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: March 31, 2020
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	**34-0244000**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
222 N. Pacific Coast Highway	
Suite 500	
El Segundo	
California	**90245**
(Address of principal executive offices)	**(Zip Code)**

310 - 252-8100
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, $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	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of April 20, 2020 , the Company had 78,527,768 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 March 31, 2020

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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 March 31,	
	2020	2019
	(In millions, except per share amounts)	
Net sales	$ 476.1	$ 491.7
Operating costs and expenses:		
Cost of sales (exclusive of items shown separately below)	394.9	397.6
Selling, general and administrative expense	9.1	12.2
Depreciation and amortization	17.2	17.5
Other (income) expense, net	(2.2)	1.1
Total operating costs and expenses	419.0	428.4
Operating income	57.1	63.3
Non-operating:		
Retirement benefits expense	9.2	6.5
Interest income	(3.2)	(4.0)
Interest expense	8.4	9.0
Total non-operating expense, net	14.4	11.5
Income before income taxes	42.7	51.8
Income tax provision	11.3	13.1
Net income	$ 31.4	$ 38.7
Earnings per share of common stock		
Basic earnings per share	$ 0.40	$ 0.49
Diluted earnings per share	$ 0.37	$ 0.47
Weighted average shares of common stock outstanding, basic	77.5	77.1
Weighted average shares of common stock outstanding, diluted	83.1	80.6

See Notes to Unaudited Condensed Consolidated Financial Statements.

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

	Three months ended March 31,	
	2020	2019
	(In millions)	
Net income	$ 31.4	$ 38.7
Other comprehensive income:		
Amortization of net actuarial losses and prior service costs (credits), net of income taxes of $3.3 million, and $2.2 million	10.2	7.0
Comprehensive income	$ 41.6	$ 45.7

See Notes to Unaudited Condensed Consolidated Financial Statements.

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

	March 31, 2020	December 31, 2019
	(In millions, except per share amounts)	
ASSETS		
Current Assets		
Cash and cash equivalents	$ 902.6	$ 932.6
Restricted cash	3.0	3.0
Accounts receivable, net	151.7	112.5
Contract assets	278.9	224.1
Other current assets, net	137.4	145.8
Total Current Assets	1,473.6	1,418.0
Noncurrent Assets		
Right-of-use assets	53.5	48.0
Property, plant and equipment, net	403.2	409.9
Recoverable environmental remediation costs	228.1	234.8
Deferred income taxes	114.5	121.9
Goodwill	161.4	161.4
Intangible assets	54.7	58.2
Other noncurrent assets, net	251.5	255.6
Total Noncurrent Assets	1,266.9	1,289.8
Total Assets	$ 2,740.5	$ 2,707.8
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities		
Current portion of long-term debt	$ 289.0	$ 284.7
Accounts payable	128.4	127.3
Reserves for environmental remediation costs	41.7	40.1
Contract liabilities	288.6	262.3
Other current liabilities	134.4	155.5
Total Current Liabilities	882.1	869.9
Noncurrent Liabilities		
Long-term debt	345.3	352.3
Reserves for environmental remediation costs	260.9	269.1
Pension benefits	394.3	398.9
Operating lease liabilities	43.9	39.1
Other noncurrent liabilities	197.2	201.8
Total Noncurrent Liabilities	1,241.6	1,261.2
Total Liabilities	2,123.7	2,131.1
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; 77.6 million shares issued and outstanding as of March 31, 2020; 77.3 million shares issued and outstanding as of December 31, 2019	7.7	7.7
Other capital	572.3	573.3
Treasury stock at cost, 0.8 million shares as of March 31, 2020 and December 31, 2019	(13.2)	(12.7)
Retained earnings	276.3	244.9
Accumulated other comprehensive loss, net of income taxes	(226.3)	(236.5)
Total Stockholders' Equity	616.8	576.7
Total Liabilities and Stockholders' Equity	$ 2,740.5	$ 2,707.8

See Notes to Unaudited Condensed Consolidated Financial Statements.

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

	Common Stock						
	Shares	Amount	Other Capital	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
				(In millions)			
December 31, 2018	76.8	$ 7.7	$ 561.8	$ (12.7)	$ 103.9	$ (239.4)	$ 421.3
Net income	—	—	—	—	38.7	—	38.7
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 equity plans	(0.3)	—	(6.2)	—	—	—	(6.2)
Stock-based compensation and shares issued under equity plans	0.6	—	5.4	—	—	—	5.4
March 31, 2019	77.1	$ 7.7	$ 561.0	$ (12.7)	$ 142.6	$ (232.4)	$ 466.2
December 31, 2019	77.3	$ 7.7	$ 573.3	$ (12.7)	$ 244.9	$ (236.5)	$ 576.7
Net income	—	—	—	—	31.4	—	31.4
Amortization of net actuarial losses and prior service credits, net of income taxes	—	—	—	—	—	10.2	10.2
Purchase of treasury stock	—	—	—	(0.5)	—	—	(0.5)
Repurchase of shares for withholding taxes and option costs under equity plans	(0.1)	—	(7.9)	—	—	—	(7.9)
Stock-based compensation and shares issued under equity plans	0.4	—	6.9	—	—	—	6.9
March 31, 2020	77.6	$ 7.7	$ 572.3	$ (13.2)	$ 276.3	$ (226.3)	$ 616.8

See Notes to Unaudited Condensed Consolidated Financial Statements.

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

	Three months ended March 31,	
	2020	**2019**
	(In millions)	
Operating Activities		
Net income	$ 31.4	$ 38.7
Adjustments to reconcile net income to net cash used in operating activities:		
Depreciation and amortization	17.2	17.5
Amortization of debt discount and deferred financing costs	2.4	2.3
Stock-based compensation	2.4	5.3
Retirement benefits, net	7.9	5.4
Other, net	0.4	0.2
Changes in assets and liabilities, net of effects from acquisition in 2019:		
Accounts receivable, net	(39.2)	(4.9)
Contract assets	(54.8)	(0.6)
Other current assets, net	8.4	(6.1)
Recoverable environmental remediation costs	6.7	4.2
Other noncurrent assets, net	4.6	(5.6)
Accounts payable	(3.3)	6.2
Contract liabilities	26.3	(63.4)
Other current liabilities	(20.3)	1.6
Deferred income taxes	4.1	(19.3)
Reserves for environmental remediation costs	(6.6)	(4.7)
Other noncurrent liabilities and other	(4.7)	5.5
Net Cash Used in Operating Activities	(17.1)	(17.7)
Investing Activities		
Capital expenditures	(3.0)	(1.5)
Net Cash Used in Investing Activities	(3.0)	(1.5)
Financing Activities		
Debt repayments	(4.9)	(5.5)
Repurchase of shares for withholding taxes and option costs under equity plans	(7.9)	(6.2)
Proceeds from shares issued under equity plans	3.4	2.2
Purchase of treasury stock	(0.5)	—
Net Cash Used in Financing Activities	(9.9)	(9.5)
Net Decrease in Cash, Cash Equivalents and Restricted Cash	(30.0)	(28.7)
Cash, Cash Equivalents and Restricted Cash at Beginning of Period	935.6	740.3
Cash, Cash Equivalents and Restricted Cash at End of Period	$ 905.6	$ 711.6
Supplemental disclosures of cash flow information		
Cash paid for interest	$ 4.1	$ 5.3

See 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, 2019 , 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, 2019 .

