The Company elected to apply the practical expedient package outlined in the transition guidance which, among other things, allows for the carryforward of historical lease classifications. In addition, the Company elected to separately account for non-lease and associated lease components and apply the short-term lease exception, whereby the Company does not recognize a right-of-use asset or lease liability for leases with an initial term of twelve months or less.

Upon adoption, the Company recognized operating lease right-of-use assets and liabilities on its Condensed Consolidated Balance Sheet of $27.1 million and $29.5 million, respectively. In addition, the Company recognized the remaining deferred gain of $8.7 million associated with the sale-leaseback transactions that the Company entered into in July 2008 for its Elgin, Illinois and University Park, Illinois plant locations, net of the related deferred tax asset of $2.2 million, as a cumulative effect adjustment to opening retained earnings as of the January 1, 2019 adoption date. Prior to the adoption of Topic 842, the deferred gain, which initially totaled $29.0 million, had been amortized through the Company's Condensed Consolidated Statements of Operations on a straight-line basis over the 15-year life of the respective leases. Effective in 2019, approximately $1.9 million of the deferred gain, which had been recognized each year since 2008, will no longer be recognized through the Condensed Consolidated Statements of Operations.

Other than the aforementioned elimination of the deferred gain recognition, the adoption of Topic 842 did not have a material impact on the Company's results of operations or cash flows. Further, the adoption of Topic 842 did not have an impact on the Company's liquidity or debt-covenant compliance under its current arrangements.

Description of Leases

The Company leases certain facilities within the U.S., Europe and Canada from which the Company provides sales, service and/or equipment rentals, some of which contain options to renew. In addition, eight of the Company's 14 principal manufacturing plants are leased. The Company also leases vehicles and various other equipment. The Company's lease agreements may contain lease and non-lease components, which are accounted for separately.

In connection with the 2016 acquisition of substantially all of the assets and operations of Joe Johnson Equipment, Inc. and Joe Johnson Equipment (USA), Inc. (collectively, "JJE"), the Company entered into lease agreements for two facilities owned by affiliates of the sellers of JJE. Both agreements include an annual rent that is considered market-based, and were for an initial lease term of five years, with options to renew. The total lease liability under these agreements to the former shareholders of JJE, some of whom are now employees of the Company, was $0.7 million as of March 31, 2019.

The Company determines if an arrangement is a lease at inception. Operating lease right-of-use assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating lease right-of-use assets and liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. As most of the Company's leases do not provide an implicit rate, the Company uses its incremental collateralized borrowing rate based on the information available at the commencement date in determining the present value of lease payments. Implicit rates are used when readily determinable. The Company's lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. Lease expense for operating lease payments is recognized on a straight-line basis over the respective lease term.

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FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

The following table summarizes the components of lease right-of-use assets and liabilities:

(in millions)	March 31, 2019	Affected Line Item in Condensed Consolidated Balance Sheets
Assets		
Operating lease right-of-use assets	$ 25.5	Operating lease right-of-use assets
Finance lease right-of-use assets	1.0	Properties and equipment, net of accumulated depreciation
Total lease right-of-use assets	$ 26.5	
Liabilities		
Current:		
Operating leases	$ 6.8	Other current liabilities
Finance leases	0.2	Current portion of long-term borrowings and finance lease obligations
Noncurrent:		
Operating leases	21.0	Long-term operating lease liabilities
Finance leases	0.4	Long-term borrowings and finance lease obligations
Total lease liabilities	$ 28.4	

The following table summarizes the Company's total lease costs and other information arising from operating lease transactions:

($ in millions)	Three Months Ended March 31, 2019
Total operating lease costs [(a)]	$ 2.8
Other Information	
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$ 2.0
Weighted-average remaining lease term – Operating leases	4.2 years
Weighted-average discount rate – Operating leases	4.0 %

(a) Includes short-term leases, which are immaterial.

Maturities of operating lease liabilities as of March 31, 2019 were as follows:

(in millions)	March 31, 2019
2019 (excluding the three months ended March 31, 2019)	$ 5.9
2020	7.4
2021	6.6
2022	5.9
2023	3.4
Thereafter	1.2
Total lease payments	$ 30.4
Less: Imputed interest	2.6
Present value of operating lease liabilities	$ 27.8

At December 31, 2018, minimum future rental commitments under operating leases having non-cancelable lease terms in excess of one year, as previously determined in accordance with Topic 840, aggregated $34.3 million and were payable as follows: $8.9 million in 2019, $8.0 million in 2020, $6.9 million in 2021, $5.9 million in 2022, $3.4 million in 2023 and $1.2 million thereafter.

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FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

NOTE 4 – INVENTORIES

The following table summarizes the components of Inventories:

(in millions)	March 31, 2019	December 31, 2018
Finished goods	$ 85.6	$ 78.3
Raw materials	70.0	66.3
Work in process	13.4	12.7
Total inventories	$ 169.0	$ 157.3

NOTE 5 – DEBT

The following table summarizes the components of Long-term borrowings and finance lease obligations:

(in millions)	March 31, 2019	December 31, 2018
Amended 2016 Credit Agreement [(a)]	$ 216.2	$ 209.4
Finance lease obligations	0.6	0.7
Total long-term borrowings and finance lease obligations, including current portion	216.8	210.1
Less: Current finance lease obligations	0.2	0.2
Total long-term borrowings and finance lease obligations	$ 216.6	$ 209.9

(a) Defined as the Amended and Restated Credit Agreement, dated January 27, 2016, as amended on June 2, 2017.

As more fully described within Note 12 – Fair Value Measurements, the Company uses a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. The fair value of long-term debt is based on interest rates that we believe are currently available to us for issuance of debt with similar terms and remaining maturities (Level 2 input).

The following table summarizes the carrying amounts and estimated fair values of the Company's long-term borrowings:

(in millions)	March 31, 2019		December 31, 2018	
	Notional Amount	Fair Value	Notional Amount	Fair Value
Long-term borrowings [(a)]	$216.8	$216.8	$210.1	$210.1

(a) Long-term borrowings includes current portions of long-term debt and current portions of finance lease obligations of $0.2 million and $0.2 million as of March 31, 2019 and December 31, 2018, respectively.

Borrowings under the Amended 2016 Credit Agreement bear interest, at the Company's option, at a base rate or a LIBOR rate, plus, in each case, an applicable margin. The applicable margin ranges from 0.00% to 1.25% for base rate borrowings and 1.00% to 2.25% for LIBOR borrowings. The Company must also pay a commitment fee to the lenders ranging between 0.15% to 0.30% per annum on the unused portion of the $400 million revolving credit facility along with other standard fees. Letter of credit fees are payable on outstanding letters of credit in an amount equal to the applicable LIBOR margin plus other customary fees.

The Company is subject to certain leverage ratio and interest coverage ratio financial covenants under the Amended 2016 Credit Agreement that are to be measured at each fiscal quarter-end. The Company was in compliance with all such covenants as of March 31, 2019.

As of March 31, 2019, there was $216.2 million of cash drawn and $11.3 million of undrawn letters of credit under the Amended 2016 Credit Agreement, with $172.5 million of net availability for borrowings. As of December 31, 2018, there was $209.4 million cash drawn and $11.3 million of undrawn letters of credit under the Amended 2016 Credit Agreement, with $179.3 million of net availability for borrowings.

For the three months ended March 31, 2019, gross borrowings under the Amended 2016 Credit Agreement were $7.0 million and there were $1.5 million of gross payments. For the three months ended March 31, 2018, gross borrowings

and gross payments were $8.0 million and $16.6 million, respectively.

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FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

Interest Rate Swap

On June 2, 2017, the Company entered into an interest rate swap (the "Swap") with a notional amount of $150.0 million, as a means of fixing the floating interest rate component on $150.0 million of its variable-rate debt. The Swap is designated as a cash flow hedge, with a termination date of June 2, 2020. As a result of the application of hedge accounting treatment, all unrealized gains and losses related to the derivative instrument are recorded in Accumulated other comprehensive loss and are reclassified into operations in the same period in which the hedged transaction affects earnings. Hedge effectiveness is assessed quarterly. We do not use derivative instruments for trading or speculative purposes.

As more fully described within Note 12 – Fair Value Measurements, the Company uses a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. The fair value of the Swap is derived from a discounted cash flow analysis based on the terms of the contract and the interest rate curve (Level 2 inputs) and measured on a recurring basis in our Condensed Consolidated Balance Sheets. At March 31, 2019 and December 31, 2018, the fair value of the Swap, included in Deferred charges and other long-term assets on the Condensed Consolidated Balance Sheets, was $1.4 million and $2.0 million, respectively. During the three months ended March 31, 2019 and 2018, unrealized pre-tax losses of $0.6 million and unrealized pre-tax gains of $1.0 million, respectively, were recorded in Accumulated other comprehensive loss.

