

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549
FORM 10-Q

(Mark One)

Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the quarterly period ended: **June 30, 2019**
or

Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the transition period from _____ to _____
Commission File Number **1-01520**

Aerojet Rocketdyne Holdings, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

34-0244000
(I.R.S. Employer
Identification No.)

222 N. Pacific Coast Highway
Suite 500
El Segundo
California
(Address of principal executive offices)

90245
(Zip Code)

310-252-8100

(Registrant's telephone number, including area code)

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common stock, \$0.10 par value	AJRD	New York Stock Exchange

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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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

As of July 22, 2019, the Company had 78,676,102 outstanding common shares, including unvested common shares, \$0.10 par value.

Aerojet Rocketdyne Holdings, Inc.
Quarterly Report on Form 10-Q
For the Quarterly Period Ended June 30, 2019

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Part I — FINANCIAL INFORMATION

Item 1. Financial Statements

Aerojet Rocketdyne Holdings, Inc.
Condensed Consolidated Statements of Operations
(Unaudited)

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
	(In millions, except per share amounts)			
Net sales	\$ 485.0	\$ 467.2	\$ 976.7	\$ 959.2
Operating costs and expenses:				
Cost of sales (exclusive of items shown separately below)	379.6	369.5	777.2	796.3
Selling, general and administrative expense	16.9	11.1	29.1	17.8
Depreciation and amortization	17.5	17.7	35.0	35.4
Other (income) expense, net	(0.1)	0.9	1.0	2.1
Total operating costs and expenses	413.9	399.2	842.3	851.6
Operating income	71.1	68.0	134.4	107.6
Non-operating (income) expense:				
Retirement benefits expense	6.5	14.4	13.0	28.8
Interest income	(4.0)	(2.0)	(8.0)	(3.6)
Interest expense	9.2	8.3	18.2	16.4
Total non-operating expense, net	11.7	20.7	23.2	41.6
Income before income taxes	59.4	47.3	111.2	66.0
Income tax provision	15.3	12.5	28.4	17.2
Net income	\$ 44.1	\$ 34.8	\$ 82.8	\$ 48.8
Earnings per share of common stock				
Basic				
Basic earnings per share	\$ 0.56	\$ 0.46	\$ 1.05	\$ 0.65
Diluted				
Diluted earnings per share	\$ 0.54	\$ 0.45	\$ 1.01	\$ 0.64
Weighted average shares of common stock outstanding, basic	77.1	73.9	77.1	73.8
Weighted average shares of common stock outstanding, diluted	80.7	75.1	80.6	75.0

See Notes to Unaudited Condensed Consolidated Financial Statements.

Aerojet Rocketdyne Holdings, Inc.
Condensed Consolidated Statements of Comprehensive Income
(Unaudited)

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
	(In millions)			
Net income	\$ 44.1	\$ 34.8	\$ 82.8	\$ 48.8
Other comprehensive income:				
Amortization of net actuarial losses and prior service credits, net of income taxes of \$2.4 million, \$4.2 million, \$4.6 million, and \$8.4 million	7.0	12.5	14.0	25.0
Comprehensive income	\$ 51.1	\$ 47.3	\$ 96.8	\$ 73.8

See Notes to Unaudited Condensed Consolidated Financial Statements.

Aerojet Rocketdyne Holdings, Inc.
Condensed Consolidated Balance Sheets
(Unaudited)

	June 30, 2019	December 31, 2018
	(In millions, except per share amounts)	
ASSETS		
Current Assets		
Cash and cash equivalents	\$ 744.3	\$ 735.3
Restricted cash	5.0	5.0
Accounts receivable, net	127.5	141.2
Contract assets	246.4	235.1
Other current assets, net	118.0	117.7
Total Current Assets	1,241.2	1,234.3
Noncurrent Assets		
Right-of-use assets	51.9	—
Property, plant and equipment, net	385.6	399.7
Recoverable environmental remediation costs	242.7	251.1
Deferred income taxes	131.6	116.9
Goodwill	161.4	161.3
Intangible assets	65.0	71.8
Other noncurrent assets, net	269.6	255.0
Total Noncurrent Assets	1,307.8	1,255.8
Total Assets	\$ 2,549.0	\$ 2,490.1
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities		
Current portion of long-term debt	\$ 278.1	\$ 273.1
Accounts payable	81.7	88.7
Reserves for environmental remediation costs	42.1	39.8
Contract liabilities	213.0	272.6
Other current liabilities	196.7	204.1
Total Current Liabilities	811.6	878.3
Noncurrent Liabilities		
Long-term debt	363.7	352.3
Reserves for environmental remediation costs	278.1	288.1
Pension benefits	370.3	376.7
Operating lease liabilities	44.1	—
Other noncurrent liabilities	160.2	173.4
Total Noncurrent Liabilities	1,216.4	1,190.5
Total Liabilities	2,028.0	2,068.8
Commitments and contingencies (Note 8)		
Stockholders' Equity		
Preferred stock, par value of \$1.00; 15.0 million shares authorized; none issued or outstanding	—	—
Common stock, par value of \$0.10; 150.0 million shares authorized; 77.1 million shares issued and outstanding as of June 30, 2019; 76.8 million shares issued and outstanding as of December 31, 2018	7.7	7.7
Other capital	564.7	561.8
Treasury stock at cost, 0.8 million shares as of June 30, 2019 and December 31, 2018	(12.7)	(12.7)
Retained earnings	186.7	103.9
Accumulated other comprehensive loss, net of income taxes	(225.4)	(239.4)
Total Stockholders' Equity	521.0	421.3
Total Liabilities and Stockholders' Equity	\$ 2,549.0	\$ 2,490.1

See Notes to Unaudited Condensed Consolidated Financial Statements.

Aerojet Rocketdyne Holdings, Inc.
Condensed Consolidated Statement of Stockholders' Equity
(Unaudited)

	Common Stock		Other Capital	Treasury Stock	(Accumulated Deficit)	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount			Retained Earnings		
	(In millions)						
March 31, 2018	73.8	\$ 7.4	\$ 505.8	\$ (64.5)	\$ (19.4)	\$ (260.1)	\$ 169.2
Net income	—	—	—	—	34.8	—	34.8
Amortization of net actuarial losses and prior service credits, net of income taxes	—	—	—	—	—	12.5	12.5
Repurchase of shares for withholding taxes and option costs under employee equity plans	(0.1)	—	(0.5)	—	—	—	(0.5)
Stock-based compensation and shares issued under equity plans	0.2	—	4.1	—	—	—	4.1
June 30, 2018	<u>73.9</u>	<u>\$ 7.4</u>	<u>\$ 509.4</u>	<u>\$ (64.5)</u>	<u>\$ 15.4</u>	<u>\$ (247.6)</u>	<u>\$ 220.1</u>
December 31, 2017	73.6	\$ 7.4	\$ 503.1	\$ (64.5)	\$ (71.0)	\$ (272.6)	\$ 102.4
Net income	—	—	—	—	48.8	—	48.8
Amortization of net actuarial losses and prior service credits, net of income taxes	—	—	—	—	—	25.0	25.0
Cumulative effect of change in accounting guidance	—	—	—	—	37.6	—	37.6
Repurchase of shares for withholding taxes and option costs under employee equity plans	(0.1)	—	(2.1)	—	—	—	(2.1)
Stock-based compensation and shares issued under equity plans	0.4	—	8.4	—	—	—	8.4
June 30, 2018	<u>73.9</u>	<u>\$ 7.4</u>	<u>\$ 509.4</u>	<u>\$ (64.5)</u>	<u>\$ 15.4</u>	<u>\$ (247.6)</u>	<u>\$ 220.1</u>
March 31, 2019	77.1	\$ 7.7	\$ 561.0	\$ (12.7)	\$ 142.6	\$ (232.4)	\$ 466.2
Net income	—	—	—	—	44.1	—	44.1
Amortization of net actuarial losses and prior service credits, net of income taxes	—	—	—	—	—	7.0	7.0
Repurchase of shares for withholding taxes and option costs under employee equity plans	—	—	(0.5)	—	—	—	(0.5)
Stock-based compensation and shares issued under equity plans	—	—	4.2	—	—	—	4.2
June 30, 2019	<u>77.1</u>	<u>\$ 7.7</u>	<u>\$ 564.7</u>	<u>\$ (12.7)</u>	<u>\$ 186.7</u>	<u>\$ (225.4)</u>	<u>\$ 521.0</u>
December 31, 2018	76.8	\$ 7.7	\$ 561.8	\$ (12.7)	\$ 103.9	\$ (239.4)	\$ 421.3
Net income	—	—	—	—	82.8	—	82.8
Amortization of net actuarial losses and prior service credits, net of income taxes	—	—	—	—	—	14.0	14.0
Repurchase of shares for withholding taxes and option costs under employee equity plans	(0.3)	—	(6.7)	—	—	—	(6.7)
Stock-based compensation and shares issued under equity plans	0.6	—	9.6	—	—	—	9.6
June 30, 2019	<u>77.1</u>	<u>\$ 7.7</u>	<u>\$ 564.7</u>	<u>\$ (12.7)</u>	<u>\$ 186.7</u>	<u>\$ (225.4)</u>	<u>\$ 521.0</u>

See Notes to Unaudited Condensed Consolidated Financial Statements.

Aerojet Rocketdyne Holdings, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)

	Six months ended June 30,	
	2019	2018
(In millions)		
Operating Activities		
Net income	\$ 82.8	\$ 48.8
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	35.0	35.4
Amortization of debt discount and deferred financing costs	4.6	4.4
Stock-based compensation	15.5	6.7
Retirement benefits, net	10.8	6.7
Other, net	0.4	(2.0)
Changes in assets and liabilities, net of effects from acquisition in 2019:		
Accounts receivable, net	13.8	(40.7)
Contract assets	(11.3)	(7.5)
Other current assets, net	(0.1)	16.3
Recoverable environmental remediation costs	8.4	5.3
Other noncurrent assets, net	(15.6)	(1.5)
Accounts payable	(10.8)	(9.7)
Contract liabilities	(59.6)	(58.1)
Other current liabilities	(27.6)	21.8
Deferred income taxes	(19.3)	2.3
Reserves for environmental remediation costs	(7.7)	(7.7)
Other noncurrent liabilities and other	11.9	4.0
Net Cash Provided by Operating Activities	<u>31.2</u>	<u>24.5</u>
Investing Activities		
Purchases of marketable securities	—	(44.7)
Sales of marketable securities	—	20.1
Insurance proceeds	—	1.9
Capital expenditures	(6.9)	(12.2)
Net Cash Used in Investing Activities	<u>(6.9)</u>	<u>(34.9)</u>
Financing Activities		
Debt repayments	(10.8)	(10.3)
Repurchase of shares for withholding taxes and option costs under employee equity plans	(6.7)	(2.1)
Proceeds from shares issued under equity plans	2.2	2.5
Net Cash Used in Financing Activities	<u>(15.3)</u>	<u>(9.9)</u>
Net Increase (Decrease) in Cash, Cash Equivalents and Restricted Cash	9.0	(20.3)
Cash, Cash Equivalents and Restricted Cash at Beginning of Year	740.3	535.0
Cash, Cash Equivalents and Restricted Cash at End of Year	<u>\$ 749.3</u>	<u>\$ 514.7</u>
Supplemental disclosures of cash flow information		
Cash paid for interest	\$ 13.7	\$ 11.9
Cash paid for income taxes	33.9	15.2
Cash refund for income taxes	1.0	4.6

See Notes to Unaudited Condensed Consolidated Financial Statements.

Aerojet Rocketdyne Holdings, Inc.
Notes to Unaudited Condensed Consolidated Financial Statements

Note 1. Basis of Presentation and Nature of Operations

Aerojet Rocketdyne Holdings, Inc. ("Aerojet Rocketdyne Holdings" or the "Company") has prepared the accompanying unaudited condensed consolidated financial statements, including the accounts of the Company and its 100% owned and majority owned subsidiaries, in accordance with the instructions to Form 10-Q. The December 31, 2018, condensed consolidated balance sheet was derived from audited financial statements, but does not include all of the disclosures required by accounting principles generally accepted in the United States of America ("GAAP"). These interim financial statements should be read in conjunction with the financial statements and accompanying notes included in the Company's Annual Report on Form 10-K for the year ended December 31, 2018. Certain reclassifications have been made to financial information for the prior year to conform to the current year's presentation.

The Company believes the accompanying unaudited condensed consolidated financial statements reflect all adjustments, including normal recurring accruals, necessary for a fair statement of its financial position, results of operations, and cash flows for the periods presented. All significant intercompany balances and transactions have been eliminated in consolidation. The preparation of the unaudited condensed consolidated financial statements in conformity with GAAP requires the Company to make estimates and assumptions that affect the amounts reported in the unaudited condensed consolidated financial statements and accompanying notes. Actual results could differ from those estimates. In addition, the operating results for interim periods may not be indicative of the results of operations for a full year.