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 re-zoning, entitlement, sale, and leasing of the Company's excess real estate assets.

The year of the Company's subsidiary, Aerojet Rocketdyne, ends on the last Saturday in December.

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, 2019 .

During the three months ended March 31, 2020, the Company's financial results and operations were not materially impacted by the coronavirus ("COVID-19") pandemic. As a defense industrial-base U.S. government contractor, the Company is considered an essential business by the U.S. and state governments and it continues to operate as such during the COVID-19 pandemic. The extent to which the COVID-19 pandemic impacts the Company's financial results and operations for 2020 and beyond will depend on future developments that are highly uncertain and cannot be predicted at this time. The Company is not aware of any specific event or circumstance that would require an update to its estimates or judgments or a revision of the carrying value of its assets or liabilities as of the date of issuance of this Quarterly Report on Form 10-Q. These estimates may change, as new events occur and additional information is obtained. Actual results could differ materially from these estimates under different assumptions or conditions.

Recently Adopted Accounting Pronouncements

In August 2018, the Financial Accounting Standards Board issued guidance requiring a customer in a cloud computing service arrangement to follow the internal-use software guidance in order to determine which implementation costs to defer and recognize as an asset. The Company adopted this new standard as of January 1, 2020, on a prospective basis and the adoption of this guidance did not have a material impact on the Company's 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 March 31,	
	2020	2019
	(In millions, except per share amounts)	
Numerator:		
Net income	$ 31.4	$ 38.7
Income allocated to participating securities	(0.5)	(0.7)
Net income for basic and diluted EPS	$ 30.9	$ 38.0
Denominator:		
Basic weighted average shares	77.5	77.1
Effect of:		
2.25% Convertible Senior Notes ("2 $^{1}/_{4}$% Notes")	5.4	3.4
Employee stock options and stock purchase plan	0.2	0.1
Diluted weighted average shares	83.1	80.6
Basic		
Basic EPS	$ 0.40	$ 0.49
Diluted		
Diluted EPS	$ 0.37	$ 0.47

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

	Three months ended March 31,	
	2020	2019
	(In millions)	
Unvested restricted shares	1.2	1.4
Total potentially dilutive securities	1.2	1.4

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 for, and provide related services to, 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 March 31,	
	2020	2019
	(In millions, except per share amounts)	
Net favorable effect of the changes in contract estimates on net sales	$ 2.1	$ 13.0
Net favorable effect of the changes in contract estimates on income before income taxes	2.5	13.4
Net favorable effect of the changes in contract estimates on net income	1.9	9.7
Net favorable effect of the changes in contract estimates on basic and diluted EPS	0.02	0.12

For the three months ended March 31, 2019, favorable changes in contract estimates were primarily driven by (i) improved performance on the Terminal High Altitude Area Defense and RL10 programs and (ii) the reserve release upon the final AJ-60 solid rocket motor delivery.

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:

	March 31, 2020	December 31, 2019
	(In millions)	
Contract assets	$ 298.7	$ 243.5
Reserve for overhead rate disallowance	(19.8)	(19.4)
Contract assets, net of reserve	278.9	224.1
Contract liabilities	288.6	262.3
Net contract liabilities, net of reserve	$ (9.7)	$ (38.2)

Net contract liabilities decreased by $28.5 million primarily due to an increase in unbilled receivables as of March 31, 2020 . During the three months ended March 31, 2020 , the Company recognized sales of $109.3 million that were included in the Company's contract liabilities as of December 31, 2019 .

As of March 31, 2020 , the Company's total remaining performance obligations, also referred to as backlog, totaled $5.2 billion . The Company expects to recognize approximately 38% , or $2.0 billion , of the remaining performance obligations as sales over the next twelve months, an additional 24% the following twelve months, and 38% 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 March 31,	
	2020	2019
Fixed-price	61%	62%
Cost-reimbursable	39	37
Other	—	1

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

	Three months ended March 31,	
	2020	2019
U.S. government	96%	95%
Non U.S. government	4	5

The Company's Real Estate segment represented less than 1% of the Company's net sales for the three months ended March 31, 2020 and 2019.

Note 4. Stock-Based Compensation

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

	Three months ended March 31,	
	2020	2019
	(In millions)	
Stock Appreciation Rights	$ (1.5)	$ 1.7
Stock options	0.1	—
Restricted stock and restricted stock units, service based	1.5	1.2
Restricted stock and restricted stock units, performance based	2.0	2.2
Employee stock purchase plan	0.3	0.2
Total stock-based compensation expense	$ 2.4	$ 5.3

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 March 31, 2020		
	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	$ 652.9	$ 652.9	$ —	$ —
Registered investment companies	3.3	3.3	—	—
Commercial paper	15.0	—	15.0	—
Total	$ 671.2	$ 656.2	$ 15.0	$ —

		Fair value measurement as of December 31, 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	$ 626.0	$ 626.0	$ —	$ —
Registered investment companies	3.7	3.7	—	—
Commercial paper	99.9	—	99.9	
Total	$ 729.6	$ 629.7	$ 99.9	$ —

As of March 31, 2020 and December 31, 2019, 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	
	March 31, 2020	December 31, 2019	March 31, 2020	December 31, 2019
	(In millions)			
Term loan	$ 299.9	$ 328.1	$ 323.8	$ 328.1
2 1/4% Notes	488.2	546.0	300.0	300.0
Total	$ 788.1	$ 874.1	$ 623.8	$ 628.1

The fair value of the 2¼% Notes was determined using broker quotes that are based on open markets for the Company's debt securities (Level 2 securities). The fair value of the term loan at March 31, 2020, was estimated based on a third-party model used to derive a relative value price using comparable corporate loans within the same industry, credit quality, and currency. At December 31, 2019, the term loan carrying value approximated fair value.

b. Accounts Receivable, net

	March 31, 2020	December 31, 2019
	(In millions)	
Billed receivables under long-term contracts	$ 152.5	$ 122.9
Reserve on billed trade receivables	(1.0)	(10.6)
Other trade receivables	0.2	0.2
Accounts receivable, net	$ 151.7	$ 112.5

c. Other Current Assets, net

	March 31, 2020	December 31, 2019
	(In millions)	
Deferred costs recoverable from the U.S. government	$ 46.9	$ 47.1
Income taxes receivable	36.2	43.4
Inventories	18.0	24.0
Prepaid expenses	13.4	13.9
Other	22.9	17.4
Other current assets, net	$ 137.4	$ 145.8

d. Property, Plant and Equipment, net

	March 31, 2020	December 31, 2019
	(In millions)	
Land	$ 71.2	$ 71.2
Buildings and improvements	436.2	434.9
Machinery and equipment, including capitalized software	459.4	488.2
Construction-in-progress	67.1	70.2
	1,033.9	1,064.5
Less: accumulated depreciation	(630.7)	(654.6)
Property, plant and equipment, net	$ 403.2	$ 409.9

e. Other Noncurrent Assets, net

	March 31, 2020	December 31, 2019
	(In millions)	
Real estate held for entitlement and leasing	$ 100.4	$ 100.3
Deferred costs recoverable from the U.S. government	55.9	54.8
Receivable from Northrop Grumman Corporation for environmental remediation costs	45.0	46.5
Other	50.2	54.0
Other noncurrent assets, net	$ 251.5	$ 255.6

f. Other Current Liabilities

	March 31, 2020	December 31, 2019
	(In millions)	
Accrued compensation and employee benefits	$ 90.0	$ 103.1
Other	44.4	52.4
Other current liabilities	$ 134.4	$ 155.5

g. Treasury Stock

During the three months ended March 31, 2020, the Company repurchased less than 0.1 million of its common shares at a cost of $0.5 million . The Company reflects stock repurchases in its financial statements on a "settlement" basis.