NOTE 6 – INCOME TAXES

The Company recognized income tax expense of $5.9 million and $4.1 million for the three months ended March 31, 2019 and 2018, respectively. The increase in tax expense in the current-year quarter was largely due to higher pre-tax income levels. The Company's effective tax rate for the three months ended March 31, 2019 was 25.2%, compared to 24.1% in the prior-year quarter.

NOTE 7 – PENSIONS

The following table summarizes the components of net postretirement pension expense:

	U.S. Benefit Plan Three Months Ended March 31,		Non-U.S. Benefit Plan Three Months Ended March 31,	
(in millions)	2019	2018	2019	2018
Service cost	$—	$—	$0.1	$0.1
Interest cost	1.7	1.6	0.3	0.3
Amortization of actuarial loss	0.6	0.8	0.2	0.2
Expected return on plan assets	(2.2)	(2.2)	(0.5)	(0.6)
Net postretirement pension expense	$0.1	$0.2	$0.1	$—

NOTE 8 – COMMITMENTS AND CONTINGENCIES

Financial Commitments

The Company provides indemnifications and other guarantees in the ordinary course of business, the terms of which range in duration and often are not explicitly defined. Specifically, the Company is occasionally required to provide letters of credit and bid and performance bonds to various customers, principally to act as security for retention levels related to casualty insurance policies and to guarantee the performance of subsidiaries that engage in export and domestic transactions. At March 31, 2019, the Company had outstanding performance and financial standby letters of credit, as well as outstanding bid and performance bonds, aggregating to $19.1 million. If any such letters of credit or bonds are called, the Company would be obligated to reimburse the issuer of the letter of credit or bond. The Company believes the likelihood of any currently outstanding letter of credit or bond being called is remote.

The Company has transactions involving the sale of equipment to certain of its customers which include (i) guarantees to repurchase the equipment for a fixed price at a future date and (ii) guarantees to repurchase the equipment from the third-party lender in the event of default by the customer. As of March 31, 2019, the single year and maximum potential cash payments the Company could be required to make to repurchase equipment under these agreements were $4.0 million and $4.7 million, respectively. The Company's risk under these repurchase arrangements would be partially mitigated by the value of the products repurchased as part of the transaction. Further, pursuant to the terms of the June 3, 2016 acquisition of JJE, the former owners of JJE have agreed to reimburse the Company for certain losses incurred resulting from the requirement to repurchase

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equipment that was sold prior to the acquisition date. Any such reimbursement would be withheld from the C$8.0 million deferred payment to be made to the former owners of JJE on the third anniversary of the acquisition date. Historical cash requirements and losses associated with these obligations have not been significant, but could increase if customer defaults exceed current expectations.

Product Warranties

The Company issues product performance warranties to customers with the sale of its products. The specific terms and conditions of these warranties vary depending upon the product sold and country in which the Company does business, with warranty periods generally ranging from one to five years. The Company estimates the costs that may be incurred under its basic limited warranty and records a liability in the amount of such costs at the time the sale of the related product is recognized. Factors that affect the Company's warranty liability include (i) the number of units under warranty, (ii) historical and anticipated rates of warranty claims and (iii) costs per claim. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary.

The following table summarizes the changes in the Company's warranty liabilities during the three months ended March 31, 2019 and 2018:

(in millions)	2019	2018
Balance at January 1	$9.8	$8.4
Provisions to expense	1.3	1.5
Payments	(1.5)	(1.5)
Balance at March 31	$9.6	$8.4

As of March 31, 2019 and December 31, 2018, an estimated liability was recorded within the Environmental Solutions Group in connection with a specific warranty matter. It is reasonably possible that the Company's estimate may change in the near term as more information becomes available; however, the ultimate resolution of this matter is not expected to have a material adverse effect on the Company's results of operations, financial position or liquidity.

Liabilities of Discontinued Operations

The Company retains certain liabilities for operations discontinued in prior periods, primarily for environmental remediation and product liability. Included in liabilities of discontinued operations on the Condensed Consolidated Balance Sheets as of March 31, 2019 and December 31, 2018, were reserves of $0.3 million and $0.4 million, respectively, related to environmental remediation at the Pearland, Texas facility previously used by the Company's discontinued Pauluhn business, and $1.1 million and $1.1 million, respectively, related to estimated product liability obligations of the discontinued North American refuse truck body business.

Legal Proceedings

The Company is subject to various claims, including pending and possible legal actions for product liability and other damages, and other matters arising in the ordinary course of the Company's business. On a quarterly basis, the Company reviews uninsured material legal claims against the Company and accrues for the costs of such claims as appropriate in the exercise of management's best judgment and experience. However, due to a lack of factual information available to the Company about a claim, or the procedural stage of a claim, it may not be possible for the Company to reasonably assess either the probability of a favorable or unfavorable outcome of the claim or to reasonably estimate the amount of loss should there be an unfavorable outcome. Therefore, for many claims, the Company cannot reasonably estimate a range of loss.

The Company believes, based on current knowledge and after consultation with counsel, that the outcome of such claims and actions will not have a material adverse effect on the Company's results of operations or financial condition. However, in the event of unexpected future developments, it is possible that the ultimate resolution of such matters, if unfavorable, could have a material adverse effect on the Company's results of operations, financial condition or cash flow.

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Hearing Loss Litigation

The Company has been sued for monetary damages by firefighters who claim that exposure to the Company's sirens has impaired their hearing and that the sirens are therefore defective. There were 33 cases filed during the period of 1999 through 2004, involving a total of 2,443 plaintiffs, in the Circuit Court of Cook County, Illinois. These cases involved more than 1,800 firefighter plaintiffs from locations outside of Chicago. In 2009, six additional cases were filed in Cook County, involving 299 Pennsylvania firefighter plaintiffs. During 2013, another case was filed in Cook County involving 74 Pennsylvania firefighter plaintiffs.

The trial of the first 27 of these plaintiffs' claims occurred in 2008, whereby a Cook County jury returned a unanimous verdict in favor of the Company.

An additional 40 Chicago firefighter plaintiffs were selected for trial in 2009. Plaintiffs' counsel later moved to reduce the number of plaintiffs from 40 to nine. The trial for these nine plaintiffs concluded with a verdict against the Company and for the plaintiffs in varying amounts totaling $0.4 million. The Company appealed this verdict. On September 13, 2012, the Illinois Appellate Court rejected this appeal. The Company thereafter filed a petition for rehearing with the Illinois Appellate Court, which was denied on February 7, 2013. The Company sought further review by filing a petition for leave to appeal with the Illinois Supreme Court on March 14, 2013. On May 29, 2013, the Illinois Supreme Court issued a summary order declining to accept review of this case. On July 1, 2013, the Company satisfied the judgments entered for these plaintiffs, which resulted in final dismissal of these cases.

A third consolidated trial involving eight Chicago firefighter plaintiffs occurred during November 2011. The jury returned a unanimous verdict in favor of the Company at the conclusion of this trial.

Following this trial, on March 12, 2012 the trial court entered an order certifying a class of the remaining Chicago Fire Department firefighter plaintiffs for trial on the sole issue of whether the Company's sirens were defective and unreasonably dangerous. The Company petitioned the Illinois Appellate Court for interlocutory appeal of this ruling. On May 17, 2012, the Illinois Appellate Court accepted the Company's petition. On June 8, 2012, plaintiffs moved to dismiss the appeal, agreeing with the Company that the trial court had erred in certifying a class action trial in this matter. Pursuant to plaintiffs' motion, the Illinois Appellate Court reversed the trial court's certification order. Thereafter, the trial court scheduled a fourth consolidated trial involving three firefighter plaintiffs, which began in December 2012. Prior to the start of this trial, the claims of two of the three firefighter plaintiffs were dismissed. On December 17, 2012, the jury entered a complete defense verdict for the Company.

Following this defense verdict, plaintiffs again moved to certify a class of Chicago Fire Department plaintiffs for trial on the sole issue of whether the Company's sirens were defective and unreasonably dangerous. Over the Company's objection, the trial court granted plaintiffs' motion for class certification on March 11, 2013 and scheduled a class action trial to begin on June 10, 2013. The Company filed a petition for review with the Illinois Appellate Court on March 29, 2013 seeking reversal of the class certification order.

On June 25, 2014, a unanimous three-judge panel of the First District Illinois Appellate Court issued its opinion reversing the class certification order of the trial court. Specifically, the Appellate Court determined that the trial court's ruling failed to satisfy the class-action requirements that the common issues of the firefighters' claims predominate over the individual issues and that there is an adequate representative for the class. During a status hearing on October 8, 2014, plaintiffs represented to the Court that they would again seek to certify a class of firefighters on the issue of whether the Company's sirens were defective and unreasonably dangerous. On January 12, 2015, plaintiffs filed motions to amend their complaints to add class action allegations with respect to Chicago firefighter plaintiffs, as well as the approximately 1,800 firefighter plaintiffs from locations outside of Chicago. On March 11, 2015, the trial court granted plaintiff's motions to amend their complaints. On April 24, 2015, the cases were transferred to Cook County chancery court, which will decide all class certification issues. On March 23, 2018, plaintiffs filed a motion to certify as a class all firefighters from the Chicago Fire Department who have filed lawsuits in this matter. The Company has served discovery upon plaintiffs related to this motion and intends to continue its objections to any attempt at certification. The court has scheduled a hearing regarding discovery issues in this case on

May 21, 2019.

The Company has also filed motions to dismiss cases involving firefighters who worked for fire departments located outside of the State of Illinois based on improper venue. On February 24, 2017, the Circuit Court of Cook County entered orders dismissing the cases of 1,770 such firefighter plaintiffs from the jurisdiction of the State of Illinois. Pursuant to these orders, these plaintiffs had six months thereafter to refile their cases in jurisdictions where these firefighters are located. Prior to this six-month deadline, attorneys representing some of these plaintiffs contacted the Company regarding possible settlement of their cases. During the year ended December 31, 2017, the Company entered into a global settlement agreement with two attorneys who represented approximately 1,090 of these plaintiffs. Under the terms of the settlement agreement, the Company offered $700 per plaintiff to settle these cases and 717 plaintiffs accepted this offer as a final settlement. The attorneys representing these plaintiffs agreed to withdraw from representing plaintiffs who did not respond to the settlement offer. It is the Company's position that the non-settling plaintiffs who failed to timely refile their cases following the February 2017 dismissal by the Circuit Court of Cook County are now barred from doing so by the statute of limitations. The Company also has filed a venue motion seeking to transfer to DuPage County cases involving 10 plaintiffs who reside and work in Illinois but outside of Cook County. The Court granted this motion on June 28, 2017.

The Company has also been sued on this issue outside of the Cook County, Illinois venue. Between 2007 and 2009, a total of 71 lawsuits involving 71 plaintiffs were filed in the Court of Common Pleas, Philadelphia County, Pennsylvania. Three of these cases were dismissed pursuant to pretrial motions filed by the Company. Another case was voluntarily dismissed. Prior to trial in four cases, the Company paid nominal sums to obtain dismissals.

Three trials occurred in Philadelphia involving these cases filed in 2007 through 2009. The first trial involving one of these plaintiffs occurred in 2010, when the jury returned a verdict for the plaintiff. In particular, the jury found that the Company's siren was not defectively designed, but that the Company negligently constructed the siren. The jury awarded damages in the amount of $0.1 million, which was subsequently reduced to $0.08 million. The Company appealed this verdict. Another trial, involving nine Philadelphia firefighter plaintiffs, also occurred in 2010 when the jury returned a defense verdict for the Company as to all claims and all plaintiffs involved in that trial. The third trial, also involving nine Philadelphia firefighter plaintiffs, was completed during 2010 when the jury returned a defense verdict for the Company as to all claims and all plaintiffs involved in that trial.

Following defense verdicts in the last two Philadelphia trials, the Company negotiated settlements with respect to all remaining filed cases in Philadelphia at that time, as well as other firefighter claimants represented by the attorney who filed the Philadelphia cases. On January 4, 2011, the Company entered into a Global Settlement Agreement (the "Settlement Agreement") with the law firm of the attorney representing the Philadelphia claimants, on behalf of 1,125 claimants the firm represented (the "Claimants") and who had asserted product claims against the Company (the "Claims"). Three hundred eight of the Claimants had lawsuits pending against the Company in Cook County, Illinois. The Settlement Agreement provided that the Company pay a total amount of $3.8 million (the "Settlement Payment") to settle the Claims (including the costs, fees and other expenses of the law firm in connection with its representation of the Claimants), subject to certain terms, conditions and procedures set forth in the Settlement Agreement. In order for the Company to be required to make the Settlement Payment: (i) each Claimant who agreed to settle his or her claims had to sign a release acceptable to the Company (a "Release"), (ii) each Claimant who agreed to the settlement and who was a plaintiff in a lawsuit, had to dismiss his or her lawsuit with prejudice, (iii) by April 29, 2011, at least 93% of the Claimants identified in the Settlement Agreement must have agreed to settle their claims and provide a signed Release to the Company and (iv) the law firm had to withdraw from representing any Claimants who did not agree to the settlement, including those who filed lawsuits. If the conditions to the settlement were met, but less than 100% of the Claimants agreed to settle their Claims and sign a Release, the Settlement Payment would be reduced by the percentage of Claimants who did not agree to the settlement.

On April 22, 2011, the Company confirmed that the terms and conditions of the Settlement Agreement had been met and made a payment of $3.6 million to conclude the settlement. The amount was based upon the Company's receipt of 1,069 signed releases provided by Claimants, which was 95% of all Claimants identified in the Settlement Agreement.

The Company generally denies the allegations made in the claims and lawsuits by the Claimants and denies that its products caused any injuries to the Claimants. Nonetheless, the Company entered into the Settlement Agreement for the purpose of minimizing its expenses, including legal fees, and avoiding the inconvenience, uncertainty and distraction of the claims and lawsuits.

During April through October 2012, 20 new cases were filed in the Court of Common Pleas, Philadelphia County, Pennsylvania. These cases were filed on behalf of 20 Philadelphia firefighters and involve various defendants in addition to the Company. Five of these cases were subsequently dismissed. The first trial involving these 2012 Philadelphia cases occurred

during December 2014 and involved three firefighter plaintiffs. The jury returned a verdict in favor of the Company. Following this trial, all of the parties agreed to settle cases involving seven firefighter plaintiffs set for trial during January 2015 for nominal amounts per plaintiff.

In January 2015, plaintiffs' attorneys filed two new complaints in the Court of Common Pleas, Philadelphia, Pennsylvania on behalf of approximately 70 additional firefighter plaintiffs. The vast majority of the firefighters identified in these complaints are located outside of Pennsylvania. One of the complaints in these cases, which involves 11 firefighter plaintiffs from the District of Columbia, was removed to federal court in the Eastern District of Pennsylvania. Plaintiffs voluntarily dismissed all claims in this case on May 31, 2016. The Company thereafter moved to recover various fees and costs in this case, asserting that plaintiffs' counsel failed to properly investigate these claims prior to filing suit. The Court granted this motion on April 25, 2017, awarding $0.1 million to the Company. After plaintiffs appealed this Order, the United States Court of Appeals for the Third Circuit affirmed the lower court decision awarding fees and costs to the Company.

With respect to claims of other out-of-state firefighters involved in these two cases, the Company moved to dismiss these claims as improperly filed in Pennsylvania. The Court granted this motion and dismissed these claims on November 5, 2015. During August through December 2015, another nine new cases were filed in the Court of Common Pleas, Philadelphia County, Pennsylvania. These cases involve a total of 193 firefighters, most of whom are located outside of Pennsylvania. The Company again moved to dismiss all claims filed by out-of-state firefighters in these cases as improperly filed in Pennsylvania. On May 24, 2016, the Court granted this motion and dismissed these claims. Plaintiffs appealed this decision and, on September 25, 2018, the appellate court reversed this dismissal. The Company has filed a petition with the appellate court requesting that the court reconsider its ruling. On December 7, 2018, the appellate court granted the Company's petition and withdrew its prior decision. The Court has ordered that the parties file additional briefs and a new panel of appellate judges issue a decision.

On May 13, 2016, four new cases were filed in Philadelphia state court, involving a total of 55 Philadelphia firefighters who live in Pennsylvania. During August 2016, the Company settled a case involving four Philadelphia firefighters that had been set for trial in Philadelphia state court during September 2016. During 2017, plaintiffs filed additional cases in the Court of Common Pleas, Philadelphia County, involving over 100 Philadelphia firefighter plaintiffs. During January 2017, plaintiffs filed a motion to consolidate and bifurcate, similar to a motion filed in the Pittsburgh hearing loss cases, as described below. The Company has filed an opposition to this motion. These cases were then transferred to the mass tort program in Philadelphia for pretrial purposes. Plaintiffs' counsel thereafter dismissed several plaintiffs. During November 2017, a trial involving one Philadelphia firefighter occurred. The jury returned a verdict in favor of the Company in this trial. Prior to a dismissal of these cases pursuant to the Tolling Agreement, discussed below, there was a total of 75 firefighters involved in cases pending in the Philadelphia mass tort program.

During April through July 2013, additional cases were filed in Allegheny County, Pennsylvania on behalf of 247 plaintiff firefighters from Pittsburgh and against various defendants, including the Company. During May 2016, two additional cases were filed against the Company in Allegheny County involving 19 Pittsburgh firefighters. After the Company filed pretrial motions, the Court dismissed claims of 55 Pittsburgh firefighter plaintiffs. The Court scheduled trials for May, September and November 2016, for eight firefighters per trial. Prior to the first scheduled trial in Pittsburgh, the Court granted the Company's motion for summary judgment and dismissed all claims asserted by plaintiff firefighters involved in this trial. Following an appeal by the plaintiff firefighters, the appellate court affirmed this dismissal. The next trial for six Pittsburgh firefighters started on November 7, 2016. Shortly after this trial began, plaintiffs' counsel moved for a mistrial because a key witness suddenly became unavailable. The Court granted this motion and rescheduled this trial for March 6, 2017. During January 2017, plaintiffs also moved to consolidate and bifurcate trials involving Pittsburgh firefighters. In particular, plaintiffs sought one trial involving liability issues which will apply to all Pittsburgh firefighters who filed suit against the Company. The Company filed an opposition to this motion. On April 18, 2017, the trial court granted plaintiffs' motion to bifurcate the next

Pittsburgh trial. Pursuant to a motion for clarification filed by the Company, the Court ruled that the bifurcation order would only apply to six plaintiffs who were part of the next trial group in Pittsburgh. The Company thereafter sought an interlocutory appeal of the Court's bifurcation order. The appellate court declined to accept the appeal at that time.

A bifurcated trial began on September 27, 2017 in Allegheny County, Pennsylvania. Prior to and during trial, two plaintiffs were dismissed, resulting in four plaintiffs remaining for trial. After approximately two weeks of trial, the jury found that the Company's siren product was not defective or unreasonably dangerous and rendered a verdict in favor of the Company.

A second trial involving Pittsburgh firefighters began during January 2018. At the outset of this trial, plaintiffs' attorneys requested that the Company consider settlement of various cases. This trial was continued to allow the parties to further discuss possible settlement. During March 2018, the parties agreed in principle on a framework to resolve hearing loss claims and cases in all jurisdictions involved in the hearing loss litigation except in Cook County and Lackawanna County, and excluding one case involving one firefighter in New York City. The firefighters excluded from this settlement framework are represented by

different attorneys. Pursuant to this settlement framework, the Company would pay $700 to each firefighter who has filed a lawsuit and is eligible to be part of the settlement. The Company would pay $300 to each firefighter who has not yet filed a case and is eligible to be part of the settlement. To be eligible for settlement, among other things, firefighters must provide proof that they have high frequency noise-induced hearing loss. There are approximately 3,700 firefighters whose claims may be considered as part of this settlement, including approximately 1,320 firefighters who have ongoing filed lawsuits. The parties are in the process of determining how many of these firefighters will be eligible to participate in the settlement. In order to minimize the parties' respective legal costs and expenses during this settlement process, on July 5, 2018, the parties entered into a tolling agreement (the "Tolling Agreement"). Pursuant to the Tolling Agreement, counsel for the settling firefighters agreed to dismiss the pending lawsuits in all jurisdictions except for the Allegheny County (Pittsburgh), Pennsylvania cases, and the Company agreed to a tolling of any statute of limitations applicable to the dismissed cases until May 13, 2019. The settlement framework will require plaintiffs' attorneys to withdraw from representing firefighters who elect not to participate in this settlement.

As of March 31, 2019, the Company has recognized an estimated liability for the potential settlement amount. While it is reasonably possible that the ultimate resolution of this matter may result in a loss in excess of the amount accrued, the incremental loss is not expected to be material.

During March 2014, an action also was brought in the Court of Common Pleas of Erie County, Pennsylvania on behalf of 61 firefighters. This case likewise involves various defendants in addition to the Company. After the Company filed pretrial motions, 33 Erie County firefighter plaintiffs voluntarily dismissed their claims. During August 2017, five cases involving 70 firefighter plaintiffs were filed in Lackawanna County, Pennsylvania. These cases involve firefighter plaintiffs who originally filed in Cook County and were dismissed pursuant to the Company's forum nonconveniens motion. As of March 31, 2019, a total of 263 firefighters are involved in cases filed in Allegheny and Lackawanna counties in Pennsylvania.

On September 17, 2014, 20 lawsuits, involving a total of 193 Buffalo Fire Department firefighters, were filed in the Supreme Court of the State of New York, Erie County. All of the cases filed in Erie County, New York have been removed to federal court in the Western District of New York. Plaintiffs have filed a motion to consolidate and bifurcate these cases, similar to the motion filed in the Pittsburgh hearing loss cases, as described above. The Company has filed an opposition to the motion. During February 2015, a lawsuit involving one New York City firefighter plaintiff was filed in the Supreme Court of the State of New York, New York County. The plaintiff named the Company as well as several other parties as defendants. That case subsequently was transferred to federal court in the Northern District of New York and thereafter dismissed. During April 2015 through January 2016, 29 new cases involving a total of 235 firefighters were filed in various counties in the New York City area. During December 2016 through October 2017, additional cases were filed in these jurisdictions. On February 5, 2018, the Company was served with a complaint in an additional case filed in Kings County, New York. This case involves one plaintiff. Prior to a dismissal of these cases pursuant to the Tolling Agreement, there was a total of 536 firefighters involved in cases filed in the State of New York.

During November 2015, the Company was served with a complaint filed in Union County, New Jersey state court, involving 34 New Jersey firefighters. This case has been transferred to federal court in the District of New Jersey. During the period from January through May 2016, eight additional cases were filed in various New Jersey state courts. Most of the firefighters in these cases reside in New Jersey and work or worked at New Jersey fire departments. During December 2016, a case involving one New Jersey firefighter was filed in the United States District Court of New Jersey. On May 2, 2017, plaintiffs filed a motion to consolidate and bifurcate in the pending federal court case in New Jersey. This motion was similar to bifurcation motions filed by plaintiffs in Pittsburgh, Buffalo and Philadelphia. The Court has denied this motion as premature. Pursuant to a petition filed by both parties, all New Jersey state court cases were consolidated for pretrial purposes. Prior to a dismissal of these cases pursuant to

the Tolling Agreement, there was a total of 61 firefighters involved in cases filed in New Jersey.

During May through October 2016, nine cases were filed in Suffolk County, Massachusetts state court, naming the Company as a defendant. These cases involve 194 firefighters who lived and worked in the Boston area. During August 2017, plaintiffs filed additional cases in Suffolk County court. The Company moved to transfer various cases filed in Suffolk County to other counties in Massachusetts where plaintiffs reside and work. Prior to a dismissal of these cases pursuant to the Tolling Agreement, there was a total of 218 firefighters involved in cases filed in Massachusetts.

During August and September 2017, plaintiffs' attorneys filed additional hearing loss cases in Florida. The Company is the only named defendant. These cases were filed in several different counties in Florida, including Tampa, Miami and Orlando municipalities. Plaintiffs have agreed to stipulate that they will not seek more than $75,000 in damages in any individual plaintiff case. Prior to a dismissal of these cases pursuant to the Tolling Agreement, there was a total of 166 firefighters involved in cases filed in Florida.

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From 2007 through 2009, firefighters also brought hearing loss claims against the Company in New Jersey, Missouri, Maryland and Kings County, New York. All of those cases, however, were dismissed prior to trial, including four cases in the Supreme Court of Kings County, New York that were dismissed upon the Company's motion in 2008. On appeal, the New York appellate court affirmed the trial court's dismissal of these cases. Plaintiffs' attorneys have threatened to file additional lawsuits. The Company intends to vigorously defend all of these lawsuits, if filed.

NOTE 9 – EARNINGS PER SHARE

The Company computes earnings per share ("EPS") in accordance with ASC 260, Earnings per Share, which requires that non-vested restricted stock containing non-forfeitable dividend rights should be treated as participating securities pursuant to the two-class method. Under the two-class method, net income is reduced by the amount of dividends declared in the period for common stock and participating securities. The remaining undistributed earnings are then allocated to common stock and participating securities as if all of the net income for the period had been distributed. The amounts of distributed and undistributed earnings allocated to participating securities for the three months ended March 31, 2019 and 2018 were insignificant and did not materially impact the calculation of basic or diluted EPS.

Basic EPS is computed by dividing income available to common stockholders by the weighted average number of shares of common stock and non-vested restricted stock awards outstanding for the period.

Diluted EPS is computed using the weighted average number of shares of common stock and non-vested restricted stock awards outstanding for the year, plus the effect of dilutive potential common shares outstanding during the period. The dilutive effect of common stock equivalents is determined using the more dilutive of the two-class method or alternative methods. The Company uses the treasury stock method to determine the potentially dilutive impact of our employee stock options and restricted stock units, and the contingently issuable method for our performance-based restricted stock unit awards.

For the three months ended March 31, 2019 and 2018, options to purchase 0.3 million and 0.2 million shares of the Company's common stock, respectively, had an anti-dilutive effect on EPS, and accordingly, are excluded from the calculation of diluted EPS.

The following table reconciles Net income to basic and diluted EPS:

	Three Months Ended March 31,	
(in millions, except per share data)	2019	2018
Net income	$17.5	$12.9
Weighted average shares outstanding – Basic	60.1	59.8
Dilutive effect of common stock equivalents	1.1	1.0
Weighted average shares outstanding – Diluted	61.2	60.8
Earnings per share:		
Basic	$0.29	$0.22
Diluted	0.29	0.21

NOTE 10 – STOCKHOLDERS' EQUITY

Dividends

On February 19, 2019, the Company's Board of Directors (the "Board") declared a quarterly cash dividend of $0.08 per common share. The dividend totaled $4.8 million and was distributed on March 29, 2019 to holders of record at the close of business on March 18, 2019. During the three months ended March 31, 2018, dividends of $4.2 million were paid to stockholders.

On April 30, 2019, the Board declared a quarterly cash dividend of $0.08 per common share payable on May 30, 2019 to holders of record at the close of business on May 15, 2019.

Stock Repurchase Program

In November 2014, the Board authorized a stock repurchase program of up to $75.0 million of the Company's common stock. The stock repurchase program is intended primarily to facilitate opportunistic purchases of Company stock as a means to

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provide cash returns to stockholders, enhance stockholder returns and manage the Company's capital structure. Under the stock repurchase program, the Company is authorized to repurchase, from time to time, shares of its outstanding common stock in the open market or through privately negotiated transactions. Stock repurchases by the Company are subject to market conditions and other factors and may be commenced, suspended or discontinued at any time. During the three months ended March 31, 2019, the Company repurchased 48,409 shares for a total of $1.0 million under the stock repurchase program.

Accumulated Other Comprehensive Loss

The following tables summarize the changes in each component of Accumulated other comprehensive loss, net of tax:

(in millions) [(a)]	Actuarial Losses	Prior Service Costs	Foreign Currency Translation	Unrealized Gain on Derivatives	Total
Balance at January 1, 2019	$(87.4)	(2.5)	$(8.9)	$1.5	$(97.3)
Other comprehensive loss before reclassifications	(0.4)	—	—	(0.2)	(0.6)
Amounts reclassified from accumulated other comprehensive loss	0.6	—	—	(0.3)	0.3
Net current-period other comprehensive income (loss)	0.2	—	—	(0.5)	(0.3)
Balance at March 31, 2019	$(87.2)	(2.5)	$(8.9)	$1.0	$(97.6)

(in millions) [(a)]	Actuarial Losses	Foreign Currency Translation	Unrealized Gain on Derivatives	Total
Balance at January 1, 2018	$(75.4)	$(2.5)	$1.0	$(76.9)
Other comprehensive (loss) income before reclassifications	(0.7)	2.0	0.8	2.1
Amounts reclassified from accumulated other comprehensive loss	0.8	—	—	0.8
Net current-period other comprehensive income	0.1	2.0	0.8	2.9
Balance at March 31, 2018	$(75.3)	$(0.5)	$1.8	$(74.0)

(a) Amounts in parentheses indicate losses.

The following table summarizes the amounts reclassified from Accumulated other comprehensive loss, net of tax, in the three months ended March 31, 2019 and 2018 and the affected line item in the Condensed Consolidated Statements of Operations:

Details about Accumulated Other Comprehensive Loss Components	Amount Reclassified from Accumulated Other Comprehensive Loss		Affected Line Item in Condensed Consolidated Statements of Operations
	2019	2018	
(in millions) [(a)]			
Amortization of actuarial losses of defined benefit pension plans	$(0.8)	$(1.0)	Other expense, net
Interest rate swap	0.4	—	Interest expense
Total before tax	(0.4)	(1.0)	
Income tax benefit	0.1	0.2	Income tax expense
Total reclassifications for the period, net of tax	$(0.3)	$(0.8)	

(a) Amounts in parentheses indicate losses.

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NOTE 11 – SEGMENT INFORMATION

The Company has two reportable segments. Business units are organized under each reportable segment because they share certain characteristics, such as technology, marketing, distribution and product application, which create long-term synergies.

The following tables summarize the Company's operations by segment, including Net sales, Operating income (loss), and Total assets:

	Three Months Ended March 31,	
(in millions)	2019	2018
Net sales:		
Environmental Solutions	$219.5	$196.6
Safety and Security Systems	54.3	53.1
Total net sales	$273.8	$249.7
Operating income (loss):		
Environmental Solutions	$25.7	$20.6
Safety and Security Systems	8.7	6.1
Corporate and eliminations	(8.6)	(7.1)
Total operating income	25.8	19.6
Interest expense	2.0	2.5
Other expense, net	0.4	0.1
Income before income taxes	$23.4	$17.0

(in millions)	As of March 31, 2019	As of December 31, 2018
Total assets:		
Environmental Solutions	$825.7	$ 775.2
Safety and Security Systems	216.9	211.5
Corporate and eliminations	27.2	36.7
Total assets of continuing operations	1,069.8	1,023.4
Total assets of discontinued operations	0.4	0.4
Total assets	$1,070.2	$ 1,023.8

NOTE 12 – FAIR VALUE MEASUREMENTS

The Company uses a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy maximizes the use of observable inputs and minimizes the use of unobservable inputs. Observable inputs are developed based on market data obtained from independent sources, while unobservable inputs reflect the Company's assumptions about valuation based on the best information available in the circumstances. The three levels of inputs are classified as follows:

- Level 1 — quoted prices in active markets for identical assets or liabilities;
- Level 2 — observable inputs, other than quoted prices included in Level 1, such as quoted prices for markets that are not active, or other inputs that are observable or can be corroborated by observable market data; and
- Level 3 — unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities, including certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

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FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS — (CONTINUED)
(Unaudited)

In determining fair value, the Company uses various valuation approaches within the fair value measurement framework. The valuation methodologies used for the Company's assets and liabilities measured at fair value and their classification in the valuation hierarchy are summarized below:

Cash Equivalents

Cash equivalents primarily consist of time-based deposits and interest-bearing instruments with maturities of three months or less. The Company classified cash equivalents as Level 1 due to the short-term nature of these instruments and measured the fair value based on quoted prices in active markets for identical assets.

Interest Rate Swap

As described in Note 5 – Debt, the Company entered into an interest rate swap as a means of fixing the floating interest rate component on a portion of its floating-rate debt. The Company classified the interest rate swap as Level 2 due to the use of a discounted cash flow model based on the terms of the contract and the interest rate curve (Level 2 inputs) to calculate the fair value of the swap.

Contingent Consideration

The Company has a contingent obligation to transfer cash to the former owners of JJE if specified financial results are met over future reporting periods (i.e., an earn-out). Liabilities for contingent consideration are measured at fair value each reporting period, with the acquisition-date fair value included as part of the consideration transferred. Subsequent changes in fair value are recorded as a component of Acquisition and integration-related expenses on the Condensed Consolidated Statements of Operations.

The Company uses an income approach to value the contingent consideration obligation based on future financial performance, which is determined based on the present value of expected future cash flows. Due to the lack of relevant observable market data over fair value inputs, the Company has classified the contingent consideration liability within Level 3 of the fair value hierarchy outlined in ASC 820, Fair Value Measurements. Increases in the expected payout under a contingent consideration arrangement contribute to increases in the fair value of the related liability. Conversely, decreases in the expected payout under a contingent consideration arrangement contribute to decreases in the fair value of the related liability. Changes in assumptions could have an impact on the fair value of the contingent consideration, which has a maximum payout of C$10.0 million (approximately $7.5 million).

The following table summarizes the Company's assets and liabilities that are measured at fair value on a recurring basis as of March 31, 2019:

(in millions)	Fair Value Measurement at Reporting Date Using			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents	$3.8	$ —	$ —	$3.8
Interest rate swap	—	1.4	—	1.4
Liabilities:				
Contingent consideration	—	—	7.1	7.1

The following table provides a roll-forward of the fair value of recurring Level 3 fair value measurements in the three months ended March 31, 2019 and 2018:

(in millions)	2019	2018
Contingent consideration liability, at January 1	$6.7	$6.3
Foreign currency translation	0.2	(0.1)
Total losses included in earnings [(a)]	0.2	0.2
Contingent consideration liability, at March 31	$7.1	$6.4

(a)

Changes in the fair value of contingent consideration liabilities are included as a component of Acquisition and integration-related expenses within the Condensed Consolidated Statements of Operations.

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Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is designed to provide information that is supplemental to, and should be read together with, the condensed consolidated financial statements and the accompanying notes contained in this Form 10-Q, as well as the Company's Annual Report on Form 10-K for the year ended December 31, 2018. Information in MD&A is intended to assist the reader in obtaining an understanding of (i) the condensed consolidated financial statements, (ii) the Company's business segments and how the results of those segments impact the Company's results of operations and financial condition as a whole and (iii) how certain accounting principles affect the Company's condensed consolidated financial statements. The Company's results for interim periods are not necessarily indicative of annual operating results.

Executive Summary

The Company is a leading global manufacturer and supplier of (i) vehicles and equipment for maintenance and infrastructure end-markets, including sewer cleaners, vacuum trucks, street sweepers, dump truck bodies and trailers and (ii) safety, security and communication equipment, such as lights, sirens and warning systems. In addition, we sell parts and provide service, repair, equipment rentals and training as part of a comprehensive aftermarket offering to our customer base. We operate 14 manufacturing facilities in five countries and provide products and integrated solutions to municipal, governmental, industrial and commercial customers in all regions of the world.

As described in Note 11 – Segment Information to the accompanying condensed consolidated financial statements, the Company's business units are organized in two reportable segments: the Environmental Solutions Group and the Safety and Security Systems Group.

Net sales increased by $24.1 million, or 10%, in the three months ended March 31, 2019 as compared to the prior-year quarter. Our Environmental Solutions Group reported a net sales increase of $22.9 million, or 12%, largely due to increases in shipments of street sweepers, vacuum trucks, refuse trucks, dump truck bodies, sewer cleaners and trailers, as well as higher aftermarket sales. Within our Safety and Security Systems Group, net sales increased by $1.2 million, or 2%, primarily due to increases in global sales of public safety products and industrial signaling equipment in the U.S., partially offset by lower domestic warning system sales and unfavorable foreign currency translation effects.

Operating income increased by $6.2 million, or 32%, to $25.8 million in the three months ended March 31, 2019 as compared to the prior-year quarter, primarily driven by a $5.1 million increase within our Environmental Solutions Group associated with increased sales volumes and improved operating leverage. Operating income in the three months ended March 31, 2019 within our Safety and Security Systems Group increased by $2.6 million, while corporate expenses increased by $1.5 million. Consolidated operating margin for the three months ended March 31, 2019 was 9.4%, up from 7.8% in the prior-year quarter.

Income before income taxes increased by $6.4 million, or 38%, to $23.4 million for the three months ended March 31, 2019 as compared to the prior-year quarter. The increase resulted from the higher operating income and a $0.5 million decrease in interest expense, partially offset by a $0.3 million increase in other expense.

Net income for the three months ended March 31, 2019 increased by $4.6 million compared to the prior-year period, largely due to the aforementioned increase in income before income taxes, partially offset by a $1.8 million increase in income tax expense associated with higher income levels.

Total orders for the three months ended March 31, 2019 were $299.0 million, compared to $329.7 million in the prior-year quarter. Our Environmental Solutions Group reported total orders of $243.7 million in the first quarter of 2019, up 2% in comparison to the fourth quarter of 2018, but lower than the outstanding order intake of $274.4 million in the prior-year quarter, which included an estimated $25 million of orders for sewer cleaners and vacuum trucks that were accelerated from subsequent quarters in 2018. Orders in the three months ended March 31, 2019 within our Safety and Security Systems Group were consistent with the prior-year quarter.

Our consolidated backlog at March 31, 2019 was $363.5 million, up $26.8 million, or 8%, compared to the prior-year quarter, and up $25.8 million, or 8%, from December 31, 2018.

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Results of Operations

The following table summarizes our Condensed Consolidated Statements of Operations and illustrates the key financial indicators used to assess our consolidated financial results:

	Three Months Ended March 31,		
($ in millions, except per share data)	2019	2018	Change
Net sales	$273.8	$249.7	$24.1
Cost of sales	203.5	187.8	15.7
Gross profit	70.3	61.9	8.4
Selling, engineering, general and administrative expenses	43.9	41.8	2.1
Acquisition and integration-related expenses	0.6	0.5	0.1
Operating income	25.8	19.6	6.2
Interest expense	2.0	2.5	(0.5)
Other expense, net	0.4	0.1	0.3
Income before income taxes	23.4	17.0	6.4
Income tax expense	5.9	4.1	1.8
Net income	$17.5	$12.9	$4.6
Operating data:			
Operating margin	9.4 %	7.8 %	1.6 %
Diluted earnings per share	$0.29	$0.21	$0.08
Total orders	299.0	329.7	(30.7)
Backlog	363.5	336.7	26.8
Depreciation and amortization	9.5	8.6	0.9

Net sales

Net sales increased by $24.1 million, or 10%, in the three months ended March 31, 2019 as compared to the prior-year quarter. The Environmental Solutions Group reported a net sales increase of $22.9 million, or 12%, largely due to increases in shipments of street sweepers, vacuum trucks, refuse trucks, dump truck bodies, sewer cleaners and trailers, as well as higher aftermarket sales. Within the Safety and Security Systems Group, net sales increased by $1.2 million, or 2%, primarily due to increases in global sales of public safety products and industrial signaling equipment in the U.S., partially offset by lower domestic warning system sales and unfavorable foreign currency translation effects.

Cost of sales

Cost of sales increased by $15.7 million, or 8%, for the three months ended March 31, 2019 compared to the prior-year quarter, largely due to an increase of $16.7 million, or 11%, within the Environmental Solutions Group, primarily driven by increased sales volumes and a $1.2 million increase in depreciation expense, partially offset by a $0.5 million reduction in purchase accounting expenses. Within the Safety and Security Systems Group, cost of sales decreased by $1.0 million, or 3%, largely due to favorable sales mix.

Gross profit

Gross profit increased by $8.4 million, or 14%, for the three months ended March 31, 2019, compared to the prior-year quarter, primarily due to improvements of $6.2 million and $2.2 million within the Environmental Solutions Group and the Safety and Security Systems Group, respectively. Gross margin for the three months ended March 31, 2019 improved to 25.7%, from 24.8% in the prior-year quarter, primarily driven by improvements within the Safety and Security Group and Environmental Solutions Group of 320 basis points and 60 basis points, respectively. Margin improvements were primarily attributable to improved operating leverage, benefits from pricing actions and favorable sales mix.

Selling, engineering, general and administrative expenses

Selling, engineering, general and administrative (“SEG&A”) expenses for the three months ended March 31, 2019 increased by $2.1 million, or 5%, primarily due to increases within the Environmental Solutions Group and Corporate

of $1.0 million and $1.5 million, respectively, partially offset by a $0.4 million reduction within the Safety and Security Systems Group. As a

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percentage of net sales, SEG&A expenses decreased from 16.7% in the prior-year quarter, to 16.0% in the current-year quarter.

Operating income

Operating income increased by $6.2 million, or 32%, to $25.8 million in the three months ended March 31, 2019 as compared to the prior-year quarter, primarily driven by a $5.1 million increase within the Environmental Solutions Group associated with increased sales volumes and improved operating leverage. Operating income in the three months ended March 31, 2019 within the Safety and Security Systems Group increased by $2.6 million, while corporate expenses increased by $1.5 million. Consolidated operating margin for the three months ended March 31, 2019 was 9.4%, up from 7.8% in the prior-year quarter.

Interest expense

Interest expense for the three months ended March 31, 2019 decreased by $0.5 million in comparison to the prior-year quarter, largely due to lower average debt levels in the first quarter of this year when compared to same period of the prior year.

Other expense, net

For the three months ended March 31, 2019, other expense increased by $0.3 million, primarily due to higher pension expense and foreign currency transaction losses.

Income tax expense

The Company recognized income tax expense of $5.9 million and $4.1 million for the three months ended March 31, 2019 and 2018, respectively. The increase in tax expense in the current-year quarter was largely due to higher pre-tax income levels. The effective tax rate for the three months ended March 31, 2019 was 25.2%, compared to 24.1% in the prior-year quarter.

Net income

Net income for the three months ended March 31, 2019 increased by $4.6 million compared to the prior-year period, largely due to the aforementioned increase in income before income taxes, partially offset by a $1.8 million increase in income tax expense, associated with higher income levels.

Orders

Total orders for the three months ended March 31, 2019 were $299.0 million, a decrease of $30.7 million, or 9%, as compared to the prior-year quarter. Our Environmental Solutions Group reported total orders of $243.7 million in the first quarter of 2019, up 2% in comparison to the fourth quarter of 2018, but lower than the outstanding order intake of $274.4 million in the prior-year quarter, which included an estimated $25 million of orders for sewer cleaners and vacuum trucks that were accelerated from subsequent quarters in 2018. Orders in the three months ended March 31, 2019 within our Safety and Security Systems Group were essentially flat compared with the prior-year quarter.

U.S. municipal and governmental orders decreased by $10.1 million, or 10%, primarily due to an $8.8 million decrease within the Environmental Solutions Group, driven by decreases in orders for sewer cleaners and street sweepers of $7.7 million and $4.3 million, respectively, partially offset by a $2.7 million improvement in orders for vacuum trucks and a $0.5 million increase in aftermarket demand. Within the Safety and Security Systems Group, municipal orders decreased by $1.3 million, due to reductions in orders for public safety products and warning systems of $0.9 million and $0.4 million, respectively.

U.S. industrial orders decreased by $25.2 million, or 16%, primarily due to a $27.5 million decrease within the Environmental Solutions Group, largely represented by decreases in orders for sewer cleaners, dump truck bodies, vacuum trucks, and trailers of $12.0 million, $8.1 million, $6.9 million and $4.0 million, respectively. These decreases were partially offset by a $4.6 million increase in aftermarket demand. The Safety and Security Systems Group reported a $2.3 million increase in industrial orders, primarily due to improvements in orders for public safety products and industrial signaling equipment of $1.8 million and $0.6 million, respectively.

Non-U.S. orders increased by $4.6 million, or 7%, primarily due to a $5.6 million increase within the Environmental Solutions Group, primarily due to a $6.0 million improvement in orders for vacuum trucks and a $3.4 million increase in aftermarket demand. Partially offsetting these improvements was a $3.1 million decrease in orders for products manufactured by other companies, such as refuse trucks, and a $1.1 million reduction in orders for waterblasting

equipment. Within the Safety and Security Solutions Group, non-U.S. orders decreased by $1.0 million, primarily due to decreases in orders for public safety products and warning systems, as well as unfavorable foreign currency translation effects, which were partially offset by higher orders for industrial signaling equipment.

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Backlog

Backlog was $363.5 million at March 31, 2019 compared to $336.7 million at March 31, 2018. The increase of $26.8 million, or 8%, was primarily due to a $27.5 million increase in backlog within the Environmental Solutions Group, largely associated with strong demand for sewer cleaners and vacuum trucks experienced in the second half of 2018.

Environmental Solutions

The following table summarizes the Environmental Solutions Group's operating results as of and for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,		
($ in millions)	2019	2018	Change
Net sales	$219.5	$196.6	$22.9
Operating income	25.7	20.6	5.1
Operating data:			
Operating margin	11.7 %	10.5 %	1.2 %
Total orders	$243.7	$274.4	$(30.7)
Backlog	335.4	307.9	27.5
Depreciation and amortization	8.6	7.7	0.9

Total orders decreased by $30.7 million, or 11%, for the three months ended March 31, 2019. U.S. orders decreased by $36.3 million, or 16%, primarily due to decreases in orders for sewer cleaners, dump truck bodies, street sweepers, vacuum trucks and trailers of $19.7 million, $8.1 million, $5.1 million, $4.2 million and $4.0 million, respectively. Partially offsetting these decreases was a $5.1 million improvement in aftermarket demand. Non-U.S. orders increased by $5.6 million, or 12%, primarily due to a $6.0 million improvement in orders for vacuum trucks and a $3.4 million increase in aftermarket demand. Partially offsetting these improvements was a $3.1 million decrease in orders for products manufactured by other companies, such as refuse trucks, and a $1.1 million reduction in orders for waterblasting equipment.

Net sales increased by $22.9 million, or 12%, for the three months ended March 31, 2019. U.S. sales increased by $10.2 million, primarily due to increases in sales of street sweepers, dump truck bodies, waterblasting equipment, vacuum trucks and trailers of $3.9 million, $2.0 million, $1.9 million, $1.1 million and $1.1 million, respectively. In addition, aftermarket sales increased by $2.2 million. Partially offsetting these increases was a $1.8 million reduction in sales of sewer cleaners. Non-U.S. sales increased by $12.7 million, primarily due to increases in sales of refuse trucks, vacuum trucks, sewer cleaners and street sweepers of $4.7 million, $4.4 million, $3.1 million and $2.0 million, respectively. In addition, aftermarket sales increased by $1.6 million. Partially offsetting these increases were reductions in sales of snow removal and waterblasting equipment of $1.3 million and $1.0 million, respectively.

Cost of sales increased by $16.7 million, or 11%, for the three months ended March 31, 2019, primarily attributable to increased sales volumes, higher material costs in comparison to the prior-year quarter, and a $1.2 million increase in depreciation expense, partially offset by a $0.5 million reduction in purchase accounting expenses. Gross margin improved to 22.4% from 21.8% in the prior-year quarter, primarily due to improved operating leverage, benefits from pricing actions, and favorable sales mix.

SEG&A expenses increased by $1.0 million for the three months ended March 31, 2019, due to higher employee incentive costs, depreciation expense and professional fees. As a percentage of net sales, SEG&A expenses decreased from 11.2% in the prior-year quarter, to 10.5% in the current-year quarter.

Operating income for the three months ended March 31, 2019 increased by $5.1 million, largely due to a $6.2 million increase in gross profit, partially offset by the $1.0 million increase in SEG&A expenses.

Backlog was $335.4 million at March 31, 2019, up 9% compared to $307.9 million at March 31, 2018. The increase was largely associated with strong demand for sewer cleaners and vacuum trucks experienced in the second half of 2018.

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Safety and Security Systems

The following table summarizes the Safety and Security Systems Group's operating results as of and for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,		
($ in millions)	2019	2018	Change
Net sales	$54.3	$53.1	$1.2
Operating income	8.7	6.1	2.6
Operating data:			
Operating margin	16.0 %	11.5 %	4.5 %
Total orders	$55.3	$55.3	$—
Backlog	28.1	28.8	(0.7)
Depreciation and amortization	0.9	0.9	—

Total orders for the three months ended March 31, 2019 were essentially flat compared with the prior-year quarter. U.S. orders increased by $1.0 million, or 3%, primarily driven by increases in orders for public safety products and industrial signaling equipment of $0.9 million and $0.6 million, respectively, partially offset by a $0.5 million reduction in orders for warning systems. Non-U.S. orders decreased by $1.0 million, or 5%, primarily due to decreases in orders for public safety products and warning systems of $1.0 million and $0.5 million, respectively, as well as a $1.1 million unfavorable foreign currency translation impact. Partially offsetting these reductions was a $1.6 million improvement in orders for industrial signaling equipment.

Net sales increased by $1.2 million, or 2%, for the three months ended March 31, 2019. In the aggregate, U.S. sales were flat as compared to the prior-year period. Sales of industrial signaling equipment and public safety products increased by $0.7 million and $0.7 million, respectively, and were offset by a $1.4 million reduction in sales of warning systems. Non-U.S. sales increased by $1.2 million, primarily due to increases in sales of public safety products and warning systems of $1.9 million and $0.3 million, respectively, which were partially offset by a $1.1 million unfavorable foreign currency translation impact.

Despite higher sales volumes, cost of sales for the three months ended March 31, 2019 decreased by $1.0 million, or 3%, largely due to favorable mix. Gross margin for the three months ended March 31, 2019 improved to 39.0%, compared to 35.8% in the prior-year quarter, primarily due to benefits from pricing actions and improved sales mix in comparison to the prior-year quarter.

SEG&A expenses for the three months ended March 31, 2019 decreased by $0.4 million, or 3%, largely due to lower marketing expense compared to the prior year quarter. As a percentage of net sales, SEG&A expenses decreased from 24.3% in the prior-year quarter, to 23.0% in the current-year quarter.

Operating income increased by $2.6 million for the three months ended March 31, 2019. The increase was primarily attributable to the $2.2 million improvement in gross profit and the $0.4 million reduction in SEG&A expenses.

Backlog was $28.1 million at March 31, 2019, compared to $28.8 million at March 31, 2018.

Corporate Expenses

Corporate operating expenses for the three months ended March 31, 2019 were $8.6 million, compared to $7.1 million in the prior-year quarter. The increase was primarily driven by higher employee incentive costs and post-employment expenses, partially offset by lower expenses associated with hearing loss litigation.

Seasonality of Company's Business

Certain of the Company's businesses are susceptible to the influences of seasonal factors, including buying patterns, delivery patterns and productivity influences from holiday periods and weather. In general, the Company tends to have lower equipment sales in the first calendar quarter of each year compared to other quarters as a result of these factors. In addition, rental income and parts sales are generally higher in the second and third quarters of the year, because many of the Company's products are used for maintenance activities in North America, where usage is typically lower during periods of harsher weather conditions.

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Financial Condition, Liquidity and Capital Resources

The Company uses its cash flow from operations to fund growth and to make capital investments that sustain its operations, reduce costs, or both. Beyond these uses, remaining cash is used to pay down debt, repurchase shares, fund dividend payments and make pension contributions. The Company may also choose to invest in the acquisition of businesses. In the absence of significant unanticipated cash demands, we believe that the Company's existing cash balances, cash flow from operations and borrowings available under the Amended 2016 Credit Agreement will provide funds sufficient for these purposes. The net cash flows associated with the Company's rental equipment transactions are included in cash flow from operating activities.

The Company's cash and cash equivalents totaled $22.7 million and $37.4 million as of March 31, 2019 and December 31, 2018, respectively. As of March 31, 2019, $15.4 million of cash and cash equivalents was held by foreign subsidiaries. Cash and cash equivalents held by subsidiaries outside the U.S. typically are held in the currency of the country in which it is located. This cash is used to fund the operating activities of our foreign subsidiaries and for further investment in foreign operations. Historically, we have considered such cash to be permanently reinvested in our foreign operations and our current plans do not demonstrate a need to repatriate such cash to fund U.S. operations. However, in the event that these funds are needed to fund U.S. operations or to satisfy U.S. obligations, they generally could be repatriated. The repatriation of these funds may cause us to incur additional U.S. income tax expense, dependent on income tax laws and other circumstances at the time any such amounts are repatriated. While the Company has no transition tax liability, the Company continues to assert that its undistributed earnings of certain foreign subsidiaries are indefinitely reinvested. The Company will continue to evaluate its U.S. and foreign cash needs and, as circumstances change, may change its assertion related to all or a portion of its undistributed foreign earnings.

In the three months ended March 31, 2019, net cash of $8.8 million was used for operating activities to fund seasonal increases in working capital requirements, higher incentive compensation and tax payments, and rental fleet investment. In the three months ended March 31, 2018, net cash of $10.3 million was provided by operating activities.

Net cash of $4.5 million was used for investing activities in the three months ended March 31, 2019, whereas in the prior-year period, $0.1 million of cash was provided by investing activities. Capital expenditures in the three months ended March 31, 2019 and 2018 were $4.5 million and $3.0 million, respectively. During the three months ended March 31, 2018, the Company also received $3.0 million as part of the finalization of certain post-closing adjustments in connection with the 2017 acquisition of Truck Bodies and Equipment International.

Net cash of $1.4 million was used for financing activities in the three months ended March 31, 2019, compared to $12.7 million in the prior-year period. In the three months ended March 31, 2019, the Company borrowed $5.5 million against its revolving credit facility. The Company also funded cash dividends and share repurchases of $4.8 million and $1.0 million, respectively, and redeemed $1.1 million of stock in order to remit funds to tax authorities to satisfy employees' tax withholdings following the vesting of stock-based compensation. In the three months ended March 31, 2018, the Company paid down $8.6 million of debt and funded cash dividends of $4.2 million.

The Company is subject to certain leverage ratio and interest coverage ratio financial covenants under the Amended 2016 Credit Agreement that are to be measured at each fiscal quarter-end. The Company was in compliance with all such covenants as of March 31, 2019.

As of March 31, 2019, there was $216.2 million of cash drawn and $11.3 million of undrawn letters of credit under the Amended 2016 Credit Agreement, with $172.5 million of net availability for borrowings.

During the three months ended March 31, 2019, the Company announced plans to expand the primary production facility of its Vactor Manufacturing, Inc. subsidiary. Over the course of the expansion project, the Company is expecting to invest up to $25 million. The Company anticipates that capital expenditures for 2019, excluding investment associated with the Vactor plant expansion, will be in the range of $15 million to $20 million.

Contractual Obligations and Off-Balance Sheet Arrangements

During the three months ended March 31, 2019, there have been no material changes in the Company's contractual obligations and off-balance sheet arrangements as described in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, of the Company's Annual Report on Form 10-K for the year ended December 31, 2018.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

See Item 7A, Quantitative and Qualitative Disclosures about Market Risk, of the Company's Annual Report on Form 10-K for the year ended December 31, 2018. During the three months ended March 31, 2019, there have been no significant changes in our exposure to market risk.

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Item 4. Controls and Procedures.

As required by Rule 13a-15 under the Exchange Act, the Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) or Rule 15d-15(e) under the Exchange Act) as of March 31, 2019. Based on that evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of March 31, 2019.

As a matter of practice, the Company's management continues to review and document internal control and procedures for financial reporting. From time to time, the Company may make changes aimed at enhancing the effectiveness of the controls and ensuring that the systems evolve with the business. There were no changes in the Company's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting during the three months ended March 31, 2019.

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PART II. OTHER INFORMATION

Item 1. Legal Proceedings.

The information set forth under the heading "Legal Proceedings" in Note 8 – Commitments and Contingencies to the accompanying condensed consolidated financial statements as included in Part I of this Form 10-Q is incorporated herein by reference.

Item 1A. Risk Factors.

There have been no material changes in the Company's risk factors as described in Item 1A, Risk Factors, of the Company's Annual Report on Form 10-K for the year ended December 31, 2018, except that the Company entered into a new 3-year collective bargaining agreement with the International Brotherhood of Electrical Workers, effective April 2019.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

The following table provides a summary of the Company's repurchase activity for its common stock during the three months ended March 31, 2019:

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs [(a)]
January 2019 (1/1/19 – 2/2/19)	47,500	$19.8227	47,500	$29,217,224
February 2019 (2/3/19 – 3/2/19)	909	20.9777	909	29,198,155
March 2019 (3/3/19 – 3/30/19)	—	—	—	29,198,155

(a) On November 4, 2014, the Board authorized a stock repurchase program of up to $75.0 million of the Company's common stock.

Item 3. Defaults upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

Submission of Matters to a Vote of Security Holders

The Company held its 2019 Annual Meeting of Stockholders on April 30, 2019. As of the March 4, 2019 record date, there were 60,253,987 shares of the Company's common stock outstanding. The holders of 55,461,674 shares of common stock, representing 92.04% of the outstanding shares entitled to vote as of the record date, were represented at the meeting in person or by proxy. This amount represented a quorum. Set forth below are the final voting results for each of the three proposals submitted to a vote of the Company's stockholders at the meeting. The proposals are described in detail in the Company's 2019 Proxy Statement filed with the SEC on March 15, 2019 (the "2019 Proxy Statement").

Proposal 1.

The following nominees were elected to the Board of Directors to hold office for one year or until their successors are elected and qualified. There were no abstentions, and 3,121,960 broker non-votes, with respect to this matter. The voting results were as follows:

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	For	Withhold
Eugene J. Lowe, III	51,718,497	621,217
Dennis J. Martin	51,345,844	993,870
Patrick E. Miller	51,646,268	693,446
Richard R. Mudge	51,596,241	743,473
William F. Owens	51,003,853	1,335,861
Brenda L. Reichelderfer	51,051,124	1,288,590
Jennifer L. Sherman	51,532,765	806,949
John L. Workman	51,687,803	651,911

Proposal 2.

The stockholders, in an advisory vote, approved the named executive officer compensation as disclosed in the 2019 Proxy Statement. There were 3,121,960 broker non-votes with respect to this matter. The voting results were as follows:

For	Against	Abstentions
51,139,410	1,053,217	147,087

In accordance with the stockholder vote at our 2017 Annual Meeting of Stockholders, the Board determined that the Company's policy is to hold a stockholder advisory vote on executive compensation every year until the next required advisory vote on the frequency of such votes. The Company is required to hold advisory votes on frequency every six years.

Proposal 3.

The stockholders ratified the appointment of Deloitte & Touche LLP as the Company’s independent registered public accounting firm for 2019. There were no broker non-votes with respect to this matter. The voting results were as follows:

For	Against	Abstentions
55,390,554	55,061	16,059

Other Events

On May 2, 2019, the Company issued a press release announcing its financial results for the three months ended March 31, 2019. The presentation slides for the first quarter 2019 earnings call were also posted on the Company’s website at that time. The full text of the first quarter financial results press release and earnings presentation are attached hereto as Exhibits 99.1 and 99.2, respectively, to this Form 10-Q.

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Item 6. Exhibits.

3.1	Restated Certificate of Incorporation of the Company. Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed April 30, 2010.
3.2	Amended and Restated By-laws of the Company. Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed February 9, 2016.
31.1	CEO Certification under Section 302 of the Sarbanes-Oxley Act.
31.2	CFO Certification under Section 302 of the Sarbanes-Oxley Act.
32.1	CEO Certification of Periodic Report under Section 906 of the Sarbanes-Oxley Act.
32.2	CFO Certification of Periodic Report under Section 906 of the Sarbanes-Oxley Act.
99.1	First Quarter Financial Results Press Release, Dated May 2, 2019.
99.2	First Quarter Earnings Call Presentation Slides.
101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Label Linkbase Document.
101.PRE	XBRL Taxonomy Presentation Linkbase Document.

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SIGNATURE

Pursuant to the requirements of Section 13 or 15 (d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Federal Signal Corporation

Date: May 2, 2019 /s/ Ian A. Hudson
Ian A. Hudson
Senior Vice President and Chief Financial Officer
(Principal Financial Officer)