The Company's operations are organized into two segments:

Aerospace and Defense — includes the operations of the Company's wholly-owned subsidiary Aerojet Rocketdyne, Inc. ("Aerojet Rocketdyne"), a leading technology-based designer, developer and manufacturer of aerospace and defense products and systems for the United States ("U.S.") government, including the Department of Defense ("DoD"), the National Aeronautics and Space Administration ("NASA"), and major aerospace and defense prime contractors.

Real Estate — includes the activities of the Company's wholly-owned subsidiary Easton Development Company, LLC ("Easton") related to the rezoning, entitlement, sale, and leasing of the Company's excess real estate assets. The Company is currently in the process of seeking zoning changes and other governmental approvals on its excess real estate assets to optimize their value.

A detailed description of the Company's significant accounting policies can be found in the Company's most recent Annual Report on Form 10-K for the year ended December 31, 2018.

Recently Adopted Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board ("FASB") issued guidance requiring lessees to recognize a right-of-use ("ROU") asset and a lease liability on the balance sheet for all leases with the exception of short-term leases. For lessees, leases will continue to be classified as either operating or finance leases in the income statement. The new standard allows for application of the standard on the adoption date without restatement of prior comparative periods presented or a modified retrospective transition method which requires application of the new guidance at the beginning of the earliest comparative period presented. The Company adopted this new standard as of January 1, 2019, without restating prior comparative periods, and elected the package of practical expedients permitted under the transition guidance within the new standard, which among other things, did not require reassessment of lease classification. The Company recorded a ROU asset and lease liability for operating leases at adoption of \$51.7 million and \$56.3 million, respectively (see Note 13). The difference between the ROU asset and lease liability for operating leases was primarily due to previously recorded deferred rents relating to periods prior to January 1, 2019. The Company's accounting for finance leases remains substantially unchanged. The standard had no impact on the Company's results of operations or cash flows.

In February 2018, the FASB issued guidance that permits the reclassification of the income tax effects of the Tax Cuts and Jobs Act ("Tax Act") on items within accumulated other comprehensive loss to retained earnings. The guidance refers to these amounts as "stranded tax effects." The Company has elected to retain the income tax effects of the Tax Act as a component of accumulated other comprehensive loss. Given this election, the adoption of this guidance did not have a material impact on the Company's financial position, results of operations, or cash flows.

Recently Issued Accounting Pronouncements

In August 2018, the FASB issued guidance that modifies the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans. The new guidance is effective for financial statements issued for fiscal years ending after December 15, 2020. Early adoption is permitted and requires adoption on a retrospective basis to all periods presented. As the new guidance only impacts presentation, the Company does not expect the guidance to have an impact on its financial position, results of operations, or cash flows.

Note 2. Earnings Per Share ("EPS") of Common Stock

The following table reconciles the numerator and denominator used to calculate basic and diluted EPS of common stock:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
(In millions, except per share amounts)				
Numerator:				
Net income	\$ 44.1	\$ 34.8	\$ 82.8	\$ 48.8
Income allocated to participating securities	(0.9)	(0.8)	(1.6)	(1.0)
Net income for basic and diluted EPS	<u>\$ 43.2</u>	<u>\$ 34.0</u>	<u>\$ 81.2</u>	<u>\$ 47.8</u>
Denominator:				
Basic weighted average shares	77.1	73.9	77.1	73.8
Effect of:				
2.25% Convertible Senior Notes ("2 1/4% Notes")	3.5	1.1	3.4	1.1
Employee stock options and stock purchase plan	0.1	0.1	0.1	0.1
Diluted weighted average shares	<u>80.7</u>	<u>75.1</u>	<u>80.6</u>	<u>75.0</u>
Basic				
Basic EPS	<u>\$ 0.56</u>	<u>\$ 0.46</u>	<u>\$ 1.05</u>	<u>\$ 0.65</u>
Diluted				
Diluted EPS	<u>\$ 0.54</u>	<u>\$ 0.45</u>	<u>\$ 1.01</u>	<u>\$ 0.64</u>

The following table sets forth the potentially dilutive securities excluded from the computation because their effect would have been anti-dilutive:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
(In millions)				
Unvested restricted shares	1.5	1.7	1.5	1.6
Total potentially dilutive securities	<u>1.5</u>	<u>1.7</u>	<u>1.5</u>	<u>1.6</u>

Note 3. Revenue Recognition

In the Company's Aerospace and Defense segment, the majority of revenue is earned from long-term contracts to design, develop, and manufacture aerospace and defense products, and provide related services, for the Company's customers, including the U.S. government, and major aerospace and defense prime contractors.

The Company evaluates the contract value and cost estimates for performance obligations at least quarterly and more frequently when circumstances significantly change. Factors considered in estimating the work to be completed include, but are not limited to: labor productivity, the nature and technical complexity of the work to be performed, availability and cost volatility of materials, subcontractor and vendor performance, warranty costs, volume assumptions, anticipated labor agreements, inflationary trends, schedule and performance delays, availability of funding from the customer, and the recoverability of costs incurred outside the original contract included in any estimates to complete. When the Company's estimate of total costs to be incurred to satisfy a performance obligation exceeds the expected revenue, the Company recognizes the loss immediately. When the Company determines that a change in estimates has an impact on the associated profit of a performance obligation, the Company records the cumulative positive or negative adjustment to the statement of operations. Changes in estimates and assumptions related to the status of certain long-term contracts may have a material effect on the Company's operating results. The following table summarizes the impact of the changes in significant contract accounting estimates on the Company's Aerospace and Defense segment operating results:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
	(In millions, except per share amounts)			
Net favorable effect of the changes in contract estimates on net sales	\$ 25.8	\$ 26.2	\$ 38.8	\$ 18.8
Net favorable effect of the changes in contract estimates on income before income taxes	25.6	22.0	39.0	14.1
Net favorable effect of the changes in contract estimates on net income	19.0	16.3	28.7	10.4
Net favorable effect of the changes in contract estimates on basic EPS	0.24	0.22	0.37	0.14
Net favorable effect of the changes in contract estimates on diluted EPS	0.23	0.21	0.35	0.14

The three and six months ended June 30, 2019, favorable changes in contract estimates were primarily driven by improved performance and risk retirements on the Terminal High Altitude Area Defense ("THAAD"), Patriot Advanced Capability-3 ("PAC-3"), AJ-60, and RL-10 programs. The three and six months ended June 30, 2018, net favorable changes in contract estimates on income before income taxes were primarily driven by improved performance and risk retirements on the THAAD, RS-68, RL-10, and RS-25 programs and better than expected overhead rate performance, partially offset by performance issues on the Commercial Crew Development program.

In the Company's Aerospace and Defense segment, the timing of revenue recognition, customer invoicing, and collections produces accounts receivable, contract assets, and contract liabilities in the unaudited condensed consolidated balance sheets. The following table summarizes contract assets and liabilities:

	June 30, 2019	December 31, 2018
	(In millions)	
Contract assets	\$ 287.8	\$ 278.0
Reserve for overhead rate disallowance	(41.4)	(42.9)
Contract assets, net of reserve	246.4	235.1
Contract liabilities	213.0	272.6
Net contract assets (liabilities), net of reserve	\$ 33.4	\$ (37.5)

Net contract assets (liabilities) increased by \$70.9 million, primarily due to a decrease in cash advances on long-term contracts as of June 30, 2019. During the three and six months ended June 30, 2019, the Company recognized sales of \$66.8 million and \$205.9 million that were included in the Company's contract liabilities as of January 1, 2019.

As of June 30, 2019, the Company's total remaining performance obligations, also referred to as backlog, totaled \$4.6 billion. The Company expects to recognize approximately 42%, or \$2.0 billion, of the remaining performance obligations as sales over the next twelve months, an additional 25% the following twelve months, and 33% thereafter.

The Company's contracts are largely categorized as either "fixed-price" (largely used by the U.S. government for production-type contracts) or "cost-reimbursable" (largely used by the U.S. government for development-type contracts). Fixed-price contracts present the risk of unreimbursed cost overruns, potentially resulting in lower than expected contract profits and margins. This risk is generally lower for cost-reimbursable contracts which, as a result, generally have a lower margin. The following table summarizes the percentages of net sales by contract type:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
Fixed-price	59%	62%	61%	62%
Cost-reimbursable	41	38	39	38

The following table summarizes the percentages of net sales by principal end user:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
U.S. government	94%	93%	94%	93%
Non U.S. government customers	6	7	6	7

The Company's Real Estate segment represented less than 1% of the Company's net sales for the three and six months ended June 30, 2019 and 2018.

Note 4. Stock-Based Compensation

The following table summarizes stock-based compensation expense by type of award:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
	(In millions)			
Stock Appreciation Rights ("SARs")	\$ 5.9	\$ 1.4	\$ 7.6	\$ 0.5
Stock options	0.1	—	0.1	0.1
Restricted stock, service based	1.5	1.2	2.7	2.2
Restricted stock, performance based	2.5	2.5	4.7	3.6
Employee stock purchase plan	0.2	0.1	0.4	0.3
Total stock-based compensation expense	\$ 10.2	\$ 5.2	\$ 15.5	\$ 6.7

Stock-based compensation in the three and six months ended June 30, 2019, includes a significant increase in the fair value of the SARs primarily as a result of an increase in the market price of the Company's common stock as reported on the New York Stock Exchange.

Note 5. Balance Sheet Accounts

a. Fair Value of Financial Instruments

Financial instruments are classified using a three-tiered fair value hierarchy, which prioritizes the inputs used in measuring fair value. These tiers include: Level 1, defined as observable inputs such as quoted prices in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs in which little or no market data exists, therefore requiring an entity to develop its own assumptions.

	Fair value measurement as of June 30, 2019			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)
	(In millions)			
Money market funds	\$ 342.9	\$ 342.9	\$ —	\$ —
Registered investment companies	4.4	4.4	—	—
Commercial paper	99.9	—	99.9	—
Total	\$ 447.2	\$ 347.3	\$ 99.9	\$ —

	Fair value measurement as of December 31, 2018			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)
	(In millions)			
Money market funds	\$ 186.3	\$ 186.3	\$ —	\$ —
Commercial paper	154.7	—	154.7	—
Total	\$ 341.0	\$ 186.3	\$ 154.7	\$ —

As of June 30, 2019 and December 31, 2018, the total estimated fair value for commercial paper was classified as cash and cash equivalents as the remaining maturity at date of purchase was less than three months.

The carrying amounts of certain of the Company's financial instruments, including cash and cash equivalents, restricted cash, accounts receivable, accounts payable, accrued compensation, and other accrued liabilities, approximate fair value because of their short maturities.

The following table summarizes the estimated fair value and principal amount for outstanding debt obligations excluding finance lease obligations:

	Fair Value		Principal Amount	
	June 30, 2019	December 31, 2018	June 30, 2019	December 31, 2018
	(In millions)			
Term loan	\$ 336.9	\$ 345.6	\$ 336.9	\$ 345.6
2 ¹ / ₄ % Notes	535.3	441.1	300.0	300.0
	<u>\$ 872.2</u>	<u>\$ 786.7</u>	<u>\$ 636.9</u>	<u>\$ 645.6</u>

The fair value of the 2¹/₄% Notes was determined using broker quotes that are based on open markets for the Company's debt securities (Level 2 securities). The term loan bore interest at variable rates, which adjusted based on market conditions, and its carrying value approximates fair value.

b. Accounts Receivable, net

	June 30, 2019	December 31, 2018
	(In millions)	
Billed receivables under long-term contracts	\$ 135.8	\$ 147.3
Reserve on billed trade receivables	(8.5)	(6.6)
Other trade receivables	0.2	0.5
Accounts receivable, net	<u>\$ 127.5</u>	<u>\$ 141.2</u>

c. Other Current Assets, net

	June 30, 2019	December 31, 2018
	(In millions)	
Deferred costs recoverable from the U.S. government	\$ 49.8	\$ 52.6
Inventories	21.7	14.9
Prepaid expenses	13.5	14.4
Other	33.0	35.8
Other current assets, net	<u>\$ 118.0</u>	<u>\$ 117.7</u>

d. Property, Plant and Equipment, net

	June 30, 2019	December 31, 2018
	(In millions)	
Land	\$ 71.2	\$ 71.2
Buildings and improvements	432.9	408.6
Machinery and equipment, including capitalized software	496.9	499.5
Construction-in-progress	34.1	63.1
	1,035.1	1,042.4
Less: accumulated depreciation	(649.5)	(642.7)
Property, plant and equipment, net	<u>\$ 385.6</u>	<u>\$ 399.7</u>

e. Other Noncurrent Assets, net

	June 30, 2019	December 31, 2018
	(In millions)	
Real estate held for entitlement and leasing	\$ 98.2	\$ 96.3
Deferred costs recoverable from the U.S. government	65.7	56.4
Receivable from Northrop Grumman Corporation ("Northrop") for environmental remediation costs	49.5	52.5
Other	56.2	49.8
Other noncurrent assets, net	<u>\$ 269.6</u>	<u>\$ 255.0</u>

f. Other Current Liabilities

	June 30, 2019	December 31, 2018
	(In millions)	
Accrued compensation and employee benefits	\$ 110.1	\$ 116.4
Income taxes payable	30.6	19.8
Other	56.0	67.9
Other current liabilities	<u>\$ 196.7</u>	<u>\$ 204.1</u>

Note 6. Income Taxes

	Six months ended June 30,	
	2019	2018
	(In millions)	
Income tax provision	\$ 28.4	\$ 17.2

In the six months ended June 30, 2019, the income tax provision was \$28.4 million for an effective tax rate of 25.5%. The Company's effective tax rate differed from the 21% statutory federal income tax rate primarily due to state income taxes and certain expenditures which are permanently not deductible for tax purposes, partially offset by the impact of Research and Development ("R&D") credits.