Note 6. Income Taxes

	Three months ended March 31,	
	2020	2019
	(In millions)	
Income tax provision	$ 11.3	$ 13.1

In the three months ended March 31, 2020, the income tax provision was $11.3 million for an effective tax rate of 26.5% . 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 three months ended March 31, 2019, the income tax provision was $13.1 million for an effective tax rate of 25.3% . 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 March 31, 2020, 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

	March 31, 2020	December 31, 2019
	(In millions)	
Term loan, bearing interest at variable rates (rate of 2.74% as of March 31, 2020), maturing in September 2023	$ 323.8	$ 328.1
Unamortized deferred financing costs	(1.7)	(1.8)
Total senior debt	322.1	326.3
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	(34.9)	(37.0)
Total convertible senior notes	265.1	263.0
Finance leases	47.1	47.7
Total other debt	47.1	47.7
Total debt, net of unamortized discount and deferred financing costs	634.3	637.0
Less: Amounts due within one year	(289.0)	(284.7)
Total long-term debt, net of unamortized discount and deferred financing costs	$ 345.3	$ 352.3

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").

As of March 31, 2020 , the Company had zero borrowings under the Revolver and issued $29.7 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 (the "Consolidated Net Leverage Ratio") measured at the end of each 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.

On December 31, 2018, the Term Loan began amortizing at a rate of 5.0% per annum of the original drawn amount which will increase 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.

The Senior Credit Facility is secured by a first priority security interest in the Company's assets, subject to certain customary exceptions, as well as pledges of its equity interests in certain subsidiaries.

The Senior Credit Facility contains financial covenants requiring the Company to (i) maintain an interest coverage ratio (the "Consolidated 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 as of March 31, 2020 .

2¼% Convertible Senior Notes

On December 14, 2016, 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 April 1, 2020, through June 30, 2020, because the Company's closing stock price exceeded $33.80 for at least 20 days in the 30 day period prior to March 31, 2020. 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 $265.1 million is classified as a current liability as of March 31, 2020. 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 information regarding the 2¼% Notes (in millions, except years, percentages, conversion rate, and conversion price):

	March 31, 2020	December 31, 2019
Carrying value	$ 265.1	$ 263.0
Unamortized discount and deferred financing costs	34.9	37.0
Principal amount	$ 300.0	$ 300.0
Carrying amount of equity component, net of equity issuance costs	$ 54.5	$ 54.5
Remaining amortization period (years)	3.75	4.0
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 $41.83 on March 31 2020, the if-converted value of the 2¼% Notes exceeded the aggregate principal amount of the 2¼% Notes by $182.6 million .

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

	Three months ended March 31,	
	2020	2019
	(In millions)	
Interest expense-contractual interest	$ 1.7	$ 1.7
Interest expense-amortization of debt discount	1.9	1.8
Interest expense-amortization of deferred financing costs	0.2	0.2

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 64 asbestos cases pending as of March 31, 2020 .

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. The aggregate settlement costs and legal and administrative fees associated with the Company's asbestos litigation has been immaterial for the last three years. As of March 31, 2020 , 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 March 31, 2020 .

b. Environmental Matters

The Company is involved in approximately 40 environmental matters under the Comprehensive Environmental Response Compensation and Liability Act, the Resource Conservation Recovery Act, and other federal, state, and local 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 15 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 March 31, 2020 , the aggregate range of these anticipated environmental costs was $302.6 million to $453.7 million and the accrued amount was $302.6 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 March 31, 2020 , the estimated range of anticipated costs discussed above for the Sacramento, California site was $204.2 million to $327.4 million and the accrued amount was $204.2 million included as a component of the Company's environmental reserves. Expenditures associated with this matter are partially recoverable. See Note 8(c) 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 the 2017 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 Grumman Corporation ("Northrop") in October 2001, the EPA approved a prospective purchaser agreement with Northrop to absolve it of a 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 March 31, 2020 , the estimated range of anticipated costs was $84.8 million to $100.9 million and the accrued amount was $84.8 million included as a component of the Company’s environmental reserves. Expenditures associated with this matter are partially recoverable. See Note 8(c) 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, 2019	$ 203.6	$ 89.6	$ 11.8	$ 305.0	$ 4.2	$ 309.2
Additions/Adjustments	4.1	(0.8)	(2.2)	1.1	0.2	1.3
Expenditures	(3.5)	(4.0)	(0.3)	(7.8)	(0.1)	(7.9)
March 31, 2020	$ 204.2	$ 84.8	$ 9.3	$ 298.3	$ 4.3	$ 302.6

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 parties reached a settlement on March 23, 2020, resolving the ARC Claim. The settlement provides for resolution of past costs and agreement that the $20.0 million cap had been reached, ARC becomes financially responsible subject to an allocation of future cleanup costs related to the Company's operation of the Open Burn Unit from 2003-2009, and ARC assumes management for the ongoing remediation as required by the 2003 acquisition agreement.

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 which was reached in June 2017. 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 March 31, 2020		(138.7)
Receivable from Northrop included in the unaudited balance sheet at March 31, 2020	$	51.0

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 continues to seek 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 March 31,			
	2020		2019	
	(In millions)			
(Benefit) expense to unaudited condensed consolidated statements of operations	$	(0.5)	$	0.3

d. Arrangements with Off-Balance Sheet Risk

As of March 31, 2020 , arrangements with off-balance sheet risk consisted of:

- $29.7 million in outstanding commercial letters of credit, the majority of which may be renewed, primarily to collateralize obligations for environmental remediation and insurance coverage.
- $53.9 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 was 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 CIP. Pursuant to Phase II, the Company expanded its CIP and further consolidated its Sacramento, California, and Gainesville, Virginia sites, while it centralized and expanded its existing presence in Huntsville, Alabama. The Company estimates the restructuring and related costs will be $197.0 million (including approximately $60.5 million of capital expenditures) and has incurred $178.1 million of such costs through March 31, 2020 , including $54.7 million in capital expenditures. The following table summarizes the Company's severance and retention liabilities related to CIP activity:

	Severance	Retention	Total
		(In millions)	
December 31, 2019	$ 5.2	$ 4.6	$ 9.8
Accrual	—	0.7	0.7
Payments	(2.6)	(2.3)	(4.9)
March 31, 2020	$ 2.6	$ 3.0	$ 5.6

The costs associated with CIP 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.

Note 10. Retirement Benefits

The following table presents the components of retirement benefits expense (income):

	Pension Benefits		Postretirement Medical and Life Insurance Benefits	
	Three months ended March 31,			
	2020	2019	2020	2019
	(In millions)			
Interest cost on benefit obligation	$ 10.6	$ 13.2	$ 0.2	$ 0.3
Expected return on assets	(15.1)	(16.2)	—	—
Amortization of prior service costs (credits)	0.1	—	—	(0.1)
Amortization of net losses (gains)	14.3	10.2	(0.9)	(0.9)
Retirement benefits expense (income)	$ 9.9	$ 7.2	$ (0.7)	$ (0.7)

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 March 31,	
	2020	2019
	(In millions)	
Net Sales:		
Aerospace and Defense	$ 474.4	$ 490.0
Real Estate	1.7	1.7
Total Net Sales	$ 476.1	$ 491.7
Segment Performance:		
Aerospace and Defense	$ 52.6	$ 64.9
Environmental remediation provision adjustments	0.5	(0.3)
GAAP/Cost Accounting Standards retirement benefits expense difference	4.7	5.4
Unusual items	—	(0.3)
Aerospace and Defense Total	57.8	69.7
Real Estate	(0.6)	0.5
Total Segment Performance	$ 57.2	$ 70.2
Reconciliation of segment performance to income before income taxes:		
Segment performance	$ 57.2	$ 70.2
Interest expense	(8.4)	(9.0)
Interest income	3.2	4.0
Stock-based compensation	(2.4)	(5.3)
Corporate retirement benefits	(2.0)	(1.8)
Corporate and other	(4.9)	(6.3)
Income before income taxes	$ 42.7	$ 51.8

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 March 31,	
	2020	2019
Lockheed Martin Corporation	34%	30%
NASA	23	20
Raytheon Technologies Corporation	16	18
United Launch Alliance	*	12

* Less than 10%.

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 March 31,	
	2020	2019
	(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.

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, 2019, 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.

A summary of the significant financial highlights for the three months ended March 31, 2020 and 2019, which management uses to evaluate our operating performance and financial condition, is presented below.

	Three months ended March 31,	
	2020	2019
	(In millions, except percentage and per share amounts)	
Net sales	$ 476.1	$ 491.7
Net income	31.4	38.7
Net income as a percentage of net sales	6.6%	7.9%
Adjusted Net Income (Non-GAAP measure*)	29.4	36.3
Adjusted Net Income (Non-GAAP measure*) as a percentage of net sales	6.2%	7.4%
Earnings Per Share ("EPS") - Diluted	0.37	0.47
Adjusted EPS (Non-GAAP measure*)	0.35	0.44
Adjusted EBITDAP (Non-GAAP measure*)	62.4	71.0
Adjusted EBITDAP (Non-GAAP measure*) as a percentage of net sales	13.1%	14.4%
Cash used in operating activities	(17.1)	(17.7)
Free cash flow (Non-GAAP measure*)	(20.1)	(19.2)

* 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 "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, including those resulting from the coronavirus ("COVID-19") pandemic. A significant component of our strategy in this environment is to focus on protecting our employees' health and safety, 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: uncertainty associated with the COVID-19 pandemic, dependence upon U.S. government programs and contracts, future reductions or changes in U.S. government spending in our markets, environmental matters, capital structure, underfunded retirement benefit plans, and cyber security.

COVID-19

During the three months ended March 31, 2020, there was minimal impact to our financial results and operations as a result of the COVID-19 outbreak that began in late 2019, and was declared a pandemic by the World Health Organization on March 11, 2020. The safety and welfare of our employees is our top priority, and during the quarter, a number of safety protocols were established. Selected and site-specific work and travel restrictions, in addition to other measures intended to reduce the spread of COVID-19, were introduced. Although we did not experience significant absenteeism or supply chain disruption, the extent to which the COVID-19 pandemic impacts our financial results and operations for 2020 and beyond will depend on future developments which are highly uncertain and cannot be predicted, including new information which may emerge concerning the severity of the pandemic and the actions being taken to contain and treat it, and other indirect effects that may come as a result of actions taken by governments, companies, and individuals in response to the pandemic and its economic impact.

As a defense industrial-base U.S. government contractor, we are considered an essential business by the U.S. and state governments and we continue to operate as such during the COVID-19 pandemic. We are taking a variety of measures to maintain the availability and functionality of our critical infrastructure, to promote the safety and security of our employees and to support the communities in which we operate. In making decisions regarding our operations, we take into account public and private sector policies and initiatives to reduce the transmission of COVID-19, such as the imposition of travel restrictions, the promotion of social distancing and the adoption of work-from-home requirements for employees where practicable, and all of these policies and initiatives could impact our operations. Due to the evolving nature of the COVID-19 pandemic, we are not able at this time to estimate its full impact on our financial results and operations.

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 March 31,	
	2020	2019
U.S. government	96%	95%
Non U.S. government	4	5

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 March 31,	
	2020	2019
RS-25	18%	15%
Standard Missile	13	14
Terminal High Altitude Area Defense	11	11
Patriot Advanced Capability-3	10	9

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 March 31,	
	2020	2019
Lockheed Martin Corporation	34%	30%
NASA	23	20
Raytheon Technologies Corporation	16	18
United Launch Alliance	*	12

* Less than 10%.

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. While U.S. and state governments continue to address the COVID-19 pandemic, our customers continue to operate under the Public Law 116-93, which includes DoD and NASA full-year appropriations bills for Government Fiscal Year 2020. Additionally, the U.S. government enacted the Coronavirus Aid, Relief & Economic Security ("CARES") Act on March 27, 2020, which provides $60 million of supplemental appropriations for NASA operational adjustments due to delays and center closures and an additional $2.45 billion for the DoD to support the defense industrial-base. There is no assurance that we will receive any benefit from the CARES Act or other emergency support legislation. Disruptions to our customer's facilities or delays in supply chain as a result of COVID-19 could delay or decrease expenditures by U.S. government agencies. Such a decrease in DoD and/or NASA expenditures, the elimination or curtailment of a material program in which we are or hope to be involved, or changes in payment patterns of our customers as a result of changes in U.S. government outlays, could have a material adverse effect on our operating results, financial condition, and/or cash flows.

Environmental Matters

Our current and former business operations are subject to, and affected by, federal, state, and local 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 March 31, 2020 :

	Recoverable Amounts (1)	Environmental Reserves	Estimated Range of Liability
		(In millions)	
Sacramento	$ 179.7	$ 204.2	$204.2 - $327.4
Baldwin Park Operable Unit	74.6	84.8	84.8 - 100.9
Other Aerojet Rocketdyne sites	9.3	9.3	9.3 - 19.8
Other sites	0.7	4.3	4.3 - 5.6
Total	$ 264.3	$ 302.6	$302.6 - $453.7

(1) Excludes the receivable from Northrop Grumman Corporation ("Northrop") of $51.0 million as of March 31, 2020 , 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 March 31, 2020 , we had $634.3 million of debt outstanding.

Retirement Benefits

During 2020, we expect to make contributions of approximately $46.0 million to our tax-qualified defined benefit pension plan in 2020, including $13.9 million of cash and $32.1 million of prepayment credits. 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").

The COVID-19 pandemic and resulting global disruptions have caused significant economic uncertainty and volatility in financial markets which could adversely impact the funded status of our tax-qualified defined benefit pension plan. The funded status of our pension plan is impacted by the investment experience of the plan assets, by any changes in U.S. law, and by changes in the statutory interest rates used by the tax-qualified pension plan in the U.S. to calculate funding requirements. Accordingly, if the performance of our plan assets does not meet our assumptions, if there are changes to the Internal Revenue Service regulations or other applicable law or if other actuarial assumptions are modified, our future contributions to our underfunded pension plan could be higher than we expect.

Cyber Security

We routinely defend against various cyber and other security threats against our defenses to protect the confidentiality, integrity and availability of our information technology infrastructure, supply chain, business or customer information and other threats. We are also subject to similar security threats at customer sites that we operate and manage as a contractual requirement.

The threats we face range from attacks common to most industries to more advanced and persistent, highly organized adversaries, insider threats and other threat vectors targeting us and other defense and aerospace companies; because we protect national security information. In addition, cyber threats are evolving, growing in their frequency and include, but are not limited to, malicious software, destructive malware, attempts to gain unauthorized access to data, disruption or denial of service attacks, and other electronic security breaches that could lead to disruptions in mission critical systems, unauthorized release of confidential, personal or otherwise protected information (ours or that of our employees, customers or partners), and corruption of data, networks or systems. We also could be impacted by cyber threats or other disruptions or vulnerabilities found in products we use or in our partners' or customers' systems that are used in connection with our business.

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 March 31, 2020	Three months ended March 31, 2019	Change
	(In millions)		
Net sales	$ 476.1	$ 491.7	$ (15.6)

Primary reason for change. The decrease in net sales was primarily due to a decline of $21.3 million in space program sales primarily driven by (i) lower sales in the Commercial Crew Development program and (ii) the final shipment of the AJ-60 solid rocket motor that occurred in the first quarter of 2019, partially offset by growth in the RS-25 program. The decline in net sales was partially offset by an increase of $5.7 million in defense program sales primarily driven by the Guided Multiple Launch Rocket System ("GMLRS") and hypersonic booster programs, partially offset by declines in the Redesigned Exoatmospheric Kill Vehicle ("RKV") program which was canceled in 2019.

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

	Three months ended March 31, 2020	Three months ended March 31, 2019	Change
	(In millions, except percentage amounts)		
Cost of sales (exclusive of items shown separately below)	$ 394.9	$ 397.6	$ (2.7)
Percentage of net sales	82.9%	80.9%	

Primary reason for change. The increase in cost of sales as a percentage of net sales was primarily driven by 2020 cost growth on a portion of the Standard Missile program and the reserve release upon the final AJ-60 solid rocket motor delivery in 2019 .

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

	Three months ended March 31, 2020	Three months ended March 31, 2019	Change
	(In millions, except percentage amounts)		
Components of SG&A:			
SG&A excluding stock-based compensation	$ 6.7	$ 6.9	$ (0.2)
Stock-based compensation	2.4	5.3	(2.9)
SG&A	$ 9.1	$ 12.2	$ (3.1)
Percentage of net sales	1.9%	2.5%	
Percentage of net sales excluding stock-based compensation	1.4%	1.4%	

Primary reason for change. The decrease in SG&A expense was primarily driven by stock-based compensation as a result of decreases in the fair value of the stock appreciation rights in the current period.

Depreciation and Amortization:

	Three months ended March 31, 2020	Three months ended March 31, 2019	Change
	(In millions)		
Components of depreciation and amortization:			
Depreciation	$ 13.1	$ 13.5	$ (0.4)
Amortization	3.4	3.4	—
Accretion	0.7	0.6	0.1
Depreciation and amortization	$ 17.2	$ 17.5	$ (0.3)

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

Other (Income) Expense, net:

	Three months ended March 31,		
	2020	2019	Change
	(In millions)		
Other (income) expense, net	$ (2.2)	$ 1.1	$ (3.3)

Primary reason for change. The change in other (income) expense, net was primarily due to lower expenses associated with our deferred compensation plans and a decrease in environmental expenses.

Retirement Benefits Expense:

	Three months ended March 31,		
	2020	2019	Change
	(In millions)		
Components of retirement benefits expense:			
Interest cost on benefit obligation	$ 10.8	$ 13.5	$ (2.7)
Expected return on assets	(15.1)	(16.2)	1.1
Amortization of prior service costs (credits)	0.1	(0.1)	0.2
Amortization of net losses	13.4	9.3	4.1
Retirement benefits expense	$ 9.2	$ 6.5	$ 2.7

Primary reason for change. The increase in retirement benefits expense was primarily due to higher actuarial losses in the current period as a result of a decrease in the discount rate used to calculate the benefit obligation at December 31, 2019, and the deferral of investment gains, partially offset by lower interest costs on the benefit obligation.

Interest Income:

	Three months ended March 31,		
	2020	2019	Change
	(In millions)		
Interest income	$ 3.2	$ 4.0	$ (0.8)

Primary reason for change. The decrease in interest income was primarily due to lower market rates partially offset by higher average cash balances in the current period.

Interest Expense:

	Three months ended March 31,		
	2020	2019	Change
	(In millions)		
Components of interest expense:			
Contractual interest and other	$ 6.0	$ 6.7	$ (0.7)
Amortization of debt discount and deferred financing costs	2.4	2.3	0.1
Interest expense	$ 8.4	$ 9.0	$ (0.6)

Primary reason for change. The decrease in interest expense was primarily due to lower average obligations and variable interest rates on our senior secured senior credit facility (the "Senior Credit Facility").

Income Taxes:

The income tax provision was as follows :

	Three months ended March 31,	
	2020	2019
	(In millions)	
Income tax provision	$ 11.3	$ 13.1

In the three months ended March 31, 2020, the income tax provision was $11.3 million for an effective tax rate of 26.5% . 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 three months ended March 31, 2019, the income tax provision was $13.1 million for an effective tax rate of 25.3% . 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, and unusual items not related to the segment. We believe that segment performance provides information useful to investors in understanding our operational performance.

Aerospace and Defense Segment

	Three months ended March 31,		
	2020	2019	Change
	(In millions, except percentage amounts)		
Net sales	$ 474.4	$ 490.0	$ (15.6)
Segment performance	57.8	69.7	(11.9)
Segment margin	12.2%	14.2%	

Primary reason for change. The decrease in net sales was primarily due to a decline of $21.3 million in space program sales primarily driven by (i) lower sales in the Commercial Crew Development program and (ii) the final shipment of the AJ-60 solid rocket motor that occurred in the first quarter of 2019, partially offset by growth in the RS-25 program. The decline in net sales was partially offset by an increase of $5.7 million in defense program sales primarily driven by the GMLRS and hypersonic booster programs, partially offset by declines in the RKV program which was canceled in 2019.

The decrease in segment margin was primarily driven by 2020 cost growth on a portion of the Standard Missile program and the reserve release upon the final AJ-60 solid rocket motor delivery in 2019.

During the three months ended March 31, 2020, we had $2.5 million of favorable changes in contract estimates on operating results before income taxes compared with favorable changes of $13.4 million during the three months ended March 31, 2019.

Real Estate Segment

	Three months ended March 31,		
	2020	2019	Change
	(In millions)		
Net sales	$ 1.7	$ 1.7	$ —
Segment performance	(0.6)	0.5	(1.1)

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

Backlog

As of March 31, 2020, our total remaining performance obligations, also referred to as backlog, totaled $5.2 billion . We expect to recognize approximately 38% , or $2.0 billion , of the remaining performance obligations as sales over the next twelve months, an additional 24% the following twelve months, and 38% thereafter. A summary of our backlog is as follows:

	March 31, 2020	December 31, 2019
	(In billions)	
Funded backlog	$ 3.3	$ 2.1
Unfunded backlog	1.9	3.3
Total backlog	$ 5.2	$ 5.4

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

Adjusted EBITDAP, Adjusted Net Income, and Adjusted EPS

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 March 31,	
	2020	2019
	(In millions, except per share and percentage amounts)	
Net income	$ 31.4	$ 38.7
Interest expense	8.4	9.0
Interest income	(3.2)	(4.0)
Income tax provision	11.3	13.1
Depreciation and amortization	17.2	17.5
GAAP retirement benefits expense	9.2	6.5
CAS recoverable retirement benefits expense	(11.9)	(10.1)
Unusual items	—	0.3
Adjusted EBITDAP	$ 62.4	$ 71.0
Net income as a percentage of net sales	6.6%	7.9%
Adjusted EBITDAP as a percentage of net sales	13.1%	14.4%
Net income	$ 31.4	$ 38.7
GAAP retirement benefits expense	9.2	6.5
CAS recoverable retirement benefits expense	(11.9)	(10.1)
Unusual items	—	0.3
Income tax impact of adjustments (1)	0.7	0.9
Adjusted Net Income	$ 29.4	$ 36.3
Diluted EPS	$ 0.37	$ 0.47
Adjustments	(0.02)	(0.03)
Adjusted EPS	$ 0.35	$ 0.44
Diluted weighted average shares, as reported and adjusted	83.1	80.6

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

Free Cash Flow

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. The following table summarizes Free Cash Flow:

	Three months ended March 31,	
	2020	2019
	(In millions)	
Net cash used in operating activities	$ (17.1)	$ (17.7)
Capital expenditures	(3.0)	(1.5)
Free Cash Flow	$ (20.1)	$ (19.2)

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, 2019.

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 contract costs, 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, 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.

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, 2019.

Liquidity and Capital Resources

Net Cash Used in Operating, Investing, and Financing Activities

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

	Three months ended March 31,	
	2020	2019
	(In millions)	
Net Cash Used in Operating Activities	$ (17.1)	$ (17.7)
Net Cash Used in Investing Activities	(3.0)	(1.5)
Net Cash Used in Financing Activities	(9.9)	(9.5)
Net Decrease in Cash, Cash Equivalents and Restricted Cash	$ (30.0)	$ (28.7)

Net Cash Used in Operating Activities

The cash used in operating activities for the three months ended March 31, 2020 , was comparable with the prior year period.

Net Cash Used in Investing Activities

During the three months ended March 31, 2020 and 2019 , we had capital expenditures of $ 3.0 million and $ 1.5 million , respectively.

Net Cash Used in Financing Activities

During the three months ended March 31, 2020 and 2019 , we had debt repayments of $4.9 million and $5.5 million , respectively. See a summary of our debt activity below.

During the three months ended March 31, 2020 and 2019 , we had net disbursements from shares issued under our equity plans of $4.5 million and $4.0 million , respectively.

Debt Activity and Covenants

The following table summarizes our debt principal activity:

	December 31, 2019	Principal Payments	March 31, 2020
		(In millions)	
Term loan	$ 328.1	$ (4.3)	$ 323.8
2.25% Convertible Senior Notes ("2 1/4% Notes")	300.0	—	300.0
Finance leases	47.7	(0.6)	47.1
Total Debt Activity	$ 675.8	$ (4.9)	$ 670.9

We were in compliance with our financial and non-financial covenants under the Senior Credit Facility as of March 31, 2020 .

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 March 31, 2020 , we had $902.6 million of cash and cash equivalents as well as $620.3 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 March 31, 2020 . 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, as well as to withstand unanticipated business volatility, including any impact arising from the COVID-19 pandemic. 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 business 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.

On March 13, 2020, we announced that our Board of Directors authorized and approved a new share repurchase program allowing us to repurchase our outstanding common stock with an aggregate market value of up to $100 million over a period of up to 18 months; however, management has discretion as to whether any repurchases will be executed. The timing of any share repurchases will be based on available liquidity, cash flows and general market conditions. The repurchase program may be executed through various methods, including open market purchases or privately negotiated transactions.

As disclosed in Notes 8(a) and 8(b) in the unaudited condensed consolidated financial statements, we have exposure for certain legal and environmental matters. We believe that it is currently not possible to estimate the impact, if any, that the ultimate resolution of certain of these matters will have on our financial position, results of operations, or cash flows.

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, 2019.

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, 2019, and Part II, Item 1A of this Quarterly Report on Form 10-Q for the quarter ended March 31, 2020, and include, but are not limited to, the following:

- the COVID-19 pandemic and its impact on economic and other conditions world-wide, including global spending, sourcing and the business operations of the Company and its customers and suppliers, among others;
- 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;
- changes in estimates related to contract accounting;
- failure to secure contracts;
- failure of the Company's subcontractors or suppliers to perform their contractual obligations;
- failure to comply with regulations applicable to contracts with the U.S. government;
- 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;
- 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;
- the Company's Competitive Improvement Program may not be successful in aligning the Company's operations to current market conditions;
- 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;
- costs and time commitment related to potential and/or actual acquisition activities may exceed expectations;
- failure of the Company's information technology infrastructure or failure to perform by the Company's third party service providers;
- product failures, schedule delays or other problems with existing or new products and systems;
- 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 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;
- changes in LIBOR reporting practices or the method by which LIBOR is determined;
- 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;
- 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; 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, 2019.

Interest Rate Risk

We are exposed to market risk principally due to changes in interest rates related to our borrowings, cash and cash equivalents, marketable securities, and pension assets and liabilities.

Borrowings

As of March 31, 2020 , our debt principal excluding finance lease obligations totaled $623.8 million : $300.0 million , or 48% , was at a fixed rate of 2.25%; and $323.8 million , or 52% , was at a variable rate of 2.74% .

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

	Fair Value		Principal Amount	
	March 31, 2020	December 31, 2019	March 31, 2020	December 31, 2019
	(In millions)			
Term loan	$ 299.9	$ 328.1	$ 323.8	$ 328.1
2 1/4 % Notes	488.2	546.0	300.0	300.0
Total	$ 788.1	$ 874.1	$ 623.8	$ 628.1

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 fair value of the term loan at March 31, 2020, was estimated based on a third-party model used to derive a relative value price using comparable corporate loans within the same industry, credit quality, and currency. At December 31, 2019, the term loan carrying value approximated fair value.

Cash and Marketable Securities

We also have exposure to changes in interest rates related to interest earned and market value on our cash and cash equivalents and marketable securities. Our cash and cash equivalents and marketable securities consist of cash, time deposits, money market funds, and investment grade corporate debt securities. Our investment policy and strategy are focused on preservation of capital and supporting our liquidity requirements. Changes in U.S. interest rates affect the interest earned on our cash and cash equivalents and marketable securities, and the market value of those securities.

Pension Assets and Liabilities

Our tax-qualified pension assets and liabilities are subject to interest rate risk. Information concerning our interest rate risk related to our tax-qualified pension assets and liabilities can be found in Part 7, Item 1, Management’s Discussion and Analysis of Financial Condition and Results of Operations under the caption "Critical Accounting Policies" in our Annual Report on Form 10-K for the year ended December 31, 2019.

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 9 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, 2019.

Item 1A. Risk Factors

The information presented below sets forth what we reasonably believe represent material changes to the risk factors described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019, and should be read in conjunction with the risk factors therein and the information described in this Quarterly Report.

Our results of operations and financial position may be negatively impacted by the COVID-19 pandemic, and the resulting economic disruption.

In December 2019, COVID-19 surfaced in Wuhan, China and the World Health Organization declared COVID-19 a pandemic on March 11, 2020. Similarly, all the states and local governments in communities where we operate have issued various state of emergency decrees or "Stay at Home" orders restricting non-essential business activities. As a defense industrial-base U.S. government contractor, we are considered an essential business by the U.S. and state governments and we continue to operate as such during the COVID-19 pandemic. However, the future impact of the COVID-19 pandemic is highly uncertain and we cannot predict if further governmental restrictions will be issued or if developments will cause a material change in our ability to maintain and operate our business. Additionally, the lifting and easing of U.S., state, and local government restrictions could also increase the risk of future outbreaks or exposure of our workforce to COVID-19 which may impact employee health and absenteeism.

We are also actively monitoring the COVID-19 pandemic and its potential impact on our employees, customers, and supply chain. While some of our employees are able to work remotely, a significant number can only perform their job functions on site, and we have promulgated policies designed to insure appropriate social distancing, employee protection, enhanced cleaning protocols, and health monitoring. Even so, there remains the risk of disruption or reduced efficiency caused by social distancing and other protective measures as well as elevated employee absence because of illness or required quarantines.

While our customers and suppliers generally continue to operate and perform their missions, some facilities have temporarily reduced or halted operations due to precautionary measures, staffing illness, or cleaning disruptions. For example, on March 20, 2020, NASA's Stennis Space Center, an engine test site for our space programs, entered into Stage 4 of their coronavirus response framework which limits access to the facility for personnel supporting activities necessary to protect life and critical infrastructure. The length and severity of such delays and closures, and any impact they will have on our operations, is uncertain. We cannot predict whether the current or future closures of customers and suppliers facilities related to the COVID-19 pandemic will have a material adverse effect on our financial results and operations.

In addition, the COVID-19 pandemic and resulting global disruptions have caused significant economic uncertainty and volatility in financial markets. Moreover, additional or unforeseen effects from the COVID-19 pandemic and actions taken by governments, companies, and individuals in response to the pandemic may affect our results of operations and financial positions in unexpected ways.

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

I ssuer Purchases of Equity Securities

On March 13, 2020, we announced that our Board of Directors authorized and approved a new share repurchase program ("Repurchase Program") allowing us to repurchase our outstanding common stock with an aggregate market value of up to $100 million, from time to time, over a period of up to 18 months. The repurchase program may be executed through various methods, including open market purchases or privately negotiated transactions. The table below provides information about the Repurchase Program activity.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased under the Plans or Programs (1)
January 1, 2020 through January 31, 2020	—	$ —	—	$ —
February 1, 2020 through February 29, 2020	—	$ —	—	$ —
March 1, 2020 through March 31, 2020	15,518	$ 35.89	15,518	$ 99.4
Total	15,518	$ 35.89	15,518	$ 99.4

______

(1) In millions.

The table below provides information about shares surrendered to the Company to pay employee withholding taxes due upon the vesting of restricted stock .

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number (or Approximate Dollar Value) of Shares that May Yet Be Purchased under the Plans or Programs
January 1, 2020 through January 31, 2020	3,368	$ 48.90	—	—
February 1, 2020 through February 29, 2020	19,053	$ 50.80	—	—
March 1, 2020 through March 31, 2020	133,678	$ 50.99	—	—
Total	156,099	$ 50.92	—	—

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

		Incorporated herein by reference				
Table Item No.	Exhibit Description	Form	File Number	Exhibit	Filing Date	Filed or Furnished herewith
10.1*	Form of Restricted Stock Unit Agreement between the Company and the Executive Chairman for grants of restricted stock units under the Aerojet Rocketdyne Holdings, Inc. 2019 Equity and Performance Incentive Plan.					x
10.2*	Form of Restricted Stock Unit Agreement between the Company and Employees for grants of restricted stock units under the Aerojet Rocketdyne Holdings, Inc. 2019 Equity and Performance Incentive Plan.					x
10.3	Aerojet Rocketdyne Holdings, Inc. Amended and Restated Executive Change in Control Severance Policy	8-K	1-01520	10.1	March 6, 2020	
10.4	Second Amended and Restated Employment Agreement between Aerojet Rocketdyne Holdings, Inc. and Eileen Drake, dated March 4, 2020	8-K	1-01520	10.2	March 6, 2020	
31.1*	Certification of Principal Executive Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended.					X
31.2*	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended.					X
32.1*	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Rule 13a-14(b) under the Securities 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.					X
101.INS*	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.					X
101.SCH*	XBRL Taxonomy Extension Schema Document					X
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document					X
104*	Cover Page Interactive Data File (included as Exhibit 101) -- the cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document					X

* Filed herewith. All other exhibits have been previously filed.

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:	April 28, 2020	By:	/s/ Eileen P. Drake
			Eileen P. Drake
			Chief Executive Officer and President
			(Principal Executive Officer)
Date:	April 28, 2020	By:	/s/ Paul R. Lundstrom
			Paul R. Lundstrom
			Vice President of Finance and Chief Financial Officer
			(Principal Financial Officer)
Date:	April 28, 2020	By:	/s/ Daniel L. Boehle
			Daniel L. Boehle
			Vice President and Controller
			(Principal Accounting Officer)

AEROJET ROCKETDYNE HOLDINGS, INC.
2019 EQUITY AND PERFORMANCE INCENTIVE PLAN

Restricted Stock Unit Agreement

WHEREAS, Participant Name (the "Grantee") is an employee of Aerojet Rocketdyne Holdings, Inc. (the "Company") or a Subsidiary of the Company (a "Subsidiary"); and

WHEREAS, the grant of an award of restricted stock units has been duly authorized by a resolution of the Organization & Compensation Committee (the "Committee") of the Board of Directors.

NOW, THEREFORE, pursuant to the Company's 2019 Equity and Performance Incentive Plan (the "Plan"), the Company hereby grants to the Grantee, as of Grant Date (the "Date of Grant"), Number of Awards Granted restricted stock units (the "Restricted Stock Units" or the "RSUs"). Each Restricted Stock Unit represents the right to receive one share of the Company's common stock, par value $0.10 per share (the "Stock"), subject to the terms and conditions of the Plan and this Restricted Stock Unit Agreement (the "Agreement").

1. Issuance of Stock . Any Stock underlying the RSUs that becomes vested in accordance with the terms and conditions of this Agreement shall be settled as soon as practicable following vesting and in no case after the later of (i) the last day of the calendar year in which the Stock underlying the RSUs becomes vested and (ii) the fifteenth (15 th) day of the third (3 rd) calendar month following such vesting date. Any Stock issued pursuant to this Agreement shall be fully paid and nonassessable and shall be represented by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company.

2. Restrictions on Transfer of RSUs . The RSUs subject to this Agreement may not be transferred, sold, pledged, exchanged, assigned or otherwise encumbered or disposed of by the Grantee and all rights with respect to the RSUs granted hereunder shall be available only to the Grantee during the Grantee's lifetime. Any purported transfer, encumbrance or other disposition of the RSUs covered by this Agreement that is in violation of this Section will be null and void, and the other party to any such purported transaction will not obtain any rights to or interest in the RSUs covered by this Agreement. When and as permitted by the Plan, the Company may waive the restrictions set forth in this Section with respect to all or any portion of the RSUs covered by this Agreement.

3. Vesting of RSUs .

(a) Provided that the Grantee remains in continuous employment as an employee of the Company or Subsidiary through such date, the RSUs covered by this Agreement will become vested and nonforfeitable on:

Vesting Schedule

(b) For the purposes of this Agreement, the continuous employment of the Grantee with the Company or a Subsidiary shall not be deemed to have been interrupted, and the Grantee will not be deemed to have ceased to be an employee of the Company or a Subsidiary, by reason of (A) the transfer of his employment among the Company and its Subsidiaries or (B) an approved leave of absence.

(c) Notwithstanding the provisions of Subsection (a) of this Section, all of the RSUs covered by this Agreement will become immediately vested and nonforfeitable upon the occurrence of any cessation (for any reason) of the Grantee's service as Executive Chairman of the Company's Board of Directors and/or as a member of the Company's Board of Directors, in each case, that occurs within 60 days following a change in control of the Company, or as otherwise determined the Company's Organization and Compensation Committee.

For the purposes of this Agreement, the term "change in control" shall mean the occurrence of any of the following events:

(i) all or substantially all (meaning having a total gross fair market value equal to 50% or more of the total gross fair market value of all of the Company's assets immediately before such acquisition or acquisitions) of the assets of the Company are acquired by a Person (during a twelve month period ending on the date of the most recent acquisition by such Person); or

(ii) the Company is merged, consolidated, or reorganized into or with another corporation or entity in one or a series of transactions during a twelve-month period with the result that upon the conclusion of the transaction less than 60% of the outstanding securities entitled to vote generally in the election of directors or other capital interests of the surviving, resulting or acquiring corporation are beneficially owned (as that term is defined in Rule 13-d 3 under the Exchange Act) by the stockholders of the Company immediately prior to the completion of the transaction in approximately the same proportions as such holdings by such stockholders immediately prior to the completion of the transaction; or

(iii) the individuals who, immediately as of the date hereof, are members of the Board (the “Company Incumbent Board”) cease for any reason to constitute at least a majority of the members of the Board; provided, however, that if the election, or nomination for election of any new director was approved by a vote of at least a majority of the Company Incumbent Board, such new director shall, for purposes of the Plan, be considered as a member of the Company Incumbent Board; provided further, however, that no individual shall be considered a member of the Company Incumbent Board if such individual initially assumed office as a result of either an actual or threatened “Election Contest” (as described in Rule 14a-11 promulgated under the Exchange Act) or other actual or threatened solicitation of proxies or consents by or on behalf of a Person other than the Board (a “Company Proxy Contest”) including by reason of any agreement intended to avoid or settle any Election Contest or Company Proxy Contest.

4. Forfeiture of RSUs .

(a) The RSUs covered by this Agreement that have not become vested and nonforfeitable in accordance with Section 3 hereof shall be forfeited upon Grantee’s Termination of Employment unless the Committee determines to provide otherwise. In the event of a forfeiture, the RSUs covered by this Agreement that have not become vested and nonforfeitable in accordance with Section 3 hereof shall be cancelled.

(b) Notwithstanding the provisions of Section 3 hereof, all of the RSUs covered by this Agreement, and any Stock that has been issued upon vesting of the RSUs, shall be subject to cancellation, forfeiture or recoupment upon the occurrence of any of the following events: (i) termination of the Grantee’s employment for cause; (ii) the Grantee’s violation of material Company or Subsidiary policies or breach of applicable noncompetition or confidentiality covenants; and (iii) conduct by the Grantee that is detrimental to the business or reputation of the Company or its Subsidiary.

5. Dividend Equivalents, Voting and Other Rights as a Shareholder . The Grantee will not have any of the rights of a shareholder with respect to the Stock underlying the RSUs covered by this Agreement, including voting rights, unless and until such shares of Stock settled for such RSUs shall have been issued by the Company to the Grantee (as evidenced on the appropriate books of the Company or of a duly authorized transfer agent of the Company). Notwithstanding the foregoing, the RSUs shall accrue dividend equivalents with respect to dividends that would otherwise be paid on the shares of Stock underlying such RSUs during the period from the Date of Grant to the date such shares of Stock are delivered in accordance with Section 1. As of any date that the Company pays a cash dividend on its Stock, the Company shall credit the Grantee with a dollar amount equal to (i) the per share cash dividend paid by the Company on its Stock on such date, multiplied by (ii) the total number of RSUs subject to this award that are outstanding immediately prior to the record date for such dividend (the “Dividend Equivalent Right”). Any such Dividend Equivalent Rights credited pursuant to the preceding sentence shall be subject to the same vesting conditions, payment and all other terms and conditions applicable to the original RSUs to which they relate, including tax withholding obligations, except that any vested Dividend Equivalent Rights shall in all cases be paid in cash.

6. Compliance with Law . The Company will make reasonable efforts to comply with all applicable federal and state securities laws; provided, however, notwithstanding any other provision of this Agreement, the Company shall not be obligated to issue any Stock pursuant to this Agreement if the issuance thereof would result in a violation of any such law.

7. Restrictions on Resale of Stock . The Company may impose such restrictions