

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 or 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Quarterly Period Ended **March 31, 2017**
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 **001-03970**

HARSCO

HARSCO CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

23-1483991

(I.R.S. employer identification number)

350 Poplar Church Road, Camp Hill, Pennsylvania

(Address of principal executive offices)

17011

(Zip Code)

Registrant's telephone number, including area code **717-763-7064**

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 NO

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). YES 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

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

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

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

Class	Outstanding at April 28, 2017
Common stock, par value \$1.25 per share	80,191,560

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PART I — FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

**HARSCO CORPORATION
CONDENSED CONSOLIDATED BALANCE SHEETS (Unaudited)**

(In thousands)	March 31 2017	December 31 2016
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 64,429	\$ 71,879
Trade accounts receivable, net	267,999	236,554
Other receivables	21,192	21,053
Inventories	190,431	187,681
Other current assets	34,203	33,108
Total current assets	578,254	550,275
Property, plant and equipment, net	483,271	490,255
Goodwill	384,812	382,251
Intangible assets, net	40,469	41,567
Deferred income tax assets	106,926	106,311
Other assets	12,702	10,679
Total assets	\$ 1,606,434	\$ 1,581,338
LIABILITIES		
Current liabilities:		
Short-term borrowings	\$ 7,875	\$ 4,259
Current maturities of long-term debt	18,690	25,574
Accounts payable	108,551	107,954
Accrued compensation	35,238	46,658
Income taxes payable	6,582	4,301
Insurance liabilities	11,916	11,850
Advances on contracts and other customer advances	113,949	117,329
Other current liabilities	112,714	109,748
Total current liabilities	415,515	427,673
Long-term debt	646,632	629,239
Insurance liabilities	25,102	25,265
Retirement plan liabilities	308,711	319,597
Other liabilities	41,941	42,001
Total liabilities	1,437,901	1,443,775
COMMITMENTS AND CONTINGENCIES		
HARSCO CORPORATION STOCKHOLDERS' EQUITY		
Preferred stock	—	—
Common stock	140,639	140,625
Additional paid-in capital	176,297	172,101
Accumulated other comprehensive loss	(589,723)	(606,722)
Retained earnings	1,158,869	1,150,688
Treasury stock	(760,444)	(760,391)
Total Harsco Corporation stockholders' equity	125,638	96,301
Noncontrolling interests	42,895	41,262
Total equity	168,533	137,563
Total liabilities and equity	\$ 1,606,434	\$ 1,581,338

See accompanying notes to unaudited condensed consolidated financial statements.

HARSCO CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

(In thousands, except per share amounts)	Three Months Ended March 31	
	2017	2016
Revenues from continuing operations:		
Service revenues	\$ 240,609	\$ 225,494
Product revenues	131,932	127,787
Total revenues	372,541	353,281
Costs and expenses from continuing operations:		
Cost of services sold	188,901	189,817
Cost of products sold	98,866	93,244
Selling, general and administrative expenses	55,141	50,784
Research and development expenses	831	882
Other expenses	894	9,123
Total costs and expenses	344,633	343,850
Operating income from continuing operations	27,908	9,431
Interest income	512	535
Interest expense	(11,653)	(12,363)
Change in fair value to the unit adjustment liability and loss on dilution of equity method investment	—	(12,217)
Income (loss) from continuing operations before income taxes and equity income	16,767	(14,614)
Income tax (expense) benefit	(6,253)	2,166
Equity income of unconsolidated entities, net	—	3,175
Income (loss) from continuing operations	10,514	(9,273)
Discontinued operations:		
Loss on disposal of discontinued business	(588)	(506)
Income tax benefit related to discontinued business	211	187
Loss from discontinued operations	(377)	(319)
Net income (loss)	10,137	(9,592)
Less: Net income attributable to noncontrolling interests	(1,247)	(1,277)
Net income (loss) attributable to Harsco Corporation	\$ 8,890	\$ (10,869)
Amounts attributable to Harsco Corporation common stockholders:		
Income (loss) from continuing operations, net of tax	\$ 9,267	\$ (10,550)
Loss from discontinued operations, net of tax	(377)	(319)
Net income (loss) attributable to Harsco Corporation common stockholders	\$ 8,890	\$ (10,869)
Weighted-average shares of common stock outstanding	80,385	80,238
Basic earnings (loss) per common share attributable to Harsco Corporation common stockholders:		
Continuing operations	\$ 0.12	\$ (0.13)
Discontinued operations	—	—
Basic earnings (loss) per share attributable to Harsco Corporation common stockholders	\$ 0.11 ^(a)	\$ (0.14) ^(a)
Diluted weighted-average shares of common stock outstanding	82,263	80,238
Diluted earnings (loss) per common share attributable to Harsco Corporation common stockholders:		
Continuing operations	\$ 0.11	\$ (0.13)
Discontinued operations	—	—
Diluted earnings (loss) per share attributable to Harsco Corporation common stockholders	\$ 0.11	\$ (0.14) ^(a)

(a) Does not total due to rounding

See accompanying notes to unaudited condensed consolidated financial statements.

HARSCO CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (Unaudited)

(In thousands)	Three Months Ended	
	March 31	
	2017	2016
Net income (loss)	\$ 10,137	\$ (9,592)
Other comprehensive income (loss):		
Foreign currency translation adjustments, net of deferred income taxes of \$393 and \$(3,577) in 2017 and 2016, respectively	16,561	11,621
Net loss on cash flow hedging instruments, net of deferred income taxes of \$256 and \$14 in 2017 and 2016, respectively	(387)	(2,407)
Pension liability adjustments, net of deferred income taxes of \$(522) and \$(685) in 2017 and 2016, respectively	1,205	10,440
Unrealized gain (loss) on marketable securities, net of deferred income taxes of \$(3) and \$4 in 2017 and 2016, respectively	6	(7)
Total other comprehensive income	17,385	19,647
Total comprehensive income	27,522	10,055
Less: Comprehensive income attributable to noncontrolling interests	(1,633)	(1,548)
Comprehensive income attributable to Harsco Corporation	\$ 25,889	\$ 8,507

See accompanying notes to unaudited condensed consolidated financial statements.

HARSCO CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)

(In thousands)	Three Months Ended March 31	
	2017	2016
Cash flows from operating activities:		
Net income (loss)	\$ 10,137	\$ (9,592)
Adjustments to reconcile net income (loss) to net cash used by operating activities:		
Depreciation	30,207	33,081
Amortization	2,021	2,964
Change in fair value to the unit adjustment liability and loss on dilution of equity method investment	—	12,217
Deferred income tax benefit	(221)	(567)
Equity in income of unconsolidated entities, net	—	(3,175)
Dividends from unconsolidated entities	19	16
Other, net	5,131	(9,875)
Changes in assets and liabilities:		
Accounts receivable	(27,882)	15,952
Inventories	(755)	(12,408)
Accounts payable	(541)	(15,851)
Accrued interest payable	286	6,668
Accrued compensation	(12,352)	(3,777)
Advances on contracts and other customer advances	(4,998)	(8,995)
Retirement plan liabilities, net	(8,381)	(10,238)
Other assets and liabilities	1,205	605
Net cash used by operating activities	(6,124)	(2,975)
Cash flows from investing activities:		
Purchases of property, plant and equipment	(16,989)	(16,951)
Proceeds from sales of assets	1,006	2,819
Purchases of businesses, net of cash acquired	—	(26)
Other investing activities, net	33	5,427
Net cash used by investing activities	(15,950)	(8,731)
Cash flows from financing activities:		
Short-term borrowings, net	3,655	(366)
Current maturities and long-term debt:		
Additions	24,000	29,010
Reductions	(14,345)	(42,921)
Cash dividends paid on common stock	—	(4,105)
Stock-based compensation - Employee taxes paid	(53)	—
Proceeds from cross-currency interest rate swap termination	—	16,625
Deferred financing costs	(36)	(894)
Net cash provided (used) by financing activities	13,221	(2,651)
Effect of exchange rate changes on cash	1,403	5,006
Net decrease in cash and cash equivalents	(7,450)	(9,351)
Cash and cash equivalents at beginning of period	71,879	79,756
Cash and cash equivalents at end of period	\$ 64,429	\$ 70,405

See accompanying notes to unaudited condensed consolidated financial statements.

HARSCO CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF EQUITY (Unaudited)

(In thousands, except share amounts)	Harsco Corporation Stockholders' Equity						
	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Noncontrolling Interests	Total
	Issued	Treasury					
Balances, January 1, 2016	\$ 140,503	\$ (760,299)	\$ 170,699	\$ 1,236,355	\$ (515,688)	\$ 39,233	\$ 310,803
Net income (loss)				(10,869)		1,277	(9,592)
Total other comprehensive income, net of deferred income taxes of \$(4,244)					19,376	271	19,647
Amortization of unearned portion of stock-based compensation, net of forfeitures			1,475				1,475
Balances, March 31, 2016	\$ 140,503	\$ (760,299)	\$ 172,174	\$ 1,225,486	\$ (496,312)	\$ 40,781	\$ 322,333

(In thousands)	Harsco Corporation Stockholders' Equity						
	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Noncontrolling Interests	Total
	Issued	Treasury					
Balances, January 1, 2017	\$ 140,625	\$ (760,391)	\$ 172,101	\$ 1,150,688	\$ (606,722)	\$ 41,262	\$ 137,563
Net income				8,890		1,247	10,137
Adoption of new accounting standard (See Note 2)			1,106	(709)			397
Total other comprehensive income, net of deferred income taxes of \$124					16,999	386	17,385
Vesting of restricted stock units and other stock grants, net 7,254 shares	14	(53)	(14)				(53)
Amortization of unearned portion of stock-based compensation, net of forfeitures			3,104				3,104
Balances, March 31, 2017	\$ 140,639	\$ (760,444)	\$ 176,297	\$ 1,158,869	\$ (589,723)	\$ 42,895	\$ 168,533

See accompanying notes to unaudited condensed consolidated financial statements.

HARSCO CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

1. Basis of Presentation

Harsco Corporation (the "Company") has prepared these unaudited condensed consolidated financial statements based on Securities and Exchange Commission rules that permit reduced disclosure for interim periods. In the opinion of management, all adjustments (all of which are of a normal recurring nature) that are necessary for a fair statement are reflected in the unaudited condensed consolidated financial statements. The December 31, 2016 Condensed Consolidated Balance Sheet information contained in this Quarterly Report on Form 10-Q was derived from the 2016 audited consolidated financial statements, but does not include all disclosures required by accounting principles generally accepted in the U.S. ("U.S. GAAP") for an annual report. The unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements, including the notes thereto, included in the Company's Annual Report on Form 10-K for the year ended December 31, 2016.

Operating results and cash flows for the three months ended March 31, 2017 are not indicative of the results that may be expected for the year ending December 31, 2017.

Reclassifications

Certain reclassifications have been made to prior year amounts to conform with current year classifications.

2. Recently Adopted and Recently Issued Accounting Standards

The following accounting standards have been adopted in 2017:

On January 1, 2017, the Company adopted changes issued by the Financial Accounting Standards Board ("FASB") related to the simplification of the measurement of inventory. The changes required entities to measure most inventory at the lower of cost and net realizable value, thereby simplifying the previous guidance under which an entity must measure inventory at the lower of cost or market. The changes did not apply to inventories that are measured using either the last-in, first-out method or the retail inventory method. The adoption of these changes did not have an impact on the Company's condensed consolidated financial statements.

On January 1, 2017, the Company adopted changes issued by the FASB that required deferred tax assets and liabilities to be classified as non-current in a classified statement of financial position. The changes applied to all entities that present a classified statement of financial position. The requirement that deferred tax assets and liabilities of a tax-paying component of an entity be offset and presented as a single amount was not affected. The adoption of these changes resulted in the Company reclassifying approximately \$27 million from reported current assets to Deferred income tax assets based on balances at December 31, 2016.

On January 1, 2017, the Company adopted changes issued by the FASB amending the accounting for stock-based compensation and requiring excess tax benefits and shortfalls to be recognized as a component of income tax expense rather than equity. These changes also required excess tax benefits and shortfalls to be presented as an operating activity on the Condensed Consolidated Statement of Cash Flows and allowed an entity to make an accounting policy election to either estimate expected forfeitures or to account for them as they occur. These changes resulted in the Company recording the cumulative impact of approximately \$1 million pre-tax on January 1, 2017 to retained earnings, related to the Company electing to not estimate forfeitures on stock compensation plans but rather recognize forfeitures as they occur. The inclusion of excess tax benefits and shortfalls as a component of the Company's income tax expense will increase volatility within the provision for income taxes as the amount of excess tax benefits or deficiencies from stock-based compensation awards are dependent on the Company's stock price at the date an award vests. The impact to income tax expense resulting from this change was not material for the first three months of 2017.

The following accounting standards have been issued and become effective for the Company at a future date:

In May 2014, the FASB issued changes related to the recognition of revenue from contracts with customers. The changes clarify the principles for recognizing revenue and develop a common revenue standard. The core principle of the changes is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The changes also require additional disclosures related to revenue recognition. In July 2015, the FASB deferred the effective date of these changes by one year, but will permit entities to adopt one year earlier. During 2016, the FASB clarified the implementation guidance for principal versus agent considerations; identifying performance obligations; accounting for intellectual property

licenses; collectability; non-cash consideration; and the presentation of sales and other similar taxes. The FASB also introduced practical expedients related to disclosures of remaining performance obligations and other technical corrections and improvements. These changes become effective for the Company on January 1, 2018. Management is currently finalizing its evaluation, but currently believes the most significant impact will be with regard to the timing of revenue recognition associated with the air-cooled heat exchanger business of the Harsco Industrial Segment and limited equipment sales in the Harsco Rail Segment. The Company currently recognizes revenues on such arrangements upon the completion of the efforts associated with these arrangements, but as a result of these changes, revenue from these arrangements will be recognized over time and increase revenue in earlier periods. Management does not currently believe that there will be any significant impact with regards to the timing of revenue recognition associated with the Harsco Metals & Minerals Segment or the industrial grating and fencing or heat transfer businesses of the Harsco Industrial Segment, but continues to evaluate the effect of these changes. The Company will adopt the standard using the modified retrospective method of implementation with the cumulative effect of initially applying the changes recognized in retained earnings at the date of initial application.

In February 2016, the FASB issued changes in accounting for leases. The changes introduce a lessee model that brings most leases onto the balance sheet. The changes also align many of the underlying principles of the new lessor model with those in the FASB's new revenue recognition standard. Furthermore, the changes address other concerns related to the current leases model such as eliminating the requirement in current guidance for an entity to use bright-line tests in determining lease classification. The changes also require lessors to increase the transparency of their exposure to changes in value of their residual assets and how they manage that exposure. The changes become effective for the Company on January 1, 2019. Management is currently evaluating the impact of these changes on its condensed consolidated financial statements.

In January 2017, the FASB issued changes that remove the second step of the annual goodwill impairment test, which requires a hypothetical purchase price allocation. The changes provide that the amount of goodwill impairment will be equal to the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. All other goodwill impairment guidance remains largely unchanged. The same one-step impairment test will be applied to goodwill at all reporting units, even those with zero or negative carrying amounts. Entities will be required to disclose the amount of goodwill at reporting units with zero or negative carrying amounts. The changes become effective for the Company on January 1, 2020. Management has determined that these changes will not have a material impact on the Company's condensed consolidated financial statements. However, should the Company be required to record a goodwill impairment charge in future periods, the amount recorded may differ compared to current practice.

In March 2017, the FASB issued changes to how employers that sponsor defined benefit pension plans and other postretirement plans present the net periodic pension cost ("NPPC") in the statement of operations. An employer will be required to report the service cost component in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. Other components of NPPC are required to be presented in the statement of operations separately from the service cost component and outside of the subtotal of income from operations. The changes also allows only the service cost component to be eligible for capitalization. The changes become effective for the Company on January 1, 2018. Management is currently evaluating the impact of these changes on its condensed consolidated financial statements.

3. Accounts Receivable and Inventories

Accounts receivable consist of the following:

(In thousands)	March 31 2017	December 31 2016
Trade accounts receivable	\$ 279,800	\$ 248,354
Less: Allowance for doubtful accounts	(11,801)	(11,800)
Trade accounts receivable, net	<u>\$ 267,999</u>	<u>\$ 236,554</u>
Other receivables (a)	<u>\$ 21,192</u>	<u>\$ 21,053</u>

(a) Other receivables include insurance claim receivables, employee receivables, tax claim receivables and other miscellaneous receivables not included in Trade accounts receivable, net.

The provision (benefit) for doubtful accounts related to trade accounts receivable was as follows:

(In thousands)	Three Months Ended	
	March 31	
	2017	2016
Provision (benefit) for doubtful accounts related to trade accounts receivable	\$ (22)	\$ (146)

Inventories consist of the following:

(In thousands)	March 31 2017	December 31 2016
Finished goods	\$ 23,175	\$ 26,464
Work-in-process	18,172	22,815
Contracts-in-process	65,693	54,044
Raw materials and purchased parts	58,987	61,450
Stores and supplies	24,404	22,908
Total inventories	<u>\$ 190,431</u>	<u>\$ 187,681</u>

Contracts-in-process consist of the following:

(In thousands)	March 31 2017	December 31 2016
Contract costs accumulated to date	\$ 98,240	\$ 90,276
Estimated forward loss provisions for contracts-in-process (b)	(32,547)	(36,232)
Contracts-in-process (c)	<u>\$ 65,693</u>	<u>\$ 54,044</u>

(b) To the extent that the estimated forward loss provision exceeds accumulated contract costs it is included in the caption Other current liabilities on the Condensed Consolidated Balance Sheets. At March 31, 2017 and December 31, 2016 this amount totaled \$6.8 million and \$6.7 million, respectively.

(c) At March 31, 2017 and December 31, 2016, the Company has \$102.5 million and \$101.1 million, respectively, of customer advances related to contracts-in-process. These amounts are included in the caption Advances on contracts and other customer advances on the Condensed Consolidated Balance Sheets.

The Company recognized an estimated forward loss provision related to the contracts with the federal railway system of Switzerland ("SBB") of \$45.1 million for the year ended December 31, 2016 in Costs of products sold on the Condensed Consolidated Statements of Operations. There was no additional estimated forward loss provision recognized for the three months ended March 31, 2017. The estimated forward loss provision represents the Company's best estimate based on currently available information. It is possible that the Company's overall estimate of costs to complete these contracts may increase, which would result in an additional estimated forward loss provision at such time, but the Company is unable to estimate any further possible loss or range of loss at March 31, 2017.

The Company did not recognize any revenue for the contracts with SBB for the three months ended March 31, 2017 and 2016, respectively, under the percentage-of-completion (units-of-delivery) method and accordingly, there was no impact on the Company's gross margins or results of operations for these periods. The Company has not yet recognized any revenue associated with the major equipment deliveries under the contracts with SBB. The majority of the equipment deliveries and related revenue recognition under these contracts are expected through 2020.

4. Equity Method Investments

In November 2013, the Company sold the Company's Harsco Infrastructure Segment into a strategic venture with Clayton, Dubilier & Rice ("CD&R") as part of a transaction that combined the Harsco Infrastructure Segment with Brand Energy & Infrastructure Services, Inc., which CD&R simultaneously acquired (the "Infrastructure Transaction"). As a result of the Infrastructure Transaction, the Company retained an equity interest in Brand Energy & Infrastructure Service, Inc. and Subsidiaries ("Brand" or the "Infrastructure strategic venture") which was accounted for as an equity method investment in accordance with U.S. GAAP.

As part of the Infrastructure Transaction, the Company was required to make a quarterly payment to the Company's partner in the Infrastructure strategic venture, either (at the Company's election) (i) in cash, with total payments to equal approximately \$22 million per year on a pre-tax basis (approximately \$15 million per year after-tax), or (ii) in kind, through the transfer of approximately 3% of the Company's ownership interest in the Infrastructure strategic venture on an annual basis (the "unit adjustment liability"). The Company recognized the change in fair value to the unit adjustment liability each period until the Company was no longer required to make these payments or chose not to make these payments. The change in fair value to the unit adjustment liability was a non-cash expense.

In March 2016, the Company elected not to make the quarterly cash payments to the Company's partner in the Infrastructure strategic venture for the remainder of 2016. Instead, the Company transferred approximately 3% of its ownership interest in satisfaction of the Company's 2016 obligation related to the unit adjustment liability. As a result of not making the quarterly cash payments for 2016, the Company's ownership interest in the Infrastructure strategic venture decreased by approximately

3% and the value of the unit adjustment liability was updated to reflect this change. Accordingly, the book value of the Company's equity method investment in Brand decreased by \$29.4 million and the unit adjustment liability decreased by \$19.1 million. The resulting net loss of \$10.3 million was recognized in Change in fair value to the unit adjustment liability and loss on dilution of equity method investment on the Condensed Consolidated Statement of Operations. This net loss was a non-cash expense.

For the three months ended March 31, 2016 the Company recognized \$1.9 million of change in fair value to the unit adjustment liability exclusive of the fair value adjustment resulting from the decision not to make the quarterly payments in 2016, in the Condensed Consolidated Statement of Operations caption Change in fair value to the unit adjustment liability and loss on dilution of equity method investment.

In September 2016, the Company sold its remaining approximate 26% interest in Brand. Accordingly, there has been no activity related to Brand subsequent to the date of sale.

The Company's proportionate share of Brand's net income was recorded one quarter in arrears. Accordingly, Brand's results of operations for the three months ended December 31, 2015 were utilized by the Company to record its proportional share of income in the first quarter of 2016. There was no equity income recorded for Brand in the first quarter of 2017 due to the sale of the interest in Brand. Brand's results of operations are summarized as follows:

(In thousands)	Three Months Ended	
	December 31	
	2015	
Net revenues	\$	800,752
Gross profit		180,577
Net income attributable to Brand Energy & Infrastructure Services, Inc. and Subsidiaries		11,060
Harsco's equity in income of Brand		3,175

5. Property, Plant and Equipment

Property, plant and equipment consists of the following:

(In thousands)	March 31 2017	December 31 2016
Land	\$ 10,707	\$ 10,606
Land improvements	15,233	15,032
Buildings and improvements	187,435	185,657
Machinery and equipment	1,559,320	1,525,156
Uncompleted construction	19,039	21,035
Gross property, plant and equipment	1,791,734	1,757,486
Less: Accumulated depreciation	(1,308,463)	(1,267,231)
Property, plant and equipment, net	\$ 483,271	\$ 490,255

6. Goodwill and Other Intangible Assets

The following table reflects the changes in carrying amounts of goodwill by segment for the three months ended March 31, 2017:

(In thousands)	Harsco Metals & Minerals Segment	Harsco Industrial Segment	Harsco Rail Segment	Consolidated Totals
Balance at December 31, 2016	\$ 362,386	\$ 6,839	\$ 13,026	\$ 382,251
Foreign currency translation	2,561	—	—	2,561
Balance at March 31, 2017	\$ 364,947	\$ 6,839	\$ 13,026	\$ 384,812

The Company's 2016 annual goodwill impairment testing did not result in any impairment of the Company's goodwill. The fair value of the Harsco Metals & Minerals Segment exceeded the carrying value by approximately 12%. The Company tests for goodwill impairment annually or more frequently if indicators of impairment exist, or if a decision is made to dispose of a business. The Company performs the annual goodwill impairment test as of October 1 and monitors for triggering events on an ongoing basis. The Company determined that, as of March 31, 2017, no interim goodwill impairment testing was necessary.

Intangible assets included in the captions, Other current assets and Intangible assets, net, on the Condensed Consolidated Balance Sheets consist of the following:

(In thousands)	March 31, 2017		December 31, 2016	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Customer related	\$ 147,784	\$ 114,386	\$ 146,840	\$ 112,610
Patents	5,750	5,606	5,729	5,534
Technology related	25,739	25,711	25,687	25,634
Trade names	8,308	4,607	8,306	4,529
Other	8,546	5,348	8,512	5,200
Total	\$ 196,127	\$ 155,658	\$ 195,074	\$ 153,507

Amortization expense for intangible assets was as follows:

(In thousands)	Three Months Ended	
	March 31	
	2017	2016
Amortization expense for intangible assets	\$ 1,318	\$ 2,105

The estimated amortization expense for the next five fiscal years based on current intangible assets is as follows:

(In thousands)	2017	2018	2019	2020	2021
Estimated amortization expense (a)	\$ 5,000	\$ 4,750	\$ 4,500	\$ 4,250	\$ 4,000

(a) These estimated amortization expense amounts do not reflect the potential effect of future foreign currency exchange fluctuations.

7. Employee Benefit Plans

Defined Benefit Pension Plans Net Periodic Pension Cost	Three Months Ended			
	March 31			
	U.S. Plans		International Plans	
(In thousands)	2017	2016	2017	2016
Service costs	\$ 942	\$ 946	\$ 411	\$ 404
Interest cost	2,469	2,545	5,734	7,123
Expected return on plan assets	(3,552)	(3,601)	(10,424)	(11,463)
Recognized prior service costs	8	16	45	44
Recognized loss	1,425	1,372	4,042	3,218
Defined benefit pension plans net periodic pension cost (income)	\$ 1,292	\$ 1,278	\$ (192)	\$ (674)

Company Contributions	Three Months Ended	
	March 31	
	2017	2016
Defined benefit pension plans (U.S.)	\$ 471	\$ 470
Defined benefit pension plans (International)	8,337	9,798
Multiemployer pension plans	485	521
Defined contribution pension plans	2,560	2,826

The Company's estimate of expected contributions to be paid during the remainder of 2017 for the U.S. and international defined benefit pension plans are \$5.8 million and \$8.4 million, respectively.

8. Income Taxes

The income tax expense related to continuing operations for the three months ended March 31, 2017 was \$6.3 million. The income tax benefit related to continuing operations for the three months ended March 31, 2016 was \$2.2 million.

An income tax benefit from an uncertain tax position may be recognized when it is more likely than not that the position will be sustained upon examination, based on technical merits, including resolutions of any related appeals or litigation processes. The reserve for uncertain tax positions at March 31, 2017 was \$5.3 million, including interest and penalties. Within the next twelve months, it is reasonably possible that \$0.8 million of unrecognized income tax benefits will be recognized upon settlement of tax examinations and the expiration of various statutes of limitations.

9. Commitments and Contingencies

Environmental

The Company is involved in a number of environmental remediation investigations and cleanups and, along with other companies, has been identified as a “potentially responsible party” for certain waste disposal sites. While each of these matters is subject to various uncertainties, it is probable that the Company will agree to make payments toward funding certain of these activities and it is possible that some of these matters will be decided unfavorably to the Company. The Company has evaluated its potential liability, and its financial exposure is dependent upon such factors as the continuing evolution of environmental laws and regulatory requirements, the availability and application of technology, the allocation of cost among potentially responsible parties, the years of remedial activity required and the remediation methods selected. The Company did not have any material accruals or record any material expenses related to environmental matters during the periods presented.

The Company evaluates its liability for future environmental remediation costs on a quarterly basis. Although actual costs to be incurred at identified sites in future periods may vary from the estimates (given inherent uncertainties in evaluating environmental exposures), the Company does not expect that any costs that are reasonably possible to be incurred by the Company in connection with environmental matters in excess of the amounts accrued would have a material adverse effect on the Company's financial condition, results of operations or cash flows.

Brazilian Tax Disputes

The Company is involved in a number of tax disputes with federal, state and municipal tax authorities in Brazil. These disputes are at various stages of the legal process, including the administrative review phase and the collection action phase, and include assessments of fixed amounts of principal and penalties, plus interest charges that increase at statutorily determined amounts per month and are assessed on the aggregate amount of the principal and penalties. In addition, the losing party at the collection action or court of appeals phase could be subject to a charge to cover statutorily mandated legal fees, which are generally calculated as a percentage of the total assessed amounts due, inclusive of penalty and interest. A large number of the claims relate to value-added (“ICMS”), services and social security tax disputes. The largest proportion of the assessed amounts relate to ICMS claims filed by the State Revenue Authorities from the State of São Paulo, Brazil (the “SPRA”), encompassing the period from January 2002 to May 2005.

In October 2009, the Company received notification of the SPRA's final administrative decision regarding the levying of ICMS in the State of São Paulo in relation to services provided to a customer in the State between January 2004 and May 2005. As of March 31, 2017, the principal amount of the tax assessment from the SPRA with regard to this case is approximately \$2 million, with penalty, interest and fees assessed to date increasing such amount by an additional \$25 million. Any change in the aggregate amount since the Company's last Annual Report on Form 10-K for the year ended December 31, 2016 is due to an increase in assessed interest and statutorily mandated legal fees for the period, as well as foreign currency translation.

Another ICMS tax case involving the SPRA refers to the tax period from January 2002 to December 2003, and is still pending at the administrative phase. The aggregate amount assessed by the tax authorities in August 2005 was \$8.0 million (the amounts with regard to this claim are valued as of the date of the assessment since it has not yet reached the collection phase), composed of a principal amount of \$1.9 million, with penalty and interest assessed through that date increasing such amount by an additional \$6.1 million. All such amounts include the effect of foreign currency translation.

The Company continues to believe that it is not probable that it will incur a loss for these assessments by the SPRA. The Company also continues to believe that sufficient coverage for these claims exists as a result of the Company's customer's indemnification obligations and such customer's pledge of assets in connection with the October 2009 notice, as required by Brazilian law.

The Company intends to continue its practice of vigorously defending itself against these tax claims under various alternatives, including judicial appeal. The Company will continue to evaluate its potential liability with regard to these claims on a quarterly basis; however, it is not possible to predict the ultimate outcome of these tax-related disputes in Brazil. No loss provision has been recorded in the Company's condensed consolidated financial statements for the disputes described above because the loss contingency is not deemed probable, and the Company does not expect that any costs that are reasonably possible to be incurred by the Company in connection with Brazilian tax disputes would have a material adverse effect on the Company's financial condition, results of operations or cash flows.

Brazilian Labor Disputes

The Company is subject to collective bargaining and individual labor claims in Brazil through the Harsco Metals & Minerals Segment which allege, among other things, the Company's failure to pay required amounts for overtime and vacation at certain sites. The Company is vigorously defending itself against these claims; however, litigation is inherently unpredictable, particularly in foreign jurisdictions. While the Company does not currently expect that the ultimate resolution of these claims will have a material adverse effect on the Company's financial condition, results of operations or cash flows, it is not possible to predict the ultimate outcome of these labor-related disputes.

The Company is continuing to review all known labor claims and as of March 31, 2017 and December 31, 2016, the Company has established reserves of \$8.7 million and \$7.9 million, respectively, on the Company's Condensed Consolidated Balance Sheets for amounts considered to be probable and estimable. As the Company continues to evaluate these claims and takes actions to address them, the amount of established reserves may be impacted.

Customer Disputes

The Company, through its Harsco Metals & Minerals Segment, may, in the normal course of business, become involved in commercial disputes with subcontractors or customers.

During the first quarter of 2015, a rail grinder manufactured by the Company's Harsco Rail Segment and operated by a subcontractor caught fire, causing a customer to incur monetary damages. Depending on the cause of the fire and the extent of insurance coverage, the Company's results of operations and cash flows may be impacted in future periods.

Although results of operations and cash flows for a given period could be adversely affected by a negative outcome in these or other lawsuits, claims or proceedings, management believes that the ultimate outcome of these matters will not have a material adverse effect on the Company's financial condition, results of operations or cash flows.

Lima Refinery Litigation

On April 8, 2016, Lima Refining Company filed a lawsuit against the Company in the District Court of Harris County, Texas related to a January 2015 explosion at an oil refinery operated by Lima Refining Company. The action seeks approximately \$106 million in property damages and approximately \$289 million in lost profits and business interruption damages. The action alleges the explosion occurred because of a defect in a heat exchange cooler manufactured by Hammco Corporation ("Hammco") in 2009, prior to the Company's acquisition of Hammco in 2014. The Company is vigorously contesting the allegations against it, both as to liability for the accident and the amount of the claimed damages. As a result, the Company believes the situation will not result in a probable loss. The Company has both an indemnity right from the sellers of Hammco and liability insurance coverage under various primary and excess policies that the Company believes will be available, if necessary, to cover substantially all of any such liability that might ultimately be incurred in the above action.

U.K. Health and Safety Executive Matter

In the third quarter of 2016, a subsidiary in the Company's Harsco Metals & Minerals Segment, along with one of its customers, was named as a co-defendant in an action brought by the U.K. Health and Safety Executive in the U.K. Crown Court Sitting at Kingston-Upon-Hull. The action relates to a fatal accident involving one of the customer's employees in 2010. The action seeks to levy a fine against the Company. The Company believes it is not responsible for the accident and is defending the action vigorously. A loss provision related to this action has not been recorded in the Company's condensed consolidated financial statements, because the Company believes that a loss is not probable. However, if the outcome of the proceedings is unfavorable, the Company does not believe it would have a material adverse effect on the Company's financial condition, results of operations or cash flows.

Other

The Company is named as one of many defendants (approximately 90 or more in most cases) in legal actions in the U.S. alleging personal injury from exposure to airborne asbestos over the past several decades. In their suits, the plaintiffs have named as defendants, among others, many manufacturers, distributors and installers of numerous types of equipment or products that allegedly contained asbestos.

The Company believes that the claims against it are without merit. The Company has never been a producer, manufacturer or processor of asbestos fibers. Any asbestos-containing part of a Company product used in the past was purchased from a supplier and the asbestos encapsulated in other materials such that airborne exposure, if it occurred, was not harmful and is not associated with the types of injuries alleged in the pending actions.

At March 31, 2017, there were 17,159 pending asbestos personal injury actions filed against the Company. Of those actions, 16,754 were filed in the New York Supreme Court (New York County), 111 were filed in other New York State Supreme Court Counties and 294 were filed in courts located in other states.

The complaints in most of those actions generally follow a form that contains a standard damages demand of \$20 million or \$25 million, regardless of the individual plaintiff's alleged medical condition, and without identifying any specific Company product.

At March 31, 2017, 16,732 of the actions filed in New York Supreme Court (New York County) were on the Deferred/Inactive Docket created by the court in December 2002 for all pending and future asbestos actions filed by persons who cannot demonstrate that they have a malignant condition or discernible physical impairment. The remaining 22 cases in New York County are pending on the Active or In Extremis Docket created for plaintiffs who can demonstrate a malignant condition or physical impairment.

The Company has liability insurance coverage under various primary and excess policies that the Company believes will be available, if necessary, to substantially cover any liability that might ultimately be incurred in the asbestos actions referred to above. The Company believes that a substantial portion of the costs and expenses of the asbestos actions will be paid by the Company's insurers.

In view of the persistence of asbestos litigation in the U.S., the Company expects to continue to receive additional claims in the future. The Company intends to continue its practice of vigorously defending these claims and cases. At March 31, 2017, the Company has obtained dismissal in 27,915 cases by stipulation or summary judgment prior to trial.

It is not possible to predict the ultimate outcome of asbestos-related actions in the U.S. due to the unpredictable nature of this litigation, and no loss provision has been recorded in the Company's condensed consolidated financial statements because a loss contingency is not deemed probable or estimable. Despite this uncertainty, and although results of operations and cash flows for a given period could be adversely affected by asbestos-related actions, the Company does not expect that any costs that are reasonably possible to be incurred by the Company in connection with asbestos litigation would have a material adverse effect on the Company's financial condition, results of operations or cash flows.

The Company is subject to various other claims and legal proceedings covering a wide range of matters that arose in the ordinary course of business. In the opinion of management, all such matters are adequately covered by insurance or by established reserves, and, if not so covered, are without merit or are of such kind, or involve such amounts, as would not have a material adverse effect on the financial position, results of operations or cash flows of the Company.

Insurance liabilities are recorded when it is probable that a liability has been incurred for a particular event and the amount of loss associated with the event can be reasonably estimated. Insurance reserves have been estimated based primarily upon actuarial calculations and reflect the undiscounted estimated liabilities for ultimate losses, including claims incurred but not reported. Inherent in these estimates are assumptions that are based on the Company's history of claims and losses, a detailed analysis of existing claims with respect to potential value, and current legal and legislative trends. If actual claims differ from those projected by management, changes (either increases or decreases) to insurance reserves may be required and would be recorded through income in the period the change was determined. When a recognized liability is covered by third-party insurance, the Company records an insurance claim receivable to reflect the covered liability. Insurance claim receivables are included in Other receivables on the Company's Condensed Consolidated Balance Sheets. See Note 1, Summary of Significant Accounting Policies, to the Consolidated Financial Statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2016 for additional information on Accrued insurance and loss reserves.

10. Reconciliation of Basic and Diluted Shares

(In thousands, except per share amounts)	Three Months Ended	
	March 31	
	2017	2016
Income (loss) from continuing operations attributable to Harsco Corporation common stockholders	\$ 9,267	\$ (10,550)
Weighted-average shares outstanding - basic	80,385	80,238
Dilutive effect of stock-based compensation	1,878	—
Weighted-average shares outstanding - diluted	82,263	80,238
Earnings (loss) from continuing operations per common share, attributable to Harsco Corporation common stockholders:		
Basic	\$ 0.12	\$ (0.13)
Diluted	\$ 0.11	\$ (0.13)

The following average outstanding stock-based compensation units were not included in the computation of diluted earnings (loss) per share because the effect was antidilutive:

(In thousands)	Three Months Ended	
	March 31	
	2017	2016
Restricted stock units	—	430
Stock options	55	90
Stock appreciation rights	1,263	1,088
Performance share units	467	309

11. Derivative Instruments, Hedging Activities and Fair Value

Derivative Instruments and Hedging Activities

The Company uses derivative instruments, including foreign currency exchange forward contracts, interest rate swaps and cross-currency interest rate swaps ("CCIRs"), to manage certain foreign currency and interest rate exposures. Derivative instruments are viewed as risk management tools by the Company and are not used for trading or speculative purposes.

All derivative instruments are recorded on the Condensed Consolidated Balance Sheets at fair value. Changes in the fair value of derivatives used to hedge foreign currency denominated balance sheet items are reported directly in earnings, along with offsetting transaction gains and losses on the items being hedged. Derivatives used to hedge forecasted cash flows associated with foreign currency commitments or forecasted commodity purchases may be accounted for as cash flow hedges, as deemed appropriate if the criteria for hedge accounting are met. Gains and losses on derivatives designated as cash flow hedges are deferred in Accumulated other comprehensive loss, a separate component of equity, and reclassified to earnings in a manner that matches the timing of the earnings impact of the hedged transactions. Generally, at March 31, 2017, deferred gains and losses related to asset purchases are reclassified to earnings over 10 to 15 years from the balance sheet date, and those related to revenue are deferred until the revenue is recognized. The ineffective portion of all hedges, if any, is recognized currently in earnings.

The fair value of outstanding derivative contracts recorded as assets and liabilities on the Condensed Consolidated Balance Sheets were as follows:

(In thousands)	Asset Derivatives		Liability Derivatives	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
March 31, 2017				
Derivatives designated as hedging instruments:				
Foreign currency exchange forward contracts	Other current assets	\$ 191	Other current liabilities	\$ 195
Cross-currency interest rate swaps	Other current assets	307		—
Interest rate swaps	Other current assets	—	Other current liabilities	117
Interest rate swaps	Other assets	178	Other liabilities	582
Total derivatives designated as hedging instruments		<u>\$ 676</u>		<u>\$ 894</u>
Derivatives not designated as hedging instruments:				
Foreign currency exchange forward contracts	Other current assets	\$ 3,601	Other current liabilities	\$ 996

(In thousands)	Asset Derivatives		Liability Derivatives	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
December 31, 2016				
Derivatives designated as hedging instruments:				
Foreign currency exchange forward contracts	Other current assets	\$ 473	Other current liabilities	\$ 166
Cross-currency interest rate swaps	Other current assets	514		—
Total derivatives designated as hedging instruments		<u>\$ 987</u>		<u>\$ 166</u>
Derivatives not designated as hedging instruments:				
Foreign currency exchange forward contracts	Other current assets	\$ 4,459	Other current liabilities	\$ 3,372

All of the Company's derivatives are recorded in the Condensed Consolidated Balance Sheets at gross amounts and not offset. All of the Company's interest rate swaps, CCIRs and certain foreign currency exchange forward contracts are transacted under International Swaps and Derivatives Association ("ISDA") documentation. Each ISDA master agreement permits the net settlement of amounts owed in the event of default. The Company's derivative assets and liabilities subject to enforceable master netting arrangements did not result in a net asset or net liability at either March 31, 2017 or December 31, 2016.

The effect of derivative instruments on the Condensed Consolidated Statements of Operations and the Condensed Consolidated Statements of Comprehensive Loss, was as follows:

Derivatives Designated as Hedging Instruments

(In thousands)	Amount of Gain (Loss) Recognized in Other Comprehensive Income ("OCI") on Derivative - Effective Portion	Location of Gain (Loss) Reclassified from Accumulated OCI into Income - Effective Portion	Amount of Gain (Loss) Reclassified from Accumulated OCI into Income - Effective Portion	Location of Gain (Loss) Recognized in Income on Derivative - Ineffective Portion and Amount Excluded from Effectiveness Testing	Amount of Gain (Loss) Recognized in Income on Derivative - Ineffective Portion and Amount Excluded from Effectiveness Testing
Three Months Ended March 31, 2017:					
Foreign currency exchange forward contracts	\$ (236)	Cost of services and products sold	\$ (1)		\$ —
Interest rate swaps	(522)		—		—
Cross-currency interest rate swaps	358	Interest expense	(242)	Cost of services and products sold	(210) ^(a)
	<u>\$ (400)</u>		<u>\$ (243)</u>		<u>\$ (210)</u>
Three Months Ended March 31, 2016:					
Foreign currency exchange forward contracts	\$ (325)	Product revenues	\$ 408		\$ —
Cross-currency interest rate swaps	(2,561)	Interest expense	57	Cost of services and products sold	4,261 ^(a)
	<u>\$ (2,886)</u>		<u>\$ 465</u>		<u>\$ 4,261</u>

(a) These gains offset foreign currency fluctuation effects on the debt principal.

Derivatives Not Designated as Hedging Instruments

(In thousands)	Location of Gain (Loss) Recognized in Income on Derivative	Amount of Gain (Loss) Recognized in Income on Derivative for the Three Months Ended March 31 (b)	
		2017	2016
Foreign currency exchange forward contracts	Cost of services and products sold	\$ 1,550	\$ (6,844)

(b) These gains (losses) offset amounts recognized in cost of services and products sold principally as a result of intercompany or third party foreign currency exposures.

Foreign Currency Exchange Forward Contracts

The Company conducts business in multiple currencies and, accordingly, is subject to the inherent risks associated with foreign exchange rate movements. The financial position and results of operations of substantially all of the Company's foreign subsidiaries are measured using the local currency as the functional currency. Foreign currency-denominated assets and liabilities are translated into U.S. dollars at the exchange rates existing at the respective balance sheet dates, and income and expense items are translated at the average exchange rates during the respective periods. The aggregate effects of translating the balance sheets of these subsidiaries are deferred and recorded in Accumulated other comprehensive loss, which is a separate component of equity.

The Company uses derivative instruments to hedge cash flows related to foreign currency fluctuations. Foreign currency exchange forward contracts outstanding are part of a worldwide program to minimize foreign currency exchange operating income and balance sheet exposure by offsetting foreign currency exposures of certain future payments between the Company and various subsidiaries, suppliers or customers. The unsecured contracts are with major financial institutions. The Company may be exposed to credit loss in the event of non-performance by the contract counterparties. The Company evaluates the creditworthiness of the counterparties and does not expect default by them. Foreign currency exchange forward contracts are used to hedge commitments, such as foreign currency debt, firm purchase commitments and foreign currency cash flows for certain export sales transactions.

The following tables summarize, by major currency, the contractual amounts of the Company's foreign currency exchange forward contracts in U.S. dollars. The "Buy" amounts represent the U.S. dollar equivalent of commitments to purchase foreign currencies, and the "Sell" amounts represent the U.S. dollar equivalent of commitments to sell foreign currencies. The recognized gains and losses offset amounts recognized in cost of services and products sold principally as a result of intercompany or third party foreign currency exposures.

Contracted Amounts of Foreign Currency Exchange Forward Contracts Outstanding at March 31, 2017:

(In thousands)	Type	U.S. Dollar Equivalent	Maturity	Recognized Gain (Loss)
British pounds sterling	Sell	\$ 60,602	April 2017	\$ 336
British pounds sterling	Buy	7,287	April 2017 through June 2017	40
Euros	Sell	306,209	April 2017 through December 2017	1,315
Euros	Buy	150,326	April 2017 through May 2018	858
Other currencies	Sell	57,635	April 2017 through October 2017	20
Other currencies	Buy	13,413	April 2017 through September 2017	32
Total		\$ 595,472		\$ 2,601

Contracted Amounts of Foreign Currency Exchange Forward Contracts Outstanding at December 31, 2016:

(In thousands)	Type	U.S. Dollar Equivalent	Maturity	Recognized Gain (Loss)
British pounds sterling	Sell	\$ 55,120	January 2017	\$ (228)
British pounds sterling	Buy	827	March 2017	(14)
Euros	Sell	326,797	January 2017 through December 2017	628
Euros	Buy	171,578	January 2017 through January 2018	(468)
Other currencies	Sell	43,455	January 2017 through September 2017	1,477
Other currencies	Buy	3,106	March 2017	(1)
Total		\$ 600,883		\$ 1,394

In addition to foreign currency exchange forward contracts, the Company designates certain loans as hedges of net investments in international subsidiaries. The Company recorded pre-tax net gains of \$1.9 million during the three months ended March 31, 2017 and pre-tax net losses of \$3.9 million during the three months ended March 31, 2016 in Accumulated other comprehensive loss.

Interest Rate Swaps

The Company uses interest rate swaps in conjunction with certain debt issuances in order to secure a fixed interest rate. The interest rate swaps are recorded on the Condensed Consolidated Balance Sheets at fair value, with changes in value attributed to the effect of the swaps' interest spread and changes in the credit worthiness of the counter-parties recorded in Accumulated other comprehensive loss.

In January 2017, the Company entered into a series of fixed to floating interest rate swaps that cover the period from 2018 through 2021, and had the effect of converting \$300.0 million of the Term Loan Facility from floating-rate to fixed-rate beginning in 2018. The fixed rates provided by the swaps replace the adjusted LIBOR rate in the interest calculation, range from 1.65% for 2018 to 2.71% for 2021.

The following table indicates the notional amounts of the Company's interest rate swaps at March 31, 2017:

(In millions)	Annual Notional Amount	Interest Rates	
		Receive	Pay
Maturing 2018 through 2021	\$ 300.0	Floating U.S. dollar rate	Fixed U.S. dollar rate

Cross-Currency Interest Rate Swaps (CCIRs)

The Company uses CCIRs in conjunction with certain debt issuances in order to secure a fixed local currency interest rate. Under these CCIRs, the Company receives interest based on a fixed or floating U.S. dollar rate and pays interest on a fixed local currency rate based on the contractual amounts in dollars and the local currency, respectively. At maturity, there is also the payment of principal amounts between currencies. The CCIRs are recorded on the Condensed Consolidated Balance Sheets at fair value, with changes in value attributed to the effect of the swaps' interest spread and changes in the credit worthiness of the counter-parties recorded in Accumulated other comprehensive loss. Changes in value attributed to the effect of foreign currency fluctuations are recorded on the Condensed Consolidated Statements of Operations and offset currency fluctuation effects on the debt principal.

The following table indicates the contractual amounts of the Company's CCIRs at March 31, 2017:

(In millions)	Contractual Amount	Interest Rates	
		Receive	Pay
Maturing 2017	\$ 2.0	Floating U.S. dollar rate	Fixed rupee rate

During March 2016, the Company effected the early termination of the British pound sterling CCIR with an original maturity date of 2020. The Company received \$16.6 million in cash related to this termination. There was no gain or loss recorded on the termination, as any change in value attributable to the effect of foreign currency translation was previously recognized in the Condensed Consolidated Statements of Operations.

Fair Value of Derivative Assets and Liabilities and Other Financial Instruments

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). The Company utilizes market data or assumptions that the Company believes market participants would use in valuing the asset or liability, including assumptions about risk and the risks inherent in the inputs to the valuation technique.

The fair value hierarchy distinguishes between (1) market participant assumptions developed based on market data obtained from independent sources (observable inputs), and (2) an entity's own assumptions about market participant assumptions based on the best information available in the circumstances (unobservable inputs). The fair value hierarchy consists of three broad levels, which give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3).

The three levels of the fair value hierarchy are described below:

- Level 1—Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.
- Level 2—Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly, including quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; inputs other than quoted prices that are observable for the asset or liability (e.g., interest rates); and inputs that are derived principally from or corroborated by observable market data by correlation or other means.
- Level 3—Inputs that are both significant to the fair value measurement and unobservable.

In instances in which multiple levels of inputs are used to measure fair value, hierarchy classification is based on the lowest level input that is significant to the fair value measurement in its entirety. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment, and considers factors specific to the asset or liability. The following table indicates the fair value hierarchy of the financial instruments of the Company:

Level 2 Fair Value Measurements (In thousands)	March 31 2017	December 31 2016
Assets		
Foreign currency exchange forward contracts	\$ 3,792	\$ 4,932
Interest rate swaps	178	—
Cross-currency interest rate swaps	307	514
Liabilities		
Foreign currency exchange forward contracts	1,191	3,538
Interest rate swaps	699	—

The following table reconciles the beginning and ending balances for liabilities measured on a recurring basis using unobservable inputs (Level 3):

Level 3 Liabilities—Unit Adjustment Liability (c) for the Three Months Ended March 31 (In thousands)	Three Months Ended March 31 2016
Balance at beginning of period	\$ 79,934
Reduction in the fair value related to election not to make 2016 payments	(19,145)
Change in fair value to the unit adjustment liability	1,913
Balance at end of period	\$ 62,702

(c) During the quarter ended March 31, 2016, the Company decided that it would not make the four quarterly payments to CD&R for 2016. This resulted in the Company revaluing the Unit Adjustment Liability. The Company sold its investment in Brand in September 2016 and the unit adjustment liability ceased at that time. See Note 4, Equity Method Investment, for additional information related to the unit adjustment liability.

The Company primarily applies the market approach for recurring fair value measurements and endeavors to utilize the best available information. Accordingly, the Company utilizes valuation techniques that maximize the use of observable inputs, such as forward rates, interest rates, the Company's credit risk and counterparties' credit risks, and which minimize the use of unobservable inputs. The Company is able to classify fair value balances based on the ability to observe those inputs. Foreign currency exchange forward contracts, interest rate swaps and CCIRs are classified as Level 2 fair value based upon pricing models using market-based inputs. Model inputs can be verified, and valuation techniques do not involve significant management judgment.

The carrying amounts of cash and cash equivalents, accounts receivable, accounts payable, accrued liabilities and short-term borrowings approximate fair value due to the short-term maturities of these assets and liabilities. At March 31, 2017 and December 31, 2016, the total fair value of long-term debt (excluding deferred financing costs), including current maturities, was \$695.4 million and \$682.9 million, respectively, compared with a carrying value of \$683.3 million and \$673.4 million, respectively. Fair values for debt are based on quoted market prices (Level 1) for the same or similar issues, or on the current rates offered to the Company for debt of the same remaining maturities (Level 2).

12. Review of Operations by Segment

(In thousands)	Three Months Ended	
	March 31	
	2017	2016
Revenues From Continuing Operations		
Harsco Metals & Minerals	\$ 247,034	\$ 229,672
Harsco Industrial	65,885	61,869
Harsco Rail	59,588	61,740
Corporate	34	—
Total Revenues From Continuing Operations	\$ 372,541	\$ 353,281
Operating Income (Loss) From Continuing Operations		
Harsco Metals & Minerals	\$ 26,429	\$ 6,941
Harsco Industrial	2,804	6,471
Harsco Rail	5,986	4,906
Corporate	(7,311)	(8,887)
Total Operating Income From Continuing Operations	\$ 27,908	\$ 9,431
Depreciation and Amortization		
Harsco Metals & Minerals	\$ 27,880	\$ 31,025
Harsco Industrial	1,840	1,718
Harsco Rail	1,037	1,434
Corporate	1,471	1,868
Total Depreciation and Amortization	\$ 32,228	\$ 36,045
Capital Expenditures		
Harsco Metals & Minerals	\$ 15,472	\$ 15,420
Harsco Industrial	752	1,134
Harsco Rail	220	372
Corporate	545	25
Total Capital Expenditures	\$ 16,989	\$ 16,951

Reconciliation of Segment Operating Income to Income (Loss) From Continuing Operations Before Income Taxes and Equity Income

(In thousands)	Three Months Ended	
	March 31	
	2017	2016
Segment operating income	\$ 35,219	\$ 18,318
General Corporate expense	(7,311)	(8,887)
Operating income from continuing operations	27,908	9,431
Interest income	512	535
Interest expense	(11,653)	(12,363)
Change in fair value to the unit adjustment liability and loss on dilution of equity method investment	—	(12,217)
Income (loss) from continuing operations before income taxes and equity income	\$ 16,767	\$ (14,614)

13. Other Expenses

The major components of this Condensed Consolidated Statements of Operations caption are as follows:

(In thousands)	Three Months Ended	
	March 31	
	2017	2016
Employee termination benefit costs	\$ 753	\$ 5,772
Harsco Metals & Minerals Segment separation costs	—	3,287
Net gains (a)	(122)	(652)
Other costs to exit activities	100	182
Impaired asset write-downs	—	93
Other	163	441
Other expenses	\$ 894	\$ 9,123

(a) Net gains result from the sales of redundant properties (primarily land, buildings and related equipment) and non-core assets.

14. Components of Accumulated Other Comprehensive Loss

Accumulated other comprehensive loss is included on the Condensed Consolidated Statements of Equity. The components of Accumulated other comprehensive loss, net of the effect of income taxes, and activity for the three months ended March 31, 2016 and 2017 was as follows:

(In thousands)	Components of Accumulated Other Comprehensive Income (Loss) - Net of Tax				
	Cumulative Foreign Exchange Translation Adjustments	Effective Portion of Derivatives Designated as Hedging Instruments	Cumulative Unrecognized Actuarial Losses on Pension Obligations	Unrealized Gain (Loss) on Marketable Securities	Total
Balance at December 31, 2015	\$ (125,561)	\$ (400)	\$ (389,696)	\$ (31)	\$ (515,688)
Other comprehensive income (loss) before reclassifications	9,501 ^(a)	(2,356) ^(b)	6,168 ^(a)	(7)	13,306
Amounts reclassified from accumulated other comprehensive loss, net of tax	—	(300)	4,133	—	3,833
Realized (gains) losses reclassified from accumulated other comprehensive loss in connection with loss on dilution of equity method investment (See Note 4, Equity Method Investments)	3,079	106	(148)	—	3,037
Other comprehensive income (loss) from equity method investee	(959)	143	287	—	(529)
Total other comprehensive income (loss)	11,621	(2,407)	10,440	(7)	19,647
Less: Other comprehensive income attributable to noncontrolling interests	(267)	(4)	—	—	(271)
Other comprehensive income (loss) attributable to Harsco Corporation	11,354	(2,411)	10,440	(7)	19,376
Balance at March 31, 2016	\$ (114,207)	\$ (2,811)	\$ (379,256)	\$ (38)	\$ (496,312)

(In thousands)	Components of Accumulated Other Comprehensive Income (Loss) - Net of Tax				
	Cumulative Foreign Exchange Translation Adjustments	Effective Portion of Derivatives Designated as Hedging Instruments	Cumulative Unrecognized Actuarial Losses on Pension Obligations	Unrealized Gain (Loss) on Marketable Securities	Total
Balance at December 31, 2016	\$ (144,534)	\$ (1,089)	\$ (461,094)	\$ (5)	\$ (606,722)
Other comprehensive income (loss) before reclassifications	16,561 ^(a)	(536) ^(b)	(3,793) ^(a)	6	12,238
Amounts reclassified from accumulated other comprehensive loss, net of tax	—	149	4,998	—	5,147
Total other comprehensive income (loss)	16,561	(387)	1,205	6	17,385
Less: Other comprehensive income attributable to noncontrolling interests	(386)	—	—	—	(386)
Other comprehensive income (loss) attributable to Harsco Corporation	16,175	(387)	1,205	6	16,999
Balance at March 31, 2017	\$ (128,359)	\$ (1,476)	\$ (459,889)	\$ 1	\$ (589,723)

(a) Principally foreign currency fluctuation.

(b) Net change from periodic revaluations.

Amounts reclassified from accumulated other comprehensive loss are as follows:

(In thousands)	Three Months Ended		Affected Caption in the Condensed Consolidated Statements of Operations
	March 31 2017	March 31 2016	
Amortization of cash flow hedging instruments:			
Foreign currency exchange forward contracts	\$ —	\$ (408)	Product revenues
Foreign currency exchange forward contracts	1	—	Cost of services and products sold
Cross-currency interest rate swaps	242	(57)	Interest expense
Total before tax	243	(465)	
Tax expense	(94)	165	
Total reclassification of cash flow hedging instruments, net of tax	<u>\$ 149</u>	<u>\$ (300)</u>	
Amortization of defined benefit pension items (c):			
Actuarial losses	\$ 2,652	\$ 2,376	Selling, general and administrative expenses
Actuarial losses	2,815	2,214	Cost of services and products sold
Prior-service costs (benefits)	(12)	(1)	Selling, general and administrative expenses
Prior-service costs	65	61	Cost of services and products sold
Total before tax	5,520	4,650	
Tax benefit	(522)	(517)	
Total reclassification of defined benefit pension items, net of tax	<u>\$ 4,998</u>	<u>\$ 4,133</u>	

(c) These accumulated other comprehensive loss components are included in the computation of net periodic pension costs. See Note 7, Employee Benefit Plans, for additional details.

Amounts reclassified from accumulated other comprehensive loss in connection with loss on dilution of equity method investment are as follows:

(In thousands)	Three Months Ended	Affected Caption in the Condensed Consolidated Statements of Operations
	March 31 2016	
Foreign exchange translation adjustments	\$ 4,880	Change in fair value to the adjustment liability and loss on dilution of equity method investment
Cash flow hedging instruments	168	Change in fair value to the adjustment liability and loss on dilution of equity method investment
Defined benefit pension obligations	(235)	Change in fair value to the adjustment liability and loss on dilution of equity method investment
Total before tax	4,813	
Tax benefit	(1,776)	
Total amounts reclassified from accumulated other comprehensive loss in connection with loss on dilution of equity method investment	<u>\$ 3,037</u>	

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with the accompanying unaudited condensed consolidated financial statements as well as the audited consolidated financial statements of Harsco Corporation (the "Company"), including the notes thereto, included in the Company's Annual Report on Form 10-K for the year ended December 31, 2016 which includes additional information about the Company's critical accounting policies, contractual obligations, practices and the transactions that support the financial results, and provides a more comprehensive summary of the Company's outlook, trends and strategies for 2017 and beyond.

Certain amounts included in Item 2 of this Quarterly Report on Form 10-Q are rounded in millions and all percentages are calculated based on actual amounts. As a result, minor differences may exist due to rounding.

Forward-Looking Statements

The nature of the Company's business and the many countries in which it operates subject it to changing economic, competitive, regulatory and technological conditions, risks and uncertainties. In accordance with the "safe harbor" provisions of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, the Company provides the following cautionary remarks regarding important factors that, among others, could cause future results to differ materially from the results contemplated by forward-looking statements, including the expectations and assumptions expressed or implied herein. Forward-looking statements contained herein could include, among other things, statements about management's confidence in and strategies for performance; expectations for new and existing products, technologies and opportunities; and expectations regarding growth, sales, cash flows, and earnings. Forward-looking statements can be identified by the use of such terms as "may," "could," "expect," "anticipate," "intend," "believe," "likely," "estimate," "plan" or other comparable terms.

Factors that could cause actual results to differ, perhaps materially, from those implied by forward-looking statements include, but are not limited to: (1) changes in the worldwide business environment in which the Company operates, including general economic conditions; (2) changes in currency exchange rates, interest rates, commodity and fuel costs and capital costs; (3) changes in the performance of equity and bond markets that could affect, among other things, the valuation of the assets in the Company's pension plans and the accounting for pension assets, liabilities and expenses; (4) changes in governmental laws and regulations, including environmental, occupational health and safety, tax and import tariff standards; (5) market and competitive changes, including pricing pressures, market demand and acceptance for new products, services and technologies; (6) the Company's inability or failure to protect its intellectual property rights from infringement in one or more of the many countries in which the Company operates; (7) failure to effectively prevent, detect or recover from breaches in the Company's cybersecurity infrastructure; (8) unforeseen business disruptions in one or more of the many countries in which the Company operates due to political instability, civil disobedience, armed hostilities, public health issues or other calamities; (9) disruptions associated with labor disputes and increased operating costs associated with union organization; (10) the seasonal nature of the Company's business; (11) the Company's ability to successfully enter into new contracts and complete new acquisitions or strategic ventures in the time-frame contemplated, or at all; (12) the integration of the Company's strategic acquisitions; (13) the amount and timing of repurchases of the Company's common stock, if any; (14) the prolonged recovery in global financial and credit markets and economic conditions generally, which could result in the Company's customers curtailing development projects, construction, production and capital expenditures, which, in turn, could reduce the demand for the Company's products and services and, accordingly, the Company's revenues, margins and profitability; (15) the outcome of any disputes with customers, contractors and subcontractors; (16) the financial condition of the Company's customers, including the ability of customers (especially those that may be highly leveraged and those with inadequate liquidity) to maintain their credit availability; (17) implementation of environmental remediation matters; (18) risk and uncertainty associated with intangible assets; and (19) other risk factors listed from time to time in the Company's SEC reports. A further discussion of these, along with other potential risk factors, can be found in Part I, Item 1A, "Risk Factors," of the Company's Annual Report on Form 10-K for the year ended December 31, 2016 and Part II, Item 1A, Risk Factors herein. The Company cautions that these factors may not be exhaustive and that many of these factors are beyond the Company's ability to control or predict. Accordingly, forward-looking statements should not be relied upon as a prediction of actual results. The Company undertakes no duty to update forward-looking statements except as may be required by law.

Executive Overview

Markets served by the Company's Harsco Metals & Minerals Segment demonstrated some improvement during the first quarter of 2017 as increased customer steel production and higher commodity volumes and prices positively affected both revenues and operating income. In addition, results were positively affected by the operational benefits and discipline achieved in recent years due to the Harsco Metals & Minerals Segment's Improvement Plan ("Project Orion").

Energy markets also demonstrated some fundamental improvement during the first quarter of 2017. The Harsco Industrial Segment's air-cooled heat exchangers business has seen steadily improving results but will continue to lag the market given the lead time for capital expenditures to formalize into new projects for customers in the oil and gas markets served by the Company. The Harsco Industrial Segment's industrial grating business continues to be impacted by a lack of large-scale projects, delayed capital expenditures, competitive market dynamics and increased material costs. Accordingly, these factors impacted revenue and operating income during the first quarter of 2017 in the Harsco Industrial Segment.

The Harsco Rail Segment's performance during the first quarter of 2017 was consistent with the same period in the prior year, as revenues decreased slightly and operating income and margins increased slightly. This was the result of increased spare part sales, partially offset by the timing and mix of equipment sales, as spending by Class I railways in the American market remains weak.

The Company has previously announced its intention to pursue strategic options for the separation of the Harsco Metals & Minerals Segment. After carefully studying alternatives to separate the Harsco Metals & Minerals Segment from the Company's other businesses, and considering the future benefits of the ongoing business transformation and the expected recovery in the Company's end markets, the Company has concluded such a separation will not be pursued for the foreseeable future.

Revenues by Segment (In millions)	Three Months Ended			
	March 31			
	2017	2016	Change	%
Harsco Metals & Minerals	\$ 247.0	\$ 229.7	\$ 17.4	7.6 %
Harsco Industrial	65.9	61.9	4.0	6.5
Harsco Rail	59.6	61.7	(2.2)	(3.5)
Total revenues	\$ 372.5	\$ 353.3	\$ 19.3	5.5 %

Revenues by Region (In millions)	Three Months Ended			
	March 31			
	2017	2016	Change	%
North America	\$ 170.7	\$ 162.3	\$ 8.5	5.2 %
Western Europe	101.3	108.3	(7.0)	(6.5)
Latin America (includes Mexico)	45.1	34.7	10.4	29.9
Asia-Pacific	37.9	31.7	6.2	19.7
Middle East and Africa	10.6	9.2	1.3	14.6
Eastern Europe	6.9	7.1	(0.1)	(1.9)
Total revenues	\$ 372.5	\$ 353.3	\$ 19.3	5.5 %

Revenues for the Company during the first quarter of 2017 were \$372.5 million compared with \$353.3 million in the first quarter of 2016. The change is primarily related to the impact of volume changes, primarily in the Harsco Metals & Minerals Segment and to a lesser extent in the Harsco Industrial Segment's air-cooled heat exchangers business; partially offset by the impacts of foreign currency translation. Foreign currency translation decreased revenues by \$5.5 million for the first quarter of 2017 compared with the same period in the prior year.

Operating Income (Loss) by Segment (In millions)	Three Months Ended			
	March 31			
	2017	2016	Change	%
Harsco Metals & Minerals	\$ 26.4	\$ 6.9	\$ 19.5	280.8 %
Harsco Industrial	2.8	6.5	(3.7)	(56.7)
Harsco Rail	6.0	4.9	1.1	22.0
Corporate	(7.3)	(8.9)	1.6	17.7
Total operating income	\$ 27.9	\$ 9.4	\$ 18.5	195.9 %

Operating Margin by Segment	Three Months Ended	
	March 31	
	2017	2016
Harsco Metals & Minerals	10.7%	3.0%
Harsco Industrial	4.3	10.5
Harsco Rail	10.0	7.9
Consolidated operating margin	7.5%	2.7%

Operating income from continuing operations for the first quarter of 2017 was \$27.9 million compared with \$9.4 million in the first quarter of 2016. Refer to the segment discussions below for information pertaining to factors positively affecting and negatively impacting operating income from continuing operations.

Harsco Metals & Minerals Segment:

Significant Impacts on Revenues

(In millions)	Three Months Ended March 31, 2017
Revenues — 2016	\$ 229.7
Net effects of price/volume changes, primarily attributable to volume changes.	23.0
Impact of foreign currency translation.	(4.0)
Net impact of new and lost contracts (including exited underperforming contracts).	(1.4)
Other.	(0.3)
Revenues — 2017	\$ 247.0

Factors Positively Affecting Operating Income:

- Increased global steel production. Overall, steel production by customers under services contracts, including the impact of new and exited contracts, increased by 11% for the first quarter of 2017 compared with the same period in the prior year. Excluding the impact of new and exited contracts, steel production by customers under services contracts increased by 8% for the first quarter of 2017 compared with the same period in the prior year.
- Increased income attributable to the impact of improved nickel-related, chrome and scrap prices and demand. Nickel-related prices increased 21% during the first quarter of 2017 compared with the same period in the prior year.
- Severance costs resulting from a site exit decreased operating income by \$5.1 million during the first quarter of 2016 which did not repeat in the first quarter of 2017.

Factors Negatively Impacting Operating Income:

- Moderately higher selling, general and administrative costs due to higher compensation costs and professional fees.

Harsco Industrial Segment:

Significant Impacts on Revenues

(In millions)	Three Months Ended March 31, 2017
Revenues — 2016	\$ 61.9
Net effects of price/volume changes, primarily attributable to volume changes.	4.5
Impact of foreign currency translation.	(0.5)
Revenues — 2017	\$ 65.9

Factors Positively Affecting Operating Income:

- Higher overall volumes in the air-cooled heat exchanger business, resulting in increased operating income during the first quarter of 2017 compared with the comparable period in 2016.

Factors Negatively Impacting Operating Income:

- Lower volumes and higher material costs in the industrial grating products business.
- Increased operating expenses including higher health care costs.

Harsco Rail Segment:**Significant Impacts on Revenues**

(In millions)	Three Months Ended March 31, 2017
Revenues — 2016	\$ 61.7
Net impacts of price/volume changes, primarily attributable to volume changes.	(1.2)
Impact of foreign currency translation.	(0.9)
Revenues — 2017	<u>\$ 59.6</u>

Factors Positively Affecting Operating Income:

- Increased volumes of spare parts sales across several geographies during the first quarter of 2017 compared with the same period in prior year.

Factors Negatively Impacting Operating Income:

- Decreased volumes in North America and an unfavorable mix of equipment sales decreased operating income during the first quarter of 2017 compared with the same period in the prior year.

Outlook, Trends and Strategies

In addition to the items noted in the Company's Annual Report on Form 10-K for the year ended December 31, 2016, the following significant items, risks, trends and strategies are expected to affect the Company for the remainder of 2017 and beyond:

- The Company will focus on providing returns above its cost of capital for its stockholders by balancing its portfolio of businesses, and by executing its strategic and operational practices with reasonable amounts of financial leverage.
- The Company will continue to build and develop strong core capabilities and maintain an active and lean corporate center that balances costs with value added services.
- The Company will assess capital needs in the context of operational trends and strategic initiatives. Management will be selective and disciplined in allocating capital by rigorously analyzing projects and utilizing a return-based capital allocation process.
- The Company expects its operational effective income tax rate to approximate 36% to 38% in 2017, excluding the tax impact of the new stock-based compensation accounting standard.

Harsco Metals & Minerals Segment:

- Steel markets demonstrated some pricing improvement during 2016 and the Company experienced improvements in demand and certain commodity prices during the first quarter of 2017. The Company expects these factors along with the effect of new contracts, the continued benefits achieved as part of Project Orion and additional improvement initiatives to positively affect operating income in the near term in the Harsco Metals & Minerals Segment. These improvements may be partially offset by the impact of foreign currency translation.
- In addition to the benefits and discipline that resulted from Project Orion, the Company will continue to focus on ensuring that forecasted results and other requirements for contracts meet certain established standards and deliver returns above its cost of capital. In connection with this focus, the possibility exists that the Company may take strategic actions that result in exit costs and non-cash asset impairment charges that may have an adverse effect on the Company's results of operations and liquidity.
- In January 2017, the Company announced two multi-year contracts for steel mill services in China and Brazil with projected revenues totaling more than \$100 million. Additionally, in March 2017, the Company announced a joint agreement with Hydro Industries for waste recycling solutions.
- As the Company has previously disclosed, over the past several years the Company has been in discussions with officials at the Supreme Council for Environment in Bahrain ("Bahrain Council") with regard to a processing by-product ("salt cakes") located at Hafeera. During 2015, the Company recorded a charge of \$7.0 million, payable over five to seven years, related to the estimated cost of processing and disposal of the salt cakes. The Company's Bahrain operations are operated under a strategic venture for which its strategic venture partner has a 35% minority interest. The Company is awaiting final approval from the Bahrain Council regarding the proposed processing and disposal method. If the Bahrain Council does not approve the proposed method or mandates alternative solutions, the Company's estimated liability could change, and such change could be material in any one period.

- During 2016, one of the Company's customers announced its intention to conduct a strategic review of its steel making operations in Europe, including the possibility of strategic collaborations through a joint venture with another major steel maker. Depending on the outcome of any potential transactions, there could be a material impact on the Company's results of operations, cash flows and asset valuations in any one period.
- One of the Company's customers in Australia has begun the process of voluntary administration under Australian law, the purpose of which is to focus on long-term solvency. The customer is continuing its operations during the voluntary administration proceedings. The Company had approximately \$5 million of receivables with the customer prior to the start of the voluntary administration and continues to believe that these amounts are collectible, because the Company is viewed as an important supplier, continues to provide services to the customer and continues to collect on post-administration invoices timely. However the administration process is uncertain in nature and length. As such, a loss on the pre-administration receivables is reasonably possible, and if there was a change in the Company's view on collectability, there could be a charge against income in future periods.

Harsco Industrial Segment:

- As energy markets have demonstrated some fundamental improvement, the Harsco Industrial Segment's air-cooled heat exchangers business has seen steadily improving results but will continue to lag the market, as expected, given the lead time for capital expenditures to formalize into new projects for customers in the upstream, midstream, and downstream oil and gas markets served by the Company. Accordingly, these factors are expected to impact revenue and operating income during the first half of 2017 in the Harsco Industrial Segment.
- The Harsco Industrial Segment's industrial grating business continues to be impacted by a lack of large-scale projects, delayed capital expenditures, competitive market dynamics and increased material costs. Accordingly, these factors are expected to impact revenue and operating income during the first half of 2017 in the Harsco Industrial Segment.
- The Company is committed to maintaining recent efficiency gains in the air-cooled heat exchangers and industrial grating products businesses and implementing additional improvements in response to the recent industry and economic challenges.
- The Company will continue to focus on product innovation and development to drive strategic growth in its businesses. During January 2017, the Company announced the launch of an all-new capability for remote indoor boiler monitoring that can be downloaded directly to wireless and desktop devices.
- The Company will focus on growing the Harsco Industrial Segment through disciplined organic expansion and acquisitions that improve competitive positioning in core markets or adjacent markets.

Harsco Rail Segment:

- The global demand for railway maintenance-of-way equipment, parts and services continues to be generally positive over the long-term, though the North American market is experiencing weakness due to reduced capital and operating spending by Class I railways.
- During January 2017, the Company announced a new order to equip the entire Denver, Colorado regional railway fleet with enhanced safety systems.
- In prior years, the Company secured two contract awards with initial contract values totaling approximately \$200 million from the federal railway system of Switzerland ("SBB"). The majority of deliveries under these contracts are anticipated to occur during 2017 through 2020. The Harsco Rail Segment recorded estimated forward loss provisions of \$40.1 million and \$5.0 million during the second and fourth quarters of 2016, respectively, which resulted from increased vendor costs, ongoing discussions with SBB, and increased estimates for commissioning, certification and testing costs, as well as expected settlements with SBB. It is possible that the Company's overall estimate of costs to complete these contracts may increase which would result in an additional estimated forward loss provision at such time.
- The Company will focus on growing the Harsco Rail Segment through disciplined organic expansion and acquisitions that improve competitive positioning in core markets or adjacent markets.

Results of Operations

(In millions, except per share amounts)	Three Months Ended	
	March 31	
	2017	2016
Total revenues	\$ 372.5	\$ 353.3
Cost of services and products sold	287.8	283.1
Selling, general and administrative expenses	55.1	50.8
Research and development expenses	0.8	0.9
Other expenses	0.9	9.1
Operating income from continuing operations	27.9	9.4
Interest income	0.5	0.5
Interest expense	(11.7)	(12.4)
Change in fair value to the unit adjustment liability and loss on dilution of equity method investment	—	(12.2)
Income tax (expense) benefit from continuing operations	(6.3)	2.2
Equity in income of unconsolidated entities, net	—	3.2
Income (loss) from continuing operations	10.5	(9.3)
Loss from discontinued operations	(0.4)	(0.3)
Net income (loss)	10.1	(9.6)
Total other comprehensive income	17.4	19.6
Total comprehensive income	27.5	10.1
Diluted earnings (loss) per common share from continuing operations attributable to Harsco Corporation common stockholders	0.11	(0.13)
Effective income tax rate for continuing operations	37.3%	14.8%

Comparative Analysis of Consolidated Results

Revenues

Revenues for the first quarter of 2017 increased \$19.3 million or 5.5% from the first quarter of 2016. Changes in revenues for the periods presented were attributable to the following significant items:

Change in Revenues — 2017 vs. 2016 (In millions)	Three Months Ended March 31, 2017
Net effects of price/volume changes in the Harsco Metals & Minerals Segment, primarily attributable to volume changes.	\$ 23.0
Net effects of price/volume changes in the Harsco Industrial Segment, primarily attributable to volume changes.	4.5
Impact of foreign currency translation.	(5.5)
Net impact of new and lost contracts (including exited underperforming contracts) in the Harsco Metals & Minerals Segment.	(1.4)
Net impacts of price/volume changes in the Harsco Rail Segment, primarily attributable to volume changes.	(1.2)
Other.	(0.1)
Total change in revenues — 2017 vs. 2016	\$ 19.3

Cost of Services and Products Sold

Cost of services and products sold for the first quarter of 2017 increased \$4.7 million or 1.7% from the first quarter of 2016. Changes in cost of services and products sold for the periods presented were attributable to the following significant items:

Change in Cost of Services and Products Sold — 2017 vs. 2016 (In millions)	Three Months Ended March 31, 2017
Increased costs due to changes in revenues (exclusive of the effects of foreign currency translation and fluctuations in commodity costs included in selling prices).	\$ 12.5
Impact of foreign currency translation.	(4.5)
Other.	(3.3)
Total change in cost of services and products sold — 2017 vs. 2016	\$ 4.7

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the first quarter of 2017 increased \$4.4 million or 8.6% from the first quarter of 2016. These increase was primarily related to higher compensation expense related to the timing of stock-based compensation issuances, increased professional fees and increased commissions in the Harsco Industrial Segment.

Other Expenses

This income statement classification includes: net gains on disposal of non-core assets, certain foreign currency gains, employee termination benefit costs, costs associated with the potential separation of the Harsco Metals & Minerals Segment, impaired asset write-downs and other costs to exit activities. Additional information on Other expenses is included in Note 13, Other Expenses, in Part I, Item 1, Financial Statements.

(In thousands)	Three Months Ended	
	March 31	
	2017	2016
Employee termination benefit costs	\$ 753	\$ 5,772
Harsco Metals & Minerals Segment separation costs	—	3,287
Net gains (a)	(122)	(652)
Other costs to exit activities	100	182
Impaired asset write-downs	—	93
Other	163	441
Other expenses	\$ 894	\$ 9,123

(a) Net gains result from the sales of redundant properties (primarily land, buildings and related equipment) and non-core assets.

Interest Expense

Interest expense during the first quarter of 2017 decreased \$0.7 million compared with the first quarter of 2016. The decrease primarily relates to the Company's overall decreased debt levels partially offset by an increase in interest rates associated with the Company's debt.

Change in Fair Value to the Unit Adjustment Liability and Loss on Dilution of Equity Method Investment

The Change in fair value to the unit adjustment liability and loss on dilution of equity method investment during the first quarter of 2017 decreased \$12.2 million compared with the first quarter of 2016. The decreases relate to losses associated with the Company's first quarter of 2016 election not to make the quarterly cash payments to the Company's partner in the Infrastructure strategic venture for the remainder of 2016. In September 2016, the Company sold its remaining approximate 26% interest in Brand Energy & Infrastructure Services. See Note 4, Equity Method Investments and Note 11, Derivative Instruments, Hedging Activities and Fair Value, in Part I, Item 1, Financial Statements for additional information.

Income Tax (Expense) Benefit

Income tax expense related to continuing operations for the first quarter of 2017 was \$6.3 million compared with an income tax benefit related to continuing operations of \$2.2 million for the first quarter of 2016. The change in the income tax expense for the first quarter of 2017 compared with the income tax benefit for the first quarter of 2016 is primarily due to the increase in income in profitable jurisdictions, as well as the expiration of the statute of limitations for uncertain tax positions in certain foreign jurisdictions in 2016 not recurring in 2017.

Income (Loss) from Continuing Operations

Income from continuing operations was \$10.5 million in the first quarter of 2017 compared with a loss from continuing operations of \$9.3 million in the first quarter of 2016. This change is primarily related to increased operating income from continuing operations and the change in fair value to the unit adjustment liability and loss on dilution of equity method investment recorded during the first quarter of 2016 not repeated in 2017, partially offset by increased income tax expense and the elimination of equity income associated with the Infrastructure strategic venture which was sold during 2016.

Total Other Comprehensive Income

Total other comprehensive income was \$17.4 million in the first quarter of 2017, compared with total other comprehensive income of \$19.6 million in the first quarter of 2016. This decrease is primarily due to slightly lower favorable foreign currency translation adjustments in the first quarter of 2017.

Liquidity and Capital Resources

Overview

The Company has sufficient financial liquidity and borrowing capacity to support the strategies within each of its businesses. The Company currently expects operational and business needs to be met by cash provided by operations supplemented with borrowings from time to time due to historical patterns of seasonal cash flow and for the funding of various projects. The Company regularly assesses its capital needs in the context of operational trends and strategic initiatives.

The Company continues to implement and perform capital efficiency initiatives to enhance liquidity and working capital efficiency. These initiatives have included: prudent allocation of capital spending to those projects where the highest results can be achieved; optimization of worldwide cash positions; reductions in discretionary spending; frequent evaluation of customer and business-partner credit risk; and Continuous Improvement initiatives aimed at improving the effective and efficient use of working capital, particularly in accounts receivable and inventories.

During the first three months ended 2017, the Company used \$6.1 million in operating cash flow, an increase from the \$3.0 million used in the first three months ended 2016.

The Company invested \$17.0 million in capital expenditures, mostly for the Harsco Metals & Minerals Segment, in both the first three months ended 2017 and the first three months ended 2016. The Company generated \$1.0 million in cash flow from asset sales in the first three months ended 2017 compared with \$2.8 million in the first three months ended 2016. Asset sales have been a normal part of the Company's business model, primarily for the Harsco Metals & Minerals Segment.

The Company's net cash borrowings increased by \$13.3 million in the first three months ended 2017 principally due to the timing of cash flows, compared with a decrease of \$14.3 million in the first three months of 2016, which included the proceeds received from the termination of cross-currency interest rate swaps ("CCIRs") of \$16.6 million. The Company's consolidated net debt to consolidated adjusted earnings before interest, tax, depreciation and amortization ("EBITDA") ratio, as defined by the Credit Agreement, was 2.3 to 1.0 at March 31, 2017.

Sources and Uses of Cash

The Company's principal sources of liquidity are cash provided by operations and borrowings under its credit facility which consists of a term loan and revolver (the "Senior Secured Credit Facility"), augmented by cash proceeds from asset sales. The primary drivers of the Company's cash flow from operations are the Company's revenues and income. Cash returns on capital investments made in the prior years, for which limited cash is currently required, are a significant source of cash provided by operations. Depreciation expense related to these investments is a non-cash charge.

The Company plans to redeploy discretionary cash for potential growth opportunities, such as disciplined organic growth and higher-return service contracts opportunities for the Harsco Metals & Minerals Segment, and strategic investments or possible acquisitions in the Harsco Rail and Harsco Industrial Segments that improve competitive positioning in core markets or adjacent markets.

Resources available for cash requirements for operations and growth initiatives

In addition to utilizing cash provided by operations and cash proceeds from asset sales, the Company has bank credit facilities available throughout the world. The Company also utilizes capital leases to finance the acquisition of certain equipment when appropriate, which allows the Company to minimize capital expenditures. The Company expects to continue to utilize all of these sources to meet future cash requirements for operations and growth initiatives.

The following table illustrates available credit at March 31, 2017:

(In millions)	March 31, 2017			Available Credit
	Facility Limit	Outstanding Balance	Outstanding Letters of Credit	
Multi-year revolving credit facility	\$ 400.0	\$ 117.0	\$ 43.5	\$ 239.5

At March 31, 2017, the Company had \$665.6 million of borrowings under the Senior Secured Credit Facilities consisting of \$548.6 million under the Term Loan Facility and \$117.0 million under the Revolving Credit Facility. Of this balance, \$660.1 million was classified as long-term debt and \$5.5 million was classified as current maturities of long-term debt on the Condensed Consolidated Balance Sheet at March 31, 2017. At December 31, 2016, the Company had \$648.0 million of borrowings under the Senior Secured Credit Facility, consisting of \$550.0 million under the Term Loan Facility and \$98.0 million under the Revolving Credit Facility. At December 31, 2016, of this balance, \$642.5 million was classified as long-term debt and \$5.5 million was classified as current maturities of long-term debt on the Condensed Consolidated Balance Sheet.

Working Capital Position

Changes in the Company's working capital are reflected in the following table:

(Dollars in millions)	March 31 2017	December 31 2016	Increase (Decrease)
Current Assets			
Cash and cash equivalents	\$ 64.4	\$ 71.9	\$ (7.5)
Trade accounts receivable, net	268.0	236.6	31.4
Other receivables	21.2	21.1	0.1
Inventories	190.4	187.7	2.8
Other current assets	34.2	33.1	1.1
Total current assets	<u>578.3</u>	<u>550.3</u>	<u>28.0</u>
Current Liabilities			
Short-term borrowings and current maturities	26.6	29.8	(3.3)
Accounts payable	108.6	108.0	0.6
Accrued compensation	35.2	46.7	(11.4)
Income taxes payable	6.6	4.3	2.3
Advances on contracts and other customer advances	113.9	117.3	(3.4)
Other current liabilities	124.6	121.6	3.0
Total current liabilities	<u>415.5</u>	<u>427.7</u>	<u>(12.2)</u>
Working Capital	<u>\$ 162.7</u>	<u>\$ 122.6</u>	<u>\$ 40.1</u>
Current Ratio (a)	<u>1.4:1</u>	<u>1.3:1</u>	

(a) Calculated as Total current assets divided by Total current liabilities.

Working capital increased \$40.1 million or 32.7% for the first three months of 2017 due primarily to the following factors:

- Working capital was positively affected by an increase in Trade accounts receivable, net of \$31.4 million, primarily due to increased sales, primarily in the Harsco Metals & Minerals Segment, as well as the timing of sales and collections in the Harsco Rail Segment; and
- Working capital was positively affected by a decrease in Accrued compensation of \$11.4 million, primarily due to the payment of incentive compensation accrued at December 31, 2016.

Certainty of Cash Flows

The Company has historically generated the majority of its cash flows in the second half of the year. The certainty of the Company's future cash flows is underpinned by the long-term nature of the Company's metals services contracts, the order backlog for the Company's railway track maintenance services and equipment, and overall discretionary cash flows (operating cash flows plus cash from asset sales in excess of the amounts necessary for capital expenditures to maintain current revenue levels) generated by the Company. Historically, the Company has utilized these discretionary cash flows for growth-related capital expenditures, strategic acquisitions, debt repayment and dividend payments.

The types of products and services that the Company provides are not subject to rapid technological change, which increases the stability of related cash flows. Additionally, the Company believes each business in its portfolio is a leader in the industries and major markets the Company serves. Due to these factors, the Company is confident in the Company's future ability to generate positive cash flows from operations.

Cash Flow Summary

The Company's cash flows from operating, investing and financing activities, as reflected in the Condensed Consolidated Statements of Cash Flows, are summarized in the following table:

(In millions)	Three Months Ended	
	March 31	
	2017	2016
Net cash provided (used) by:		
Operating activities	\$ (6.1)	\$ (3.0)
Investing activities	(16.0)	(8.7)
Financing activities	13.2	(2.7)
Effect of exchange rate changes on cash	1.4	5.0
Net change in cash and cash equivalents	<u>\$ (7.5)</u>	<u>\$ (9.4)</u>

Cash used by operating activities — Net cash used by operating activities in the first three months of 2017 was \$6.1 million, an increase of \$3.1 million from cash used by operating activities in the first three months of 2016. The increase is primarily attributable to the timing of accounts receivable collections and the payment of incentive compensation, partially offset by an increase in cash net income and the timing of accounts payable and inventory purchases.

Cash used by investing activities — Net cash used by investing activities in the first three months of 2017 was \$16.0 million, an increase of \$7.2 million from the cash used by investing activities in the first three months of 2016. The increase was primarily due to the reduction in proceeds received from the settlement of certain foreign exchange contracts.

Cash provided (used) by financing activities — Net cash provided by financing activities in the first three months of 2017 was \$13.2 million, an increase of \$15.9 million from cash used by financing activities in the first three months of 2016. The change was primarily due to the proceeds received from the termination of CCIRs in 2016 that was not repeated in the first three months of 2017.

Debt Covenants

The Credit Agreement contains a consolidated net debt to consolidated adjusted EBITDA ratio covenant, which is not to exceed 3.75 to 1.0, and a minimum consolidated adjusted EBITDA to consolidated interest charges ratio covenant, which is not to be less than 3.0 to 1.0. The consolidated net debt to consolidated adjusted EBITDA ratio covenant is reduced to 3.5 to 1.0 after December 31, 2017. At March 31, 2017, the Company was in compliance with these covenants, as the total net leverage ratio was 2.3 to 1.0 and total interest coverage ratio was 5.3 to 1.0. Based on balances and covenants in effect at March 31, 2017, the Company could increase net debt by \$389.6 million (although the Company only has \$239.5 million available credit remaining under the Revolving Credit Facility), and still be in compliance with these debt covenants. Alternatively, keeping all other factors constant, the Company's adjusted EBITDA could decrease by \$103.9 million and the Company would still be within these debt covenants. The Company expects to continue to be in compliance with these debt covenants for at least the next twelve months.

Cash Management

The Company has various cash management systems throughout the world that centralize cash in various bank accounts where it is economically justifiable and legally permissible to do so. These centralized cash balances are then redeployed to other operations to reduce short-term borrowings and to finance working capital needs or capital expenditures. Due to the transitory nature of cash balances, they are normally invested in bank deposits that can be withdrawn at will or in very liquid short-term bank time deposits and government obligations. The Company's policy is to use the largest banks in the various countries in which the Company operates. The Company monitors the creditworthiness of banks and when appropriate will adjust banking operations to reduce or eliminate exposure to less creditworthy banks. The Company plans to continue the strategy of targeted, prudent investing for strategic purposes for the foreseeable future, and to make more efficient use of existing investments.

At March 31, 2017, the Company's consolidated cash and cash equivalents included \$63.4 million held by non-U.S. subsidiaries. At March 31, 2017, less than 10% of the Company's consolidated cash and cash equivalents had regulatory restrictions that would preclude the transfer of funds with and among subsidiaries. The cash and cash equivalents held by non-U.S. subsidiaries also included \$18.9 million held in consolidated strategic ventures. The strategic venture agreements may require strategic venture partner approval to transfer funds with and among subsidiaries. While the Company's remaining non-U.S. cash and cash equivalents can be transferred with and among subsidiaries, the majority of these non-U.S. cash balances will be used to support the ongoing working capital needs and continued growth of the Company's non-U.S. operations.

The Company's financial position and debt capacity should enable it to meet current and future requirements. The Company continues to assess its capital needs in the context of operational trends, capital market conditions and strategic initiatives.

Recently Adopted and Recently Issued Accounting Standards

Information on recently adopted and recently issued accounting standards is included in Note 2, Recently Adopted and Recently Issued Accounting Standards, in Part I, Item 1, Financial Statements.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risks have not changed significantly from those disclosed in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2016.

ITEM 4. CONTROLS AND PROCEDURES

Based on the evaluation required by Securities Exchange Act Rules 13a-15(b) and 15d-15(b), the Company's management, including the Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of disclosure controls and procedures, as defined in Securities Exchange Act Rules 13a-15(e) and 15d-15(e), at March 31, 2017. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures were effective at March 31, 2017. There have been no changes in internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting during the first quarter of 2017.

PART II — OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

Information on legal proceedings is included in Note 9, Commitments and Contingencies, in Part I, Item 1, Financial Statements.

ITEM 1A. RISK FACTORS

The Company's risk factors as of March 31, 2017 have not changed materially from those described in Part 1, Item 1A, "Risk Factors," of the Company's Annual Report on Form 10-K for the year ended December 31, 2016.

ITEM 6. EXHIBITS

See the Exhibit Index following the signature page to this Quarterly Report on Form 10-Q for a list of exhibits filed or furnished with this report, which Exhibit Index is incorporated herein by reference.

SIGNATURES

Pursuant to the requirements 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.

HARSCO CORPORATION

(Registrant)

DATE

May 3, 2017

/s/ PETER F. MINAN

Peter F. Minan

Senior Vice President and Chief Financial Officer

(On behalf of the registrant and as Principal Financial and Chief Accounting Officer)

EXHIBIT INDEX

Exhibit Number	Description
10.1	Amendment No. 1 to the 2013 Equity and Incentive Compensation Plan, effective as of April 25, 2017 (incorporated by reference to the Company's Current Report on Form 8-K filed May 1, 2017).
31.1	Certification Pursuant to Rule 13a-14(a) or 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (Chief Executive Officer).
31.2	Certification Pursuant to Rule 13a-14(a) or 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (Chief Financial Officer).
32	Certifications Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Chief Executive Officer and Chief Financial Officer).
101	The following financial statements from Harsco Corporation's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 filed with the Securities and Exchange Commission on May 3, 2017, formatted in XBRL (Extensible Business Reporting Language): (i) the Condensed Consolidated Balance Sheets; (ii) the Condensed Consolidated Statements of Operations; (iii) the Condensed Consolidated Statements of Comprehensive Loss; (iv) the Condensed Consolidated Statements of Cash Flows; (v) the Condensed Consolidated Statements of Equity; and (vi) the Notes to Condensed Consolidated Financial Statements.

HARSCO CORPORATION
CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a)
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, F. Nicholas Grasberger, III, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Harsco Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

May 3, 2017

/s/ F. NICHOLAS GRASBERGER, III

F. Nicholas Grasberger, III

President and Chief Executive Officer

HARSCO CORPORATION
CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a)
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Peter F. Minan, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Harsco Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

May 3, 2017

/s/ PETER F. MINAN

Peter F. Minan

Senior Vice President and Chief Financial Officer

HARSCO CORPORATION
CERTIFICATIONS PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Harsco Corporation (the "Company") on Form 10-Q for the period ending March 31, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of our knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

May 3, 2017

/s/ F. NICHOLAS GRASBERGER, III

F. Nicholas Grasberger, III

President and Chief Executive Officer

/s/ PETER F. MINAN

Peter F. Minan

Senior Vice President and Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to Harsco Corporation and will be retained by Harsco Corporation and furnished to the Securities and Exchange Commission or its staff upon request.