In the six months ended June 30, 2018, the income tax provision was \$17.2 million for an effective tax rate of 26.1%. The Company's effective tax rate differed from the 21% statutory federal income tax rate primarily due to state income taxes and certain expenditures which are permanently not deductible for tax purposes, partially offset by the impact of R&D credits.

A valuation allowance is required when it is more-likely-than-not that all or a portion of deferred tax assets may not be realized. Assessing the need for a valuation allowance requires management to evaluate, on a quarterly basis, all available evidence, both positive and negative. As of June 30, 2019, the Company continues to believe that the weight of the positive evidence outweighed the negative evidence regarding the realization of its net deferred tax assets.

Note 7. Long-term Debt

	June 30, 2019	December 31, 2018
	(In millions)	
Term loan, bearing interest at variable rates (rate of 4.15% as of June 30, 2019), maturing in September 2023	\$ 336.9	\$ 345.6
Unamortized deferred financing costs	(2.0)	(2.3)
Total senior debt	<u>334.9</u>	<u>343.3</u>
Convertible senior notes, bearing interest at 2.25% per annum, interest payments due in June and December, maturing in December 2023	300.0	300.0
Unamortized discount and deferred financing costs	(41.1)	(45.1)
Total convertible senior notes	<u>258.9</u>	<u>254.9</u>
Finance leases (see Note 13)	48.0	27.2
Total other debt	<u>48.0</u>	<u>27.2</u>
Total debt, net of unamortized discount and deferred financing costs	641.8	625.4
Less: Amounts due within one year	(278.1)	(273.1)
Total long-term debt, net of unamortized discount and deferred financing costs	<u>\$ 363.7</u>	<u>\$ 352.3</u>

Senior Credit Facility

On September 20, 2018, the Company amended the senior secured senior credit facility (the "Senior Credit Facility") to a \$1.0 billion commitment. The Senior Credit Facility matures on September 20, 2023, and consists of (i) a \$650.0 million revolving line of credit (the "Revolver") and (ii) a \$350.0 million term loan (the "Term Loan"). The Senior Credit Facility amended the prior \$750.0 million credit facility which was set to mature in June 2021 and is intended to provide available funds for the Company's short-term liquidity needs from time to time.

As of June 30, 2019, the Company had zero borrowings under the Revolver and issued \$29.6 million letters of credit.

The Term Loan and any borrowings under the Revolver bear interest at LIBOR plus an applicable margin ranging from 175 to 250 basis points based on the Company's leverage ratio measured at the end of each fiscal quarter. In addition to interest, the Company must pay certain fees including (i) letter of credit fees ranging from 175 to 250 basis points per annum on the amount of issued but undrawn letters of credit and eurocurrency rate loans and (ii) commitment fees ranging from 30 to 45 basis points

per annum on the unused portion of the Revolver.

The Term Loan amortizes at a rate of 5.0% per annum of the original drawn amount, increasing to 7.5% per annum on December 31, 2020, and increasing to 10.0% per annum from December 31, 2022, to be paid in equal quarterly installments with any remaining amounts, along with outstanding borrowings under the Revolver, due on the maturity date. Outstanding borrowings under the Revolver and the Term Loan may be voluntarily repaid at any time, in whole or in part, without premium or penalty.

Subject to certain restrictions, all the obligations under the Senior Credit Facility will be guaranteed by the Company and the existing and future material domestic subsidiaries, other than Easton.

The Senior Credit Facility contains financial covenants requiring the Company to (i) maintain an interest coverage ratio of not less than 3.00 to 1.00 and (ii) maintain a consolidated net leverage ratio not to exceed (a) 4.00 to 1.00 through September 30, 2020; (b) 3.75 to 1.00 from October 1, 2020, through September 30, 2021; and (c) 3.50 to 1.00 from October 1, 2021, thereafter, provided that the maximum leverage ratio for all periods shall be increased by 0.50 to 1.00 for two consecutive quarters after consummation of a qualified acquisition.

The Company may generally make certain investments, redeem debt subordinated to the Senior Credit Facility and make certain restricted payments (such as stock repurchases and dividends) if the Company's consolidated net leverage ratio does not exceed 3.25 to 1.00 pro forma for such transaction. The Company is otherwise subject to customary covenants including limitations on asset sales, incurrence of additional debt, and limitations on certain investments and restricted payments.

The Company was in compliance with its financial and non-financial covenants under the Senior Credit Facility as of June 30, 2019.

2¼% Convertible Senior Notes

The Company issued \$300.0 million aggregate principal amount of 2¼% Notes in a private placement to qualified institutional buyers pursuant to Rule 144A under the Securities Act of 1933, as amended.

Holders may convert their 2¼% Notes at their option from July 1, 2019, through September 30, 2019, because the Company's closing stock price exceeded \$33.80 for at least 20 days in the 30 day period prior to June 30, 2019. The Company has a stated intention to cash settle the principal amount of the 2¼% Notes with the conversion premium to be settled in common shares. Accordingly, the net balance of the 2¼% Notes of \$258.9 million is classified as a current liability as of June 30, 2019. The classification of the 2¼% Notes as current or noncurrent on the balance sheet is evaluated at each reporting date and may change depending on whether the sale price contingency (discussed below) has been met.

As more fully described in the indenture governing the 2¼% Notes, the holders of the 2¼% Notes may surrender all or any portion of their 2¼% Notes for conversion at any time during any calendar quarter commencing after the calendar quarter ending on March 31, 2017, (and only during such calendar quarter), if the last reported sale price of the Company's common stock for at least 20 trading days (whether or not consecutive) during the period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% (\$33.80) of the conversion price on each applicable trading day.

The following table summarizes the 2¼% Notes information (in millions, except years, percentages, conversion rate, and conversion price):

	June 30, 2019	December 31, 2018
Carrying value	\$ 258.9	\$ 254.9
Unamortized discount and deferred financing costs	41.1	45.1
Principal amount	\$ 300.0	\$ 300.0
Carrying amount of equity component, net of equity issuance costs	\$ 54.5	\$ 54.5
Remaining amortization period (years)	4.50	5.0
Effective interest rate	5.8%	5.8%
Conversion rate (shares of common stock per \$1,000 principal amount)	38.4615	38.4615
Conversion price (per share of common stock)	\$ 26.00	\$ 26.00

Based on the Company's closing stock price of \$44.77 on June 30, 2019, the if-converted value of the 2¼% Notes exceeded the aggregate principal amount of the 2¼% Notes by \$216.6 million.

The following table presents the interest expense components for the 2¼% Notes:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
	(In millions)			
Interest expense-contractual interest	\$ 1.7	\$ 1.7	\$ 3.4	\$ 3.4
Interest expense-amortization of debt discount	1.9	1.8	3.7	3.5
Interest expense-amortization of deferred financing costs	0.1	0.2	0.3	0.3

Note 8. Commitments and Contingencies

a. Legal Matters

The Company and its subsidiaries are subject to legal proceedings, including litigation in U.S. federal and state courts, which arise out of, and are incidental to, the ordinary course of the Company's on-going and historical businesses. The Company is also subject from time to time to governmental investigations by federal and state agencies. The Company cannot predict the outcome of such proceedings with any degree of certainty. Loss contingency provisions are recorded for probable losses at management's best estimate of a loss. When only a range of amounts can be reasonably estimated and no amount within the range is more likely than another, the low end of the range is recorded. These estimates are often initially developed substantially earlier than when the ultimate loss is known, and are refined each quarterly reporting period as additional information becomes available.

Asbestos Litigation

The Company has been, and continues to be, named as a defendant in lawsuits alleging personal injury or death and seeking various monetary damages due to exposure to asbestos in building materials, products, or in manufacturing operations. The majority of cases are pending in Illinois state courts. There were 61 asbestos cases pending as of June 30, 2019.

Given the lack of any significant consistency to claims (i.e., as to product, operational site, or other relevant assertions) filed against the Company, the Company is generally unable to make a reasonable estimate of the future costs of pending claims or unasserted claims. As of June 30, 2019, the Company has accrued an immaterial amount related to pending claims.

United States ex. rel. Markus vs. Aerojet Rocketdyne Holdings

In the case captioned *United States ex. rel. Markus vs. Aerojet Rocketdyne Holdings, Inc. et al.*, Case No. 2:15-CV-02245- WBS-AC, the Department of Justice completed its review of the case and declined to intervene in June 2018. The case was originally filed under seal in the U.S. District Court, Eastern District of California in September 2017 and alleged causes of action against the Company based on false claims, retaliation, and wrongful termination of employment seeking injunctive relief, civil penalties, and compensatory and punitive damages. In February 2019, the Company filed a Motion to Dismiss the False Claims Act ("FCA") counts of the complaint and a Motion to Compel Arbitration on the employment based claims. In May 2019, the court dismissed one count of the FCA claim, denied the motion to dismiss the remaining FCA counts, and moved the employment based claims to arbitration. The Company continues to vigorously contest the complaint's allegations and has not recorded any liability for this matter as of June 30, 2019.

b. Environmental Matters

The Company is involved in approximately forty environmental matters under the Comprehensive Environmental Response Compensation and Liability Act, the Resource Conservation Recovery Act, and other federal, state, local, and foreign laws relating to soil and groundwater contamination, hazardous waste management activities, and other environmental matters at some of its current and former facilities. The Company is also involved in a number of remedial activities at third party sites, not owned by the Company, where it is designated a potentially responsible party ("PRP") by either the U.S. Environmental Protection Agency ("EPA") and/or a state agency. In many of these matters, the Company is involved with other PRPs. In some instances, the Company's liability and proportionate share of costs have not been determined largely due to uncertainties as to the nature and extent of site conditions and the Company's involvement. While government agencies frequently claim PRPs are jointly and severally liable at such sites, in the Company's experience, interim and final allocations of liability and costs are generally made based on relative contributions of waste or contamination. Anticipated costs associated with environmental remediation that are probable and estimable are accrued. In cases where a date to complete remedial activities at a particular site cannot be determined by reference to agreements or otherwise, the Company projects costs over an appropriate time period not exceeding fifteen years. In such cases, generally the Company does not have the ability to reasonably estimate environmental remediation costs that are beyond this period. Factors that could result in changes to the Company's estimates include completion of current and future soil and groundwater investigations, new claims, future agency demands, discovery of more or less contamination than expected, discovery of new contaminants, modification of planned remedial actions, changes in estimated time required to remediate, new technologies, and changes in laws and regulations.

As of June 30, 2019, the aggregate range of these anticipated environmental costs was \$320.2 million to \$455.8 million and the accrued amount was \$320.2 million. See Note 8(c) for a summary of the environmental reserve activity. Of these accrued liabilities, approximately 99% relates to the Company's U.S. government contracting business, and a portion of this liability is recoverable. The significant environmental sites are discussed below. The balance of the accrued liabilities, which are

not recoverable from the U.S. government, relate to other sites for which the Company's obligations are probable and estimable.

Sacramento, California Site

In 1989, a federal district court in California approved a Partial Consent Decree ("PCD") requiring Aerojet Rocketdyne, among other things, to conduct a Remedial Investigation and Feasibility Study to determine the nature and extent of impacts due to the release of chemicals from the Sacramento, California site, monitor the American River and offsite public water supply wells, operate Groundwater Extraction and Treatment facilities that collect groundwater at the site perimeter, and pay certain government oversight costs. The primary chemicals of concern for both on-site and off-site groundwater are trichloroethylene, perchlorate, and n-nitrosodimethylamine. A 2002 PCD revision (a) separated the Sacramento site into multiple operable units to allow quicker implementation of remedies for critical areas; (b) required the Company to guarantee up to \$75 million (in addition to a prior \$20 million guarantee) to assure that Aerojet Rocketdyne's Sacramento remediation activities are fully funded; and (c) removed approximately 2,600 acres of non-contaminated land from the EPA superfund designation.

Aerojet Rocketdyne is involved in various stages of soil and groundwater investigation, remedy selection, design, construction, operation and maintenance associated with the operable units, all of which are conducted under the direction and oversight of the EPA, including unilateral administrative orders, and the California Department of Toxic Substances Control ("DTSC") and Regional Water Quality Control Board, Central Valley Region ("RWQCB"). On September 22, 2016, the EPA completed its first five-year remedy review of the Sacramento superfund site. The five-year review required by statute and regulation applies to all remedial actions which result in hazardous substances above levels that allow unlimited use and unrestricted exposure. The Company is working with the EPA to address the findings of the five-year remedy review.

The entire southern portion of the site known as Rio Del Oro was under state orders issued in the 1990s from DTSC and the RWQCB to investigate and remediate soil and groundwater contamination. In 2008, the DTSC released all but approximately 400 acres of the Rio Del Oro property from DTSC's environmental orders regarding soil contamination although the property remains subject to the RWQCB's orders to investigate and remediate groundwater environmental contamination emanating offsite from the property.

As of June 30, 2019, the estimated range of anticipated costs discussed above for the Sacramento, California site was \$207.8 million to \$313.9 million and the accrued amount was \$207.8 million included as a component of the Company's environmental reserves. Expenditures associated with this matter are partially recoverable. See Note 8(c) below for further discussion on recoverability.

Baldwin Park Operable Unit ("BPOU")

As a result of its former Azusa, California operations, in 1994, Aerojet Rocketdyne was named a PRP by the EPA in the area of the San Gabriel Valley Basin superfund site known as the BPOU. In 2002, Aerojet Rocketdyne, along with seven other PRPs (the "Cooperating Respondents") signed a project agreement with the San Gabriel Basin Water Quality Authority, the Main San Gabriel Basin Watermaster, and five water companies. The 2002 project agreement terminated in 2017 and the parties executed a project agreement which became operational on May 9, 2017. The agreement has a ten-year term and requires the Cooperating Respondents to fund through an escrow account the ongoing operation, maintenance, and administrative costs of certain treatment and water distribution facilities owned and operated by the water companies. There are also provisions in the project agreement for maintaining financial assurance.

Pursuant to an agreement with the remaining Cooperating Respondents, Aerojet Rocketdyne's current share of future BPOU costs will be approximately 74%.

As part of Aerojet Rocketdyne's sale of its Electronics and Information Systems ("EIS") business to Northrop in October 2001, the EPA approved a prospective purchaser agreement with Northrop to absolve it of pre-closing liability for contamination caused by the Azusa, California operations, which liability remains with Aerojet Rocketdyne. As part of that agreement, the Company agreed to provide a \$25 million guarantee of its obligations under the project agreement.

As of June 30, 2019, the estimated range of anticipated costs was \$96.8 million to \$114.9 million and the accrued amount was \$96.8 million included as a component of the Company's environmental reserves. Expenditures associated with this matter are partially recoverable. See Note 8(c) below for further discussion on recoverability.

c. Environmental Reserves and Estimated Recoveries

Environmental Reserves

The Company reviews on a quarterly basis estimated future remediation costs and has an established practice of estimating environmental remediation costs over a fifteen year period, except for those environmental remediation costs with a specific contractual term. Environmental liabilities at the BPOU site are currently estimated through the term of the project agreement, which expires in May 2027. As the period for which estimated environmental remediation costs lengthens, the reliability of such estimates decreases. These estimates consider the investigative work and analysis of engineers, outside environmental consultants, and the advice of legal staff regarding the status and anticipated results of various administrative and legal proceedings. In most cases, only a range of reasonably possible costs can be estimated. In establishing the Company's reserves, the most probable estimate is used when determinable; otherwise, the minimum amount is used when no single amount in the range is more probable. Accordingly, such estimates can change as the Company periodically evaluates and revises these estimates as new information becomes available. The Company cannot predict whether new information gained as projects progress will affect the estimated liability accrued. The timing of payment for estimated future environmental

costs is influenced by a number of factors, such as the regulatory approval process and the time required designing, constructing, and implementing the remedy.

The following table summarizes the Company's environmental reserve activity:

	Aerojet Rocketdyne-Sacramento	Aerojet Rocketdyne-BPOU	Other Aerojet Rocketdyne Sites	Total Aerojet Rocketdyne	Other	Total Environmental Reserve
(In millions)						
December 31, 2018	\$ 207.4	\$ 103.8	\$ 12.4	\$ 323.6	\$ 4.3	\$ 327.9
Additions/Adjustments	6.5	(0.8)	(0.4)	5.3	—	5.3
Expenditures	(6.1)	(6.2)	(0.5)	(12.8)	(0.2)	(13.0)
June 30, 2019	\$ 207.8	\$ 96.8	\$ 11.5	\$ 316.1	\$ 4.1	\$ 320.2

The effect of the final resolution of environmental matters and the Company's obligations for environmental remediation and compliance cannot be accurately predicted due to the uncertainty concerning both the amount and timing of future expenditures and due to regulatory or technological changes. The Company continues its efforts to mitigate past and future costs through pursuit of claims for recoveries from insurance coverage and other PRPs and continued investigation of new and more cost effective remediation alternatives and associated technologies.

As part of the acquisition of the Atlantic Research Corporation ("ARC") propulsion business in 2003, Aerojet Rocketdyne entered into an agreement with ARC pursuant to which Aerojet Rocketdyne is responsible for up to \$20.0 million of costs ("Pre-Close Environmental Costs") associated with environmental issues that arose prior to Aerojet Rocketdyne's acquisition of the ARC propulsion business. ARC is responsible for any cleanup costs relating to the ARC acquired businesses in excess of \$20.0 million. Pursuant to a separate agreement with the U.S. government which was entered into prior to the completion of the ARC acquisition, these costs are recovered through the establishment of prices for Aerojet Rocketdyne's products and services sold to the U.S. government. The Company reached the \$20.0 million cap on cleanup costs in the three months ended March 31, 2017, and expects that additional costs will be incurred due to contamination existing at the time of the acquisition and still requiring remediation and monitoring. On May 6, 2016, ARC informed Aerojet Rocketdyne that it was disputing certain costs that Aerojet Rocketdyne attributed to the \$20.0 million Pre-Close Environmental Costs ("ARC Claim"). The Company responded to the ARC Claim on June 23, 2017, and subsequently continues to communicate with ARC. Final settlement of the Pre-Close Environmental Costs will be determined in conjunction with the Company's evaluation and ultimate resolution of the ARC Claim.

Estimated Recoveries

On January 12, 1999, Aerojet Rocketdyne and the U.S. government reached a settlement agreement ("Global Settlement") covering environmental costs associated with the Company's Sacramento site and its former Azusa site. Pursuant to the Global Settlement, the Company can recover up to 88% of its environmental remediation costs through the establishment of prices for Aerojet Rocketdyne's products and services sold to the U.S. government. Additionally, in conjunction with the sale of the EIS business in 2001, Aerojet Rocketdyne entered into an agreement with Northrop (the "Northrop Agreement") whereby Aerojet Rocketdyne is reimbursed by Northrop for a portion of environmental expenditures eligible for recovery under the Global Settlement, subject to an annual billing limitation of \$6.0 million and a cumulative limitation of \$189.7 million. The following table summarizes the Northrop Agreement activity (in millions):

Total reimbursable costs under the Northrop Agreement	\$ 189.7
Amount reimbursed to the Company through June 30, 2019	(134.2)
Receivable from Northrop included in the unaudited balance sheet at June 30, 2019	\$ 55.5

The cumulative expenditure limitation of \$189.7 million under the Northrop Agreement was reached in June 2017. At that time, the Company was uncertain of the allowability and allocability of additional expenditures above that cumulative limitation and therefore did not recognize a recoverable asset for such amounts. In the third quarter of 2018, the Company and the U.S. government reached a determination that these expenditures are reimbursable under the Global Settlement and therefore recorded a one-time benefit of \$43.0 million to recognize the recoverability of environmental expenditures at a rate of 88%.

Environmental remediation costs are primarily incurred by the Company's Aerospace and Defense segment, and certain of these costs are recoverable from the Company's contracts with the U.S. government. The Company currently estimates approximately 12% of its future Aerospace and Defense segment environmental remediation costs will not likely be reimbursable and are expensed. Allowable environmental remediation costs are charged to the Company's contracts with the U.S. government as the costs are incurred. Because these costs are recovered through forward-pricing arrangements, the ability of Aerojet Rocketdyne to continue recovering these costs from the U.S. government depends on Aerojet Rocketdyne's sustained business volume from U.S. government contracts and programs.

While the Company is currently seeking an arrangement with the U.S. government to recover environmental expenditures in excess of the reimbursement ceiling identified in the Global Settlement, there can be no assurances that such a recovery will be obtained, or if not obtained, that such unreimbursed environmental expenditures will not have a materially adverse effect on the Company's operating results, financial condition, and/or cash flows.

Environmental reserves and estimated recoveries impact to unaudited condensed consolidated statements of operations

The following table summarizes the financial information for the impact of environmental reserves and recoveries to the unaudited condensed consolidated statements of operations:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
	(In millions)			
Expense to unaudited condensed consolidated statements of operations	\$ 0.4	\$ 1.4	\$ 0.7	\$ 2.8

d. Arrangements with Off-Balance Sheet Risk

As of June 30, 2019, arrangements with off-balance sheet risk consisted of:

- \$29.6 million in outstanding commercial letters of credit, the majority of which may be renewed, primarily to collateralize obligations for environmental remediation and insurance coverage.
- \$53.2 million in outstanding surety bonds to primarily satisfy indemnification obligations for environmental remediation coverage.
- \$120.0 million aggregate in guarantees by the Company of Aerojet Rocketdyne's obligations to U.S. government agencies for environmental remediation activities.
- Guarantees, jointly and severally, by the Company's material domestic subsidiaries of their obligations under the Senior Credit Facility.

In addition to the items discussed above, the Company has and will from time to time enter into certain types of contracts that require the Company to indemnify parties against potential third-party and other claims. These contracts primarily relate to: (i) divestiture agreements, under which the Company may provide customary indemnification to purchasers of its businesses or assets including, for example, claims arising from the operation of the businesses prior to disposition, and liability to investigate and remediate environmental contamination existing prior to disposition; (ii) certain real estate leases, under which the Company may be required to indemnify property owners for claims arising from the use of the applicable premises; and (iii) certain agreements with officers and directors, under which the Company may be required to indemnify such persons for liabilities arising out of their relationship with the Company. The terms of such obligations vary. Generally, a maximum obligation is not explicitly stated.

Additionally, the Company has open purchase orders and other commitments to suppliers, subcontractors, and other outsourcing partners for equipment, materials, and supplies in the normal course of business. These amounts are based on volumes consistent with anticipated requirements to fulfill purchase orders or contracts for product deliveries received, or expected to be received, from customers. A substantial portion of these amounts are recoverable through the Company's contracts with the U.S. government.

The Company provides product warranties in conjunction with certain product sales. The majority of the Company's warranties are a one-year standard warranty for parts, workmanship, and compliance with specifications. On occasion, the Company has made commitments beyond the standard warranty obligation. While the Company has contracts with warranty provisions, there is not a history of any significant warranty claims experience. A reserve for warranty exposure is made on a product by product basis when it is both estimable and probable. These costs are included in the program's estimate at completion and are expensed in accordance with the Company's revenue recognition methodology as allowed under GAAP for that particular contract.

Note 9. Cost Reduction Plans

During 2015, the Company initiated the first phase ("Phase I") of the competitive improvement program (the "CIP") comprised of activities and initiatives aimed at reducing costs in order for the Company to continue to compete successfully. Phase I is comprised of three major components: (i) facilities optimization and footprint reduction; (ii) product affordability; and (iii) reduced administrative and overhead costs. In 2017, the Board of Directors approved the second phase ("Phase II") of the Company's previously announced CIP. Pursuant to Phase II, the Company expanded its CIP and further consolidated its Sacramento, California, and Gainesville, Virginia sites, while centralizing and expanding its existing presence in Huntsville, Alabama. The Company currently estimates that it will incur restructuring and related costs of the Phase I and II programs of approximately \$210.0 million (including approximately \$60.5 million of capital expenditures). The Company has incurred \$150.1 million of such costs through June 30, 2019, including \$50.3 million in capital expenditures. The following table summarizes the Company's severance and retention liabilities related to Phase I and II activity:

	Severance		Retention		Total
	(In millions)				
December 31, 2018	\$	18.1	\$	5.1	\$ 23.2
Accrual		—		3.1	3.1
Payments		(7.5)		(2.8)	(10.3)
June 30, 2019	\$	10.6	\$	5.4	\$ 16.0

The costs associated with Phase I and II are included as a component of the Company's U.S. government forward-pricing rates, and therefore, are recovered through the pricing of the Company's products and services to the U.S. government. In addition to the employee-related CIP obligations, the Company incurred non-cash accelerated depreciation expense of \$0.4 million and \$0.7 million in the six months ended June 30, 2019 and 2018, respectively, associated with changes in the estimated useful lives of long-lived assets.

Note 10. Retirement Benefits

The following tables present the components of retirement benefits expense (income):

	Pension Benefits		Postretirement Medical and Life Insurance Benefits	
	Three months ended June 30,			
	2019	2018	2019	2018
	(In millions)			
Interest cost on benefit obligation	\$ 13.1	\$ 12.5	\$ 0.3	\$ 0.3
Expected return on assets	(16.2)	(15.1)	—	—
Amortization of prior service costs	0.1	0.1	—	—
Amortization of net losses (gains)	10.2	17.6	(1.0)	(1.0)
Retirement benefits expense (income)	\$ 7.2	\$ 15.1	\$ (0.7)	\$ (0.7)

	Pension Benefits		Postretirement Medical and Life Insurance Benefits	
	Six months ended June 30,			
	2019	2018	2019	2018
	(In millions)			
Interest cost on benefit obligation	\$ 26.3	\$ 24.9	\$ 0.6	\$ 0.6
Expected return on assets	(32.4)	(30.1)	—	—
Amortization of prior service costs	0.1	0.1	(0.1)	(0.1)
Amortization of net losses (gains)	20.4	35.3	(1.9)	(1.9)
Retirement benefits expense (income)	\$ 14.4	\$ 30.2	\$ (1.4)	\$ (1.4)

Note 11. Operating Segments and Related Disclosures

The Company's operations are organized into two operating segments based on different products and customer bases: Aerospace and Defense, and Real Estate.

The following table presents selected financial information for each reportable segment:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
(In millions)				
Net Sales:				
Aerospace and Defense	\$ 483.1	\$ 465.6	\$ 973.1	\$ 956.0
Real Estate	1.9	1.6	3.6	3.2
Total Net Sales	\$ 485.0	\$ 467.2	\$ 976.7	\$ 959.2
Segment Performance:				
Aerospace and Defense	\$ 77.1	\$ 69.5	\$ 142.0	\$ 106.1
Environmental remediation provision adjustments	(0.4)	(1.0)	(0.7)	(2.3)
GAAP/Cost Accounting Standards retirement benefits expense difference	5.5	(1.2)	10.9	(2.2)
Unusual items	—	—	(0.3)	—
Aerospace and Defense Total	82.2	67.3	151.9	101.6
Real Estate	0.6	0.6	1.1	1.2
Total Segment Performance	\$ 82.8	\$ 67.9	\$ 153.0	\$ 102.8
Reconciliation of segment performance to income before income taxes:				
Segment performance	\$ 82.8	\$ 67.9	\$ 153.0	\$ 102.8
Interest expense	(9.2)	(8.3)	(18.2)	(16.4)
Interest income	4.0	2.0	8.0	3.6
Stock-based compensation	(10.2)	(5.2)	(15.5)	(6.7)
Corporate retirement benefits	(1.8)	(3.3)	(3.6)	(6.6)
Corporate and other	(6.2)	(5.8)	(12.5)	(10.7)
Income before income taxes	\$ 59.4	\$ 47.3	\$ 111.2	\$ 66.0

The following table summarizes customers that represented more than 10% of net sales, each of which involves sales of several product lines and programs:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
Lockheed Martin Corporation	30%	29%	30%	29%
NASA	22	19	21	18
Raytheon Company	20	15	19	18
United Launch Alliance	10	19	11	19

Note 12. Unusual Items

The following table presents total unusual items, comprised of a component of other (income) expense, net in the unaudited condensed consolidated statements of operations:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
(In millions)				
Unusual items				
Acquisition costs	\$ —	\$ —	\$ 0.3	\$ —
	\$ —	\$ —	\$ 0.3	\$ —

On March 29, 2019, the Company acquired certain assets of 3D Material Technologies ("3DMT") from ARC Group Worldwide, Inc. 3DMT is a provider of additive manufacturing (3-D printing) services to the aerospace, defense and industrial markets. The net assets acquired of \$1.1 million are immaterial to the Company's unaudited condensed consolidated financial statements. The purchase price allocation was developed based on estimates of the fair value of the assets and liabilities. The purchase price allocation resulted in the recognition of \$0.1 million in goodwill.

Note 13. Leases

The Company adopted the new leasing guidance effective January 1, 2019. The new guidance requires lessees to recognize a ROU asset and a lease liability on the balance sheet for all leases with the exception of short-term leases.

Operating leases are included in operating lease ROU assets, other current liabilities, and operating lease liabilities. Finance leases are included in property, plant and equipment and debt. Operating ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. Finance leases are recorded as an asset and an obligation at an amount equal to the present value of the minimum lease payments during the lease term. Amortization expense related to finance leases is included in depreciation and amortization expense.

The Company determines if an arrangement is a lease at inception. For certain technology equipment leases, the Company accounts for lease and nonlease (service) components separately based on a relative fair market value basis. For all other leases, the Company accounts for the lease and nonlease components (e.g., common area maintenance) on a combined basis.

The discount rate used for leases is the Company's incremental borrowing rate for collateralized debt based on information available at the lease commencement date. Lease terms may include options to extend or terminate the lease when it is reasonably certain that the option will be exercised. Leases with a term of twelve months or less and that do not include a purchase option that is likely to be exercised are treated as short-term leases and are not reflected on the balance sheet. The Company leases certain facilities, machinery and equipment (including information technology equipment), and office buildings under long-term, non-cancelable operating and finance leases.

The following table summarizes the Company's lease costs:

	Three months ended June 30, 2019	Six months ended June 30, 2019
	(In millions)	
Operating lease cost	\$ 3.7	\$ 6.9
Finance lease cost:		
Amortization	0.9	1.4
Interest on lease liabilities	0.7	1.4
Short-term lease cost	0.5	1.4
Total lease costs	<u>\$ 5.8</u>	<u>\$ 11.1</u>

The following table summarizes the supplemental cash flow information related to leases:

	Six months ended June 30, 2019
	(In millions)
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	\$ 7.0
Operating cash flows from finance leases	1.4
Financing cash flows from finance leases	2.1
Assets obtained in exchange for lease obligations:	
Operating leases	5.4
Finance leases	22.9

The following table summarizes the supplemental balance sheet information related to leases:

	June 30, 2019	
	(In millions)	
Operating leases:		
Operating lease right-of-use assets	\$	51.9
Operating lease liabilities (component of other current liabilities)	\$	11.8
Operating lease liabilities, noncurrent		44.1
	\$	55.9
Finance leases:		
Property, plant and equipment	\$	52.1
Accumulated depreciation		(3.1)
Property, plant and equipment, net	\$	49.0
Current portion of long-term debt	\$	1.9
Long-term debt		46.1
Total finance lease liability	\$	48.0
Weighted-average remaining lease term (in years):		
Operating leases		6
Finance leases		18
Weighted-average discount rate:		
Operating leases		4.7%
Finance leases		5.2%

The Company has additional real estate and information technology equipment operating leases that have not yet commenced amounting to \$83.3 million. These operating leases will commence between 2019 and 2022 with lease terms of up to twelve years.

The following table presents the maturities of lease liabilities:

Year Ending December 31,	Operating Leases		Finance Leases	
	(In millions)			
2019 (excluding the six months ended June 30, 2019)	\$	7.3	\$	2.4
2020		13.5		4.5
2021		12.7		4.6
2022		10.7		4.1
2023		5.5		3.7
Thereafter		15.5		61.2
Total minimum rentals		65.2		80.5
Less: imputed interest		(9.3)		(32.5)
Total	\$	55.9	\$	48.0

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

Unless otherwise indicated or required by the context, as used in this Quarterly Report on Form 10-Q, the terms "the Company," "we," "our" and "us" refer to Aerojet Rocketdyne Holdings, Inc. and all of its subsidiaries that are consolidated in conformity with accounting principles generally accepted in the United States of America ("GAAP").

The preparation of the consolidated financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and accompanying notes. Actual results could differ from those estimates. In addition, our operating results for interim periods may not be indicative of the results of operations for a full year or future periods. This section contains a number of forward-looking statements, all of which are based on current expectations and are subject to risks and uncertainties including those described in this Quarterly Report under the heading "Forward-Looking Statements." Actual results may differ materially. This section should be read in conjunction with our Annual Report on Form 10-K for the year ended December 31, 2018, and periodic reports subsequently filed with the Securities and Exchange Commission ("SEC").

Overview

Our operations are organized into two segments:

Aerospace and Defense — includes the operations of our wholly-owned subsidiary Aerojet Rocketdyne, Inc. ("Aerojet Rocketdyne"), a leading technology-based designer, developer and manufacturer of aerospace and defense products and systems for the United States ("U.S.") government, including the Department of Defense ("DoD"), the National Aeronautics and Space Administration ("NASA"), and major aerospace and defense prime contractors.

Real Estate — includes the activities of our wholly-owned subsidiary Easton Development Company, LLC ("Easton") related to the re-zoning, entitlement, sale, and leasing of our excess real estate assets. We currently are in the process of seeking zoning changes and other governmental approvals on our excess real estate assets to optimize their value.

A summary of the significant financial highlights for the three months ended June 30, 2019, which management uses to evaluate our operating performance and financial condition, is presented below.

- Net sales for the three months ended June 30, 2019, totaled \$485.0 million compared with \$467.2 million for the three months ended June 30, 2018.
- Net income for the three months ended June 30, 2019, was \$44.1 million, or \$0.54 diluted earnings per share ("EPS"), compared with net income of \$34.8 million, or \$0.45 diluted EPS, for the three months ended June 30, 2018.
- Adjusted Net Income (Non-GAAP measure*) for the three months ended June 30, 2019, was \$41.4 million or \$0.50 Adjusted EPS (Non-GAAP measure*), compared with Adjusted Net Income of \$38.1 million, or \$0.50 Adjusted EPS, for the three months ended June 30, 2018.
- Adjusted EBITDAP (Non-GAAP measure*) for the three months ended June 30, 2019, was \$78.4 million compared with \$75.8 million for the three months ended June 30, 2018.
- Segment performance before environmental remediation provision adjustments, retirement benefits, net, and unusual items (Non-GAAP measure*) was \$77.7 million for the three months ended June 30, 2019, compared with \$70.1 million for the three months ended June 30, 2018.
- Cash provided by operating activities for the three months ended June 30, 2019, totaled \$48.9 million compared with \$119.9 million of cash provided by operating activities for the three months ended June 30, 2018.
- Free cash flow (Non-GAAP measure*) for the three months ended June 30, 2019, totaled \$43.5 million compared with \$111.8 million for the three months ended June 30, 2018.
- Total backlog as of June 30, 2019, was \$4.6 billion compared with \$4.1 billion as of December 31, 2018.

* We provide Non-GAAP measures as a supplement to financial results presented in accordance with GAAP. A reconciliation of the Non-GAAP measures to the most directly comparable GAAP measures is presented later in the Management's Discussion and Analysis under the heading "Operating Segment Information" and "Use of Non-GAAP Financial Measures."

Our business outlook is affected by both increasing complexity in the global security environment and continuing worldwide economic pressures. A significant component of our strategy in this environment is to focus on delivering excellent performance to our customers, driving improvements and efficiencies across our operations, and creating value through the enhancement and expansion of our business.

Some of the significant challenges we face are as follows: dependence upon U.S. government programs and contracts, future reductions or changes in U.S. government spending in our markets, successful implementation of our cost reduction plans, environmental matters, capital structure, underfunded retirement benefit plans, and information technology and cyber security.

Major Customers

The principal end user customers of our products and technology are primarily agencies of the U.S. government. Since a majority of our sales are, directly or indirectly, to the U.S. government, funding for the purchase of our products and services generally follows trends in U.S. aerospace and defense spending. However, individual U.S. government agencies, which include the military services, NASA, the Missile Defense Agency, and the prime contractors that serve these agencies, exercise

independent purchasing power within "budget top-line" limits. Therefore, sales to the U.S. government are not regarded as sales to one customer, but rather each contracting agency is viewed as a separate customer.

The following table summarizes net sales to the U.S. government and its agencies, including net sales to significant customers disclosed below:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
U.S. government	94%	93%	94%	93%
Non U.S. government customers	6	7	6	7

The following table summarizes the percentages of net sales for significant programs, all of which are included in the U.S. government sales and are comprised of multiple contracts:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
RS-25	17%	15%	16%	14%
Standard Missile	15	11	14	14
Terminal High Altitude Area Defense ("THAAD")	11	12	11	11

The following table summarizes customers that represented more than 10% of net sales, each of which involves sales of several product lines and programs:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
Lockheed Martin Corporation	30%	29%	30%	29%
NASA	22	19	21	18
Raytheon Company	20	15	19	18
United Launch Alliance	10	19	11	19

Industry Update

We rely on U.S. government spending on aerospace and defense products and systems, and our backlog depends, in large part, on continued funding by the U.S. government for the programs in which we are involved. Information concerning our industry appears in Part 1, Item 1, Business under the caption "Industry Overview" in our Annual Report on Form 10-K for the year ended December 31, 2018.

Cost Reduction Plans

During 2015, we initiated the first phase ("Phase I") of our competitive improvement program ("CIP") comprised of activities and initiatives aimed at reducing costs in order for us to continue to compete successfully. Phase I is comprised of three major components: (i) facilities optimization and footprint reduction; (ii) product affordability; and (iii) reduced administrative and overhead costs. On April 6, 2017, the Board of Directors approved the second phase ("Phase II") of our previously announced CIP. Pursuant to Phase II, we are expanding CIP and further consolidating our Sacramento, California, and Gainesville, Virginia sites, while centralizing and expanding our existing presence in Huntsville, Alabama. When fully implemented, we anticipate that the CIP will result in annual costs that are \$230 million below levels anticipated prior to CIP.

We currently estimate that we will incur restructuring and related costs of the Phase I and II programs of approximately \$210.0 million (including approximately \$60.5 million of capital expenditures). We have incurred \$150.1 million of such costs through June 30, 2019, including \$50.3 million in capital expenditures.

Environmental Matters

Our current and former business operations are subject to, and affected by, federal, state, local, and foreign environmental laws and regulations relating to the discharge, treatment, storage, disposal, investigation, and remediation of certain materials, substances, and wastes. Our policy is to conduct our business with due regard for the preservation and protection of the environment. We continually assess compliance with these regulations and we believe our current operations are materially in compliance with all applicable environmental laws and regulations.

The following table summarizes our recoverable amounts, environmental reserves, and range of liability, as of June 30, 2019:

	Recoverable Amounts (1)	Environmental Reserves	Estimated Range of Liability
(In millions)			
Sacramento	\$ 182.8	\$ 207.8	\$207.8 - \$313.9
Baldwin Park Operable Unit	85.2	96.8	96.8 - 114.9
Other Aerojet Rocketdyne sites	10.3	11.5	11.5 - 21.2
Other sites	0.7	4.1	4.1 - 5.8
Total	\$ 279.0	\$ 320.2	\$320.2 - \$455.8

(1) Excludes the receivable from Northrop Grumman Corporation ("Northrop") of \$55.5 million as of June 30, 2019, related to environmental costs already paid (and therefore not reserved) by us in prior years and reimbursable under our agreement with Northrop.

Environmental remediation costs are primarily incurred by our Aerospace and Defense segment, and certain of these costs are recoverable from our contracts with the U.S. government. We currently estimate approximately 12% of our future Aerospace and Defense segment environmental remediation costs will not likely be reimbursable and are expensed.

Capital Structure

We have a substantial amount of debt for which we are required to make interest and principal payments. Interest on long-term financing is not a recoverable cost under our U.S. government contracts. As of June 30, 2019, we had \$641.8 million of debt outstanding.

Retirement Benefits

During 2019, we expect to use \$38.4 million of prepayment credits to fund our tax-qualified defined benefit pension plan. We generally are able to recover contributions related to our tax-qualified defined benefit pension plan as allowable costs on our U.S. government contracts, but there are differences between when we contribute to our tax-qualified defined benefit pension plan under pension funding rules and when it is recoverable under Cost Accounting Standards ("CAS").

Information Technology and Cyber Security

We routinely experience cyber security threats, threats to our information technology infrastructure and unauthorized attempts to gain access to our sensitive information, as do our customers, suppliers, subcontractors, and other partners. In 2017, we outsourced certain information technology and cyber security functions to third-party contractors in order to take advantage of advanced cyber security technologies. The visibility provided by the additional cyber security technologies identified vulnerabilities and resulted in additional costs to remediate. The transition to the outsourced provider impacted our level of control over the performance and delivery of such services.

We continue to assess our information technology systems and are engaged in cooperative efforts with our customers, suppliers, and subcontractors to seek to minimize the impact of cyber threats, other security threats or business disruptions.

Results of Operations

Net Sales:

	Three months ended June 30,			Six months ended June 30,		
	2019	2018	Change*	2019	2018	Change**
(In millions)						
Net sales	\$ 485.0	\$ 467.2	\$ 17.8	\$ 976.7	\$ 959.2	\$ 17.5

* *Primary reason for change.* The increase in net sales was primarily due to an increase of \$39.4 million in defense programs primarily driven by the Standard Missile program partially offset by a decrease of \$21.9 million in space programs primarily driven by the RS-68 program and the winding down of the AJ-60 solid rocket motor.

** *Primary reason for change.* The increase in net sales was primarily due to an increase of \$48.0 million in defense programs primarily driven by the Patriot Advanced Capability-3 ("PAC-3") and Guidance Enhanced Missile ("GEM-T") programs partially offset by a decrease of \$30.9 million in space programs primarily driven by the RS-68 program and the winding down of the AJ-60 solid rocket motor.

Cost of Sales (exclusive of items shown separately below):

	Three months ended June 30,			Six months ended June 30,		
	2019	2018	Change*	2019	2018	Change**
(In millions, except percentage amounts)						
Cost of sales (exclusive of items shown separately below)	\$ 379.6	\$ 369.5	\$ 10.1	\$ 777.2	\$ 796.3	\$ (19.1)
Percentage of net sales	78.3%	79.1%		79.6%	83.0%	

* *Primary reason for change.* The improvement in cost of sales as a percentage of net sales was primarily driven by increased volume and improved performance on the Standard Missile and PAC-3 programs partially offset by the RS-68 program.

** *Primary reason for change.* The improvement in cost of sales as a percentage of net sales was primarily driven by performance issues on the Commercial Crew Development program in 2018.

Selling, General and Administrative Expense ("SG&A"):

	Three months ended June 30,			Six months ended June 30,		
	2019	2018	Change*	2019	2018	Change*
(In millions, except percentage amounts)						
Components of SG&A:						
SG&A excluding stock-based compensation	\$ 6.7	\$ 5.9	\$ 0.8	\$ 13.6	\$ 11.1	\$ 2.5
Stock-based compensation	10.2	5.2	5.0	15.5	6.7	8.8
SG&A	\$ 16.9	\$ 11.1	\$ 5.8	\$ 29.1	\$ 17.8	\$ 11.3
Percentage of net sales	3.5%	2.4%		3.0%	1.9%	
Percentage of net sales excluding stock-based compensation	1.4%	1.3%		1.4%	1.2%	

* *Primary reason for change.* The increase in SG&A expense was primarily driven by stock-based compensation as a result of increases in the fair value of the stock appreciation rights in the current period and improved performance on various operations and earnings targets.

Depreciation and Amortization:

	Three months ended June 30,			Six months ended June 30,		
	2019	2018	Change*	2019	2018	Change*
(In millions)						
Components of depreciation and amortization:						
Depreciation	\$ 13.4	\$ 13.5	\$ (0.1)	\$ 26.9	\$ 27.2	\$ (0.3)
Amortization	3.4	3.5	(0.1)	6.8	6.9	(0.1)
Accretion	0.7	0.7	—	1.3	1.3	—
Depreciation and amortization	\$ 17.5	\$ 17.7	\$ (0.2)	\$ 35.0	\$ 35.4	\$ (0.4)

* *Primary reason for change.* Depreciation and amortization expense was comparable with the prior year period.

Other (Income) Expense, net:

	Three months ended June 30,			Six months ended June 30,		
	2019	2018	Change*	2019	2018	Change*
(In millions)						
Other (income) expense, net	\$ (0.1)	\$ 0.9	\$ (1.0)	\$ 1.0	\$ 2.1	\$ (1.1)

* *Primary reason for change.* The decrease in other (income) expense, net was primarily due to a decrease in environmental remediation expenses (see Note 8(c) of the Notes to Unaudited Condensed Consolidated Financial Statements).

Retirement Benefits Expense:

	Three months ended June 30,			Six months ended June 30,		
	2019	2018	Change*	2019	2018	Change*
(In millions)						
Components of retirement benefits expense:						
Interest cost on benefit obligation	\$ 13.4	\$ 12.8	\$ 0.6	\$ 26.9	\$ 25.5	\$ 1.4
Expected return on assets	(16.2)	(15.1)	(1.1)	(32.4)	(30.1)	(2.3)
Amortization of prior service credits	0.1	0.1	—	—	—	—
Amortization of net losses	9.2	16.6	(7.4)	18.5	33.4	(14.9)
Retirement benefits expense	\$ 6.5	\$ 14.4	\$ (7.9)	\$ 13.0	\$ 28.8	\$ (15.8)

* *Primary reason for change.* The decrease in retirement benefits expense was primarily due to a decrease in the amortization of net actuarial losses in the current period.

Interest Income:

	Three months ended June 30,			Six months ended June 30,		
	2019	2018	Change*	2019	2018	Change*
(In millions)						
Interest income	\$ 4.0	\$ 2.0	\$ 2.0	\$ 8.0	\$ 3.6	\$ 4.4

* *Primary reason for change.* The increase in interest income was primarily due to higher average cash balances and interest rates.

Interest Expense:

	Three months ended June 30,			Six months ended June 30,		
	2019	2018	Change*	2019	2018	Change*
(In millions)						
Components of interest expense:						
Contractual interest and other	\$ 6.9	\$ 6.0	\$ 0.9	\$ 13.6	\$ 12.0	\$ 1.6
Amortization of debt discount and deferred financing costs	2.3	2.3	—	4.6	4.4	0.2
Interest expense	\$ 9.2	\$ 8.3	\$ 0.9	\$ 18.2	\$ 16.4	\$ 1.8

* *Primary reason for change.* The increase in interest expense was primarily due to higher finance lease obligations in 2019 (see Note 13 of the Notes to Unaudited Condensed Consolidated Financial Statements).

Income Tax Provision:

The income tax provision was as follows:

	Six months ended June 30,	
	2019	2018
(In millions)		
Income tax provision	\$ 28.4	\$ 17.2

In the six months ended June 30, 2019, the income tax provision was \$28.4 million for an effective tax rate of 25.5%. Our effective tax rate differed from the 21% statutory federal income tax rate primarily due to state income taxes and certain expenditures which are permanently not deductible for tax purposes, partially offset by the impact of Research and Development ("R&D") credits.

In the six months ended June 30, 2018, the income tax provision was \$17.2 million for an effective tax rate of 26.1%. Our effective tax rate differed from the 21% statutory federal income tax rate primarily due to state income taxes and certain expenditures which are permanently not deductible for tax purposes, partially offset by the impact of R&D credits.

Operating Segment Information:

We evaluate our operating segments based on several factors, of which the primary financial measure is segment performance. Segment performance represents net sales less applicable costs, expenses and provisions for unusual items relating to the segment. Excluded from segment performance are: corporate income and expenses, interest expense, interest income, income taxes, legacy income or expenses, and unusual items not related to the segment. We believe that segment performance provides information useful to investors in understanding our underlying operational performance. In addition, we provide the Non-GAAP financial measure of our operational performance called segment performance before environmental remediation provision adjustments, retirement benefits, and segment unusual items. We believe the exclusion of the items listed above permits an evaluation and a comparison of results for ongoing business operations, and it is on this basis that management internally assesses operational performance.

Aerospace and Defense Segment

	Three months ended June 30,			Six months ended June 30,		
	2019	2018	Change*	2019	2018	Change**
(In millions, except percentage amounts)						
Net sales	\$ 483.1	\$ 465.6	\$ 17.5	\$ 973.1	\$ 956.0	\$ 17.1
Segment performance	82.2	67.3	14.9	151.9	101.6	50.3
Segment margin	17.0%	14.5%		15.6%	10.6%	
Segment margin before environmental remediation provision adjustments, retirement benefits, net, and unusual items (Non-GAAP measure)	16.0%	14.9%		14.6%	11.1%	
Components of segment performance:						
Aerospace and Defense income	\$ 77.1	\$ 69.5	\$ 7.6	\$ 142.0	\$ 106.1	\$ 35.9
Environmental remediation provision adjustments	(0.4)	(1.0)	0.6	(0.7)	(2.3)	1.6
GAAP/CAS retirement benefits expense difference	5.5	(1.2)	6.7	10.9	(2.2)	13.1
Unusual items	—	—	—	(0.3)	—	(0.3)
Aerospace and Defense total	\$ 82.2	\$ 67.3	\$ 14.9	\$ 151.9	\$ 101.6	\$ 50.3

* *Primary reason for change.* The increase in net sales was primarily due to an increase of \$39.4 million in defense programs primarily driven by the Standard Missile program partially offset by a decrease of \$21.9 million in space programs primarily driven by the RS-68 program and the winding down of the AJ-60 solid rocket motor.

The increase in segment margin before environmental remediation provision adjustments, retirement benefits, net and unusual items was primarily driven by increased volume and improved performance on the Standard Missile and PAC-3 programs partially offset by the RS-68 program.

During the three months ended June 30, 2019, we had \$25.6 million of favorable changes in contract estimates on operating results before income taxes compared with favorable changes of \$22.0 million during the three months ended June 30, 2018.

** *Primary reason for change.* The increase in net sales was primarily due to an increase of \$48.0 million in defense programs primarily driven by the PAC-3 and GEM-T programs partially offset by a decrease of \$30.9 million in space programs primarily driven by the RS-68 program and the winding down of the AJ-60 solid rocket motor.

The increase in segment margin before environmental remediation provision adjustments, retirement benefits, net and unusual items was primarily driven by performance issues on the Commercial Crew Development program in 2018.

During the six months ended June 30, 2019, we had \$39.0 million of favorable changes in contract estimates on operating results before income taxes compared with favorable changes of \$14.1 million during the six months ended June 30, 2018.

Real Estate Segment

	Three months ended June 30,			Six months ended June 30,		
	2019	2018	Change	2019	2018	Change
	(In millions)					
Net sales	\$ 1.9	\$ 1.6	\$ 0.3	\$ 3.6	\$ 3.2	\$ 0.4
Segment performance	0.6	0.6	—	1.1	1.2	(0.1)

Net sales and segment performance consist primarily of rental property operations.

Backlog

In the six months ended June 30, 2019, we continued to expand our legacy defense propulsion franchises with large multi-year awards creating strong growth in backlog primarily on the THAAD, Guided Multiple Launch Rocket System ("GMLRS"), and PAC-3 programs. As of June 30, 2019, our total remaining performance obligations, also referred to as backlog, totaled \$4.6 billion. We expect to recognize approximately 42%, or \$2.0 billion, of the remaining performance obligations as sales over the next twelve months, an additional 25% the following twelve months, and 33% thereafter. A summary of our backlog is as follows:

	June 30, 2019	December 31, 2018
	(In billions)	
Funded backlog	\$ 2.1	\$ 1.9
Unfunded backlog	2.5	2.2
Total backlog	<u>\$ 4.6</u>	<u>\$ 4.1</u>

Total backlog includes both funded backlog (unfilled orders for which funding is authorized, appropriated and contractually obligated by the customer) and unfunded backlog (firm orders for which funding has not been appropriated). Indefinite delivery and quantity contracts and unexercised options are not reported in total backlog. Backlog is subject to funding delays or program restructurings/cancellations which are beyond our control.

Use of Non-GAAP Financial Measures

In addition to segment performance (discussed above), we provide the Non-GAAP financial measures of our performance called Adjusted EBITDAP, Adjusted Net Income, and Adjusted EPS. We use these metrics to measure our operating and total Company performance. We believe that for management and investors to effectively compare core performance from period to period, the metrics should exclude items that are not indicative of, or are unrelated to, results from our ongoing business operations such as retirement benefits (pension and postretirement benefits), significant non-cash expenses, the impacts of financing decisions on earnings, and items incurred outside the ordinary, ongoing and customary course of our business. Accordingly, we define Adjusted EBITDAP as GAAP net income adjusted to exclude interest expense, interest income, income taxes, depreciation and amortization, retirement benefits net of amounts that are recoverable under our U.S. government contracts, and unusual items which we do not believe are reflective of such ordinary, ongoing and customary activities. Adjusted Net Income and Adjusted EPS exclude retirement benefits net of amounts that are recoverable under our U.S. government contracts and unusual items which we do not believe are reflective of such ordinary, ongoing and customary activities. Adjusted Net Income and Adjusted EPS do not represent, and should not be considered an alternative to, net income or diluted EPS as determined in accordance with GAAP.

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
(In millions, except per share and percentage amounts)				
Net income	\$ 44.1	\$ 34.8	\$ 82.8	\$ 48.8
Interest expense	9.2	8.3	18.2	16.4
Interest income	(4.0)	(2.0)	(8.0)	(3.6)
Income tax provision	15.3	12.5	28.4	17.2
Depreciation and amortization	17.5	17.7	35.0	35.4
GAAP retirement benefits expense	6.5	14.4	13.0	28.8
CAS recoverable retirement benefits expense	(10.2)	(9.9)	(20.3)	(20.0)
Unusual items	—	—	0.3	—
Adjusted EBITDAP	<u>\$ 78.4</u>	<u>\$ 75.8</u>	<u>\$ 149.4</u>	<u>\$ 123.0</u>
Net income as a percentage of net sales	9.1%	7.4%	8.5%	5.1%
Adjusted EBITDAP as a percentage of net sales	16.2%	16.2%	15.3%	12.8%
Net income	\$ 44.1	\$ 34.8	\$ 82.8	\$ 48.8
GAAP retirement benefits expense	6.5	14.4	13.0	28.8
CAS recoverable retirement benefits expense	(10.2)	(9.9)	(20.3)	(20.0)
Unusual items	—	—	0.3	—
Income tax impact of adjustments (1)	1.0	(1.2)	1.9	(2.4)
Adjusted Net Income	<u>\$ 41.4</u>	<u>\$ 38.1</u>	<u>\$ 77.7</u>	<u>\$ 55.2</u>
Diluted EPS	\$ 0.54	\$ 0.45	\$ 1.01	\$ 0.64
Adjustments	(0.04)	0.05	(0.06)	0.08
Adjusted EPS	<u>\$ 0.50</u>	<u>\$ 0.50</u>	<u>\$ 0.95</u>	<u>\$ 0.72</u>
Diluted weighted average shares, as reported and adjusted	<u>80.7</u>	<u>75.1</u>	<u>80.6</u>	<u>75.0</u>

(1) The income tax impact is calculated using the federal and state statutory rates in the corresponding period.

We also provide the Non-GAAP financial measure of Free Cash Flow. Free Cash Flow is defined as cash flow from operating activities less capital expenditures. Free Cash Flow should not be considered in isolation, as a measure of residual cash flow available for discretionary purposes, or as an alternative to cash flows from operations presented in accordance with GAAP. We use Free Cash Flow, both in presenting our results to stakeholders and the investment community, and in our internal evaluation and management of the business. Management believes that this financial measure is useful because it provides supplemental information to assist investors in viewing the business using the same tools that management uses to evaluate progress in achieving our goals (including under our annual cash and long-term compensation incentive plans). The following table summarizes Free Cash Flow:

	Three months ended June 30,		Six months ended June 30,	
	2019	2018	2019	2018
(In millions)				
Net cash provided by operating activities	\$ 48.9	\$ 119.9	\$ 31.2	\$ 24.5
Capital expenditures	(5.4)	(8.1)	(6.9)	(12.2)
Free Cash Flow (1)	<u>\$ 43.5</u>	<u>\$ 111.8</u>	<u>\$ 24.3</u>	<u>\$ 12.3</u>

(1) Free Cash Flow, a Non-GAAP financial measure, is defined as cash flow from operating activities less capital expenditures.

Because our method for calculating these Non-GAAP measures may differ from other companies' methods, the Non-GAAP measures presented above may not be comparable to similarly titled measures reported by other companies. These measures are not recognized in accordance with GAAP, and we do not intend for this information to be considered in isolation or as a substitute for GAAP measures.

Other Information

Recently Adopted Accounting Pronouncements

See Note 1 of the Notes to Unaudited Condensed Consolidated Financial Statements for information relating to our discussion of the effects of recent accounting pronouncements.

Contractual Obligations

There have been no material changes to our contractual obligations as previously reported in our Annual Report on Form 10-K for the year ended December 31, 2018.

Arrangements with Off-Balance Sheet Risk

See Note 8(d) of the Notes to Unaudited Condensed Consolidated Financial Statements for off-balance sheet risk.

Critical Accounting Policies and Estimates

Our financial statements are prepared in accordance with GAAP that offer acceptable alternative methods for accounting for certain items affecting our financial results, such as determining inventory cost, depreciating long-lived assets, and recognizing revenues.

The preparation of financial statements requires the use of estimates, assumptions, judgments, and interpretations that can affect the reported amounts of assets, liabilities, revenues, and expenses, the disclosure of contingent assets and liabilities and other supplemental disclosures. The development of accounting estimates is the responsibility of our management. Management discusses those areas that require significant judgment with the audit committee of our board of directors. All of our financial disclosures in our filings with the SEC have been reviewed with the audit committee. Although we believe that the positions we have taken with regard to uncertainties are reasonable, others might reach different conclusions and our positions can change over time as more information becomes available. If an accounting estimate changes, its effects are accounted for prospectively and, if significant, disclosed in the Notes to Unaudited Condensed Consolidated Financial Statements.

The areas most affected by our accounting policies and estimates are revenue recognition, other contract considerations, goodwill, retirement benefit plans, litigation, environmental remediation costs and recoveries, and income taxes. Except for income taxes and litigation matters related to legacy operations, which are not allocated to our operating segments, these areas affect the financial results of our business segments.

See Note 13 of the Notes to Unaudited Condensed Consolidated Financial Statements for the impact of the new guidance requiring lessees to recognize a right-of-use asset and a lease liability on the balance sheet for all leases with the exception of short-term leases effective January 1, 2019.

A detailed description of our significant accounting policies can be found in our most recent Annual Report on Form 10-K for the year ended December 31, 2018.

Liquidity and Capital Resources

Net Cash Provided by (Used in) Operating, Investing, and Financing Activities

The following table summarizes the change in cash, cash equivalents and restricted cash:

	Six months ended June 30,	
	2019	2018
	(In millions)	
Net Cash Provided by Operating Activities	\$ 31.2	\$ 24.5
Net Cash Used in Investing Activities	(6.9)	(34.9)
Net Cash Used in Financing Activities	(15.3)	(9.9)
Net Increase (Decrease) in Cash, Cash Equivalents and Restricted Cash	\$ 9.0	\$ (20.3)

Net Cash Provided by Operating Activities

The \$6.7 million increase in cash provided by operating activities for the six months ended June 30, 2019, compared with the six months ended June 30, 2018, was primarily due to improved operating performance partially offset by higher income taxes paid in the current period.

Net Cash Used In Investing Activities

During the six months ended June 30, 2019 and 2018, we had capital expenditures of \$6.9 million and \$12.2 million, respectively.

During the six months ended June 30, 2018, we received insurance proceeds of \$1.9 million and we made a net cash investment of \$24.6 million in marketable securities.

Net Cash Used in Financing Activities

During the six months ended June 30, 2019 and 2018, we had debt repayments of \$10.8 million and \$10.3 million, respectively. See a summary of the debt activity below.

During the six months ended June 30, 2019 and 2018, we had net (disbursements)/receipts from shares issued under our equity plans of \$(4.5) million and \$0.4 million, respectively.

Debt Activity and Covenants

The following table summarizes our debt principal activity:

	December 31, 2018	Cash Payments	Non-cash Activity	June 30, 2019
	(In millions)			
Term loan	\$ 345.6	\$ (8.7)	\$ —	\$ 336.9
2.25% Convertible Senior Notes ("2¼% Notes")	300.0	—	—	300.0
Finance leases	27.2	(2.1)	22.9	48.0
Total Debt Activity	<u>\$ 672.8</u>	<u>\$ (10.8)</u>	<u>\$ 22.9</u>	<u>\$ 684.9</u>

We were in compliance with our financial and non-financial covenants under the Senior Credit Facility as of June 30, 2019.

Outlook

Short-term liquidity requirements consist primarily of recurring operating expenses, including but not limited to costs related to our capital and environmental expenditures, company-funded R&D expenditures, debt service requirements, and retirement benefit plans. We believe that our existing cash and cash equivalents and availability under the Senior Credit Facility coupled with cash generated from our future operations will provide sufficient funds to meet our operating plan for the next twelve months. The operating plan for this period provides for full operation of our businesses, including interest and debt payments. As of June 30, 2019, we had \$744.3 million of cash and cash equivalents as well as \$620.4 million of available borrowings under our Senior Credit Facility. Based on our existing debt agreements, we were in compliance with our financial and non-financial covenants as of June 30, 2019. Our failure to comply with these covenants could result in an event of default that, if not cured or waived by the lenders, could result in the acceleration of the Senior Credit Facility and 2¼% Notes. In addition, our failure to pay principal and interest when due is a default under the Senior Credit Facility, and in certain cases, would cause a cross default on the 2¼% Notes.

We are committed to a cash management strategy that maintains liquidity to adequately support the operation of the business, our growth strategy and to withstand unanticipated business volatility. Our cash management strategy includes maintaining the flexibility to pay down debt and/or repurchase shares depending on economic and other conditions. In connection with the implementation of our cash management strategy, our management may seek to retire or purchase our outstanding debt through cash purchases and/or exchanges for equity securities, in open market purchases, privately negotiated transactions or otherwise if we believe that it is in our best interests. Such repurchases or exchanges, if any, will depend on prevailing market conditions, our liquidity requirements, contractual restrictions and other factors. The amounts involved may be material.

Potential future acquisitions depend, in part, on the availability of financial resources at an acceptable cost of capital. We expect to utilize cash on hand and cash generated by operations, as well as cash available under our Senior Credit Facility, which may involve renegotiation of credit limits to finance any future acquisitions. Other sources of capital could include the issuance of common and/or preferred stock, the placement of debt, or combination of both. We periodically evaluate capital markets and may access such markets when circumstances appear favorable. We believe that sufficient capital resources will be available from one or several of these sources to finance any future acquisitions. However, no assurances can be made that acceptable financing will be available, or that acceptable acquisition candidates will be identified, or that any such acquisitions will be accretive to earnings.

Major factors that could adversely impact our forecasted operating cash and our financial condition are described in the section "Risk Factors" in Item 1A of our Annual Report to the SEC on Form 10-K for the year ended December 31, 2018.

Forward-Looking Statements

Certain information contained in this report should be considered "forward-looking statements" as defined by Section 21E of the Private Securities Litigation Reform Act of 1995. All statements in this report other than historical information may be deemed forward-looking statements. These statements present (without limitation) the expectations, beliefs, plans and objectives of management and future financial performance and assumptions underlying, or judgments concerning, the matters discussed in the statements. The words "believe," "estimate," "anticipate," "project" and "expect," and similar expressions, are generally intended to identify forward-looking statements. Forward-looking statements involve certain risks, estimates, assumptions and uncertainties, including with respect to future sales and activity levels, cash flows, contract performance, the outcome of litigation and contingencies, environmental remediation and anticipated costs of capital. A variety of factors could cause actual results or outcomes to differ materially from those expected and expressed in our forward-looking statements. Important risk factors that could cause actual results or outcomes to differ from those expressed in the forward-looking statements are described in the section "Risk Factors" in Item 1A of our Annual Report to the SEC on Form 10-K for the year ended December 31, 2018, include, but are not limited to, the following:

- reductions, delays or changes in U.S. government spending;
- cancellation or material modification of one or more significant contracts;
- cost overruns on the Company's contracts that require the Company to absorb excess costs;
- failure of the Company's subcontractors or suppliers to perform their contractual obligations;
- failure to secure contracts;
- failure to comply with regulations applicable to contracts with the U.S. government;

- failure to comply with applicable laws, including laws relating to export controls and anti-corruption or bribery laws;
- the Company's Competitive Improvement Program may not be successful in aligning the Company's operations to current market conditions or in achieving the anticipated costs savings and other benefits within the expected timeframes;
- costs and time commitment related to potential and/or actual acquisition activities may exceed expectations;
- failure of the Company's information technology infrastructure, including a successful cyber-attack, accident, unsuccessful outsourcing of certain information technology and cyber security functions, or security breach that could result in disruptions to the Company's operations;
- product failures, schedule delays or other problems with existing or new products and systems;
- the release, unplanned ignition, explosion, or improper handling of dangerous materials used in the Company's businesses;
- loss of key qualified suppliers of technologies, components, and materials;
- the funded status of the Company's defined benefit pension plan and the Company's obligation to make cash contributions in excess of the amount that the Company can recover in its current period overhead rates;
- effects of changes in discount rates and actuarial estimates, actual returns on plan assets, and government regulations on defined benefit pension plans;
- the possibility that environmental and other government regulations that impact the Company become more stringent or subject the Company to material liability in excess of its established reserves;
- environmental claims related to the Company's current and former businesses and operations including the inability to protect or enforce previously executed environmental agreements;
- reductions in the amount recoverable from environmental claims;
- significant risk exposures and potential liabilities that are inadequately covered by indemnity or insurance;
- inability to protect the Company's patents and proprietary rights;
- business disruptions to the extent not covered by insurance;
- changes or clarifications to current tax law or procedural guidance could adversely impact the Company's tax liabilities and effective tax rate;
- the substantial amount of debt that places significant demands on the Company's cash resources and could limit the Company's ability to borrow additional funds or expand its operations;
- the Company's ability to comply with the financial and other covenants contained in the Company's debt agreements;
- risks inherent to the real estate market;
- changes in economic and other conditions in the Sacramento, California metropolitan area real estate market or changes in interest rates affecting real estate values in that market;
- additional costs related to past or future divestitures;
- the loss of key employees and shortage of available skilled employees to achieve anticipated growth;
- a strike or other work stoppage or the Company's inability to renew collective bargaining agreements on favorable terms;
- fluctuations in sales levels causing the Company's quarterly operating results and cash flows to fluctuate;
- failure to maintain effective internal controls in accordance with the Sarbanes-Oxley Act; and
- those risks detailed in the Company's reports filed with the SEC.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

There have been no material changes to our disclosures related to certain market risks as reported under Part II, Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," in our Annual Report to the SEC on Form 10-K for the year ended December 31, 2018.

Interest Rate Risk

We are exposed to market risk principally due to changes in interest rates. Debt with interest rate risk includes borrowings under our Senior Credit Facility. Other than pension assets and liabilities, we do not have any significant exposure to interest rate risk related to our investments.

As of June 30, 2019, our debt principal excluding finance lease obligations totaled \$636.9 million: \$300.0 million, or 47%, was at a fixed rate of 2.25%; and \$336.9 million, or 53%, was at a variable rate of 4.15%.

The following table summarizes the estimated fair value and principal amount for outstanding debt obligations excluding finance lease obligations:

	Fair Value		Principal Amount	
	June 30, 2019	December 31, 2018	June 30, 2019	December 31, 2018
	(In millions)			
Term loan	\$ 336.9	\$ 345.6	\$ 336.9	\$ 345.6
2 ¹ / ₄ % Notes	535.3	441.1	300.0	300.0
	<u>\$ 872.2</u>	<u>\$ 786.7</u>	<u>\$ 636.9</u>	<u>\$ 645.6</u>

The fair value of the 2¼% Notes was determined using broker quotes that are based on open markets for our debt securities (Level 2 securities). The term loan bore interest at variable rates, which adjusted based on market conditions, and its carrying value approximates fair value.

Item 4. Controls and Procedures

Evaluation of disclosure controls and procedures

Based on our management's evaluation (with the participation of our principal executive officer and principal financial officer), as of the end of the period covered by this report, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) are effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in internal control over financial reporting

There were no changes in internal control over financial reporting that occurred during the most recent quarter that have materially affected, or are reasonably likely to materially affect, the effectiveness of our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings

Except as disclosed in Note 8 of the Notes to Unaudited Condensed Consolidated Financial Statements, which is incorporated herein by reference, there have been no significant developments in the pending legal proceedings as previously reported in Part 1, Item 3, Legal Proceedings in our Annual Report on Form 10-K for the year ended December 31, 2018.

Item 1A. Risk Factors

There have been no material changes from our risk factors as previously reported in our Annual Report on Form 10-K for the year ended December 31, 2018.

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

None.

Item 3. Defaults upon Senior Securities

None.

Item 4. Mine safety disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

No.	Description
10.1	2019 Equity and Performance Incentive Plan (incorporated by reference to Appendix B of the Registrant's Definitive Proxy Statement on Schedule 14A filed on March 29, 2019).
10.2	Form of Restricted Stock Agreement between the Company and Employees for grants under the 2019 Equity and Performance Incentive Plan (incorporated by reference to Exhibit 99.2 of the Registrant's Registration Statement on Form S-8 filed on May 13, 2019).
10.3	Form of Restricted Stock Agreement between the Company and Directors for grants under the 2019 Equity and Performance Incentive Plan (incorporated by reference to Exhibit 99.3 of the Registrant's Registration Statement on Form S-8 filed on May 13, 2019).
10.4	Form of Unrestricted Stock Agreement between the Company and Directors for grants under the 2019 Equity and Performance Incentive Plan (incorporated by reference to Exhibit 99.4 of the Registrant's Registration Statement on Form S-8 filed on May 13, 2019).
10.5	Form of Stock Option Agreement between the Company and Employees for grants under the 2019 Equity and Performance Incentive Plan (incorporated by reference to Exhibit 99.5 of the Registrant's Registration Statement on Form S-8 filed on May 13, 2019).
10.6	Form of Stock Appreciation Rights Agreement between the Company and Employees for grants under the 2019 Equity and Performance Incentive Plan (incorporated by reference to Exhibit 99.6 of the Registrant's Registration Statement on Form S-8 filed on May 13, 2019).
31.1*	Certification of Principal Executive Officer pursuant to Rule 13a — 14(a) of the Securities Exchange Act of 1934
31.2*	Certification of Principal Financial Officer pursuant to Rule 13a — 14(a) of the Securities Exchange Act of 1934
32.1*	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Rule 13a — 14(b) of the Securities and Exchange Act of 1934, as amended, and 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101*	The following materials from the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, formatted in XBRL (Extensible Business Reporting Language): (i) Unaudited Condensed Consolidated Statements of Operations, (ii) Unaudited Condensed Consolidated Statements of Comprehensive Income, (iii) Unaudited Condensed Consolidated Balance Sheets, (iv) Unaudited Condensed Consolidated Statement of Stockholders' Equity, (v) Unaudited Condensed Consolidated Statements of Cash Flows, and (vi) Unaudited Notes to Unaudited Condensed Consolidated Financial Statements.
104*	The cover page from the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, formatted in Inline XBRL

* Filed herewith.

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.

Aerojet Rocketdyne Holdings, Inc.

Date: July 31, 2019

By: /s/ Eileen P. Drake
Eileen P. Drake
Chief Executive Officer and President
(Principal Executive Officer)

Date: July 31, 2019

By: /s/ Paul R. Lundstrom
Paul R. Lundstrom
Vice President and Chief Financial Officer
(Principal Financial Officer)

Date: July 31, 2019

By: /s/ Daniel L. Boehle
Daniel L. Boehle
Vice President and Controller
(Principal Accounting Officer)

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Eileen P. Drake, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Aerojet Rocketdyne Holdings, Inc.;
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 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 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.

Date: July 31, 2019

/s/ Eileen P. Drake

Eileen P. Drake

Chief Executive Officer and President
(Principal Executive Officer)

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Paul R. Lundstrom, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Aerojet Rocketdyne Holdings, Inc.;

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 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 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.

Date: July 31, 2019

/s/ Paul R. Lundstrom

Paul R. Lundstrom

Vice President and Chief Financial Officer

(Principal Financial Officer)

**CERTIFICATIONS
PURSUANT TO 18 UNITED STATES CODE §1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

The undersigned hereby certifies that to her knowledge the quarterly report on Form 10-Q of Aerojet Rocketdyne Holdings, Inc. for the period ended June 30, 2019 (the Report), as filed with the Securities and Exchange Commission on the date hereof, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of the operations of the Company, as of the dates and the periods expressed in the Report.

/s/ Eileen P. Drake

Eileen P. Drake

Chief Executive Officer and President
(Principal Executive Officer)

Date: July 31, 2019

The undersigned hereby certifies that to his knowledge the quarterly report on Form 10-Q of Aerojet Rocketdyne Holdings, Inc. for the period ended June 30, 2019 (the Report), as filed with the Securities and Exchange Commission on the date hereof, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of the operations of the Company, as of the dates and the periods expressed in the Report.

/s/ Paul R. Lundstrom

Paul R. Lundstrom

Vice President and Chief Financial Officer
(Principal Financial Officer)

Date: July 31, 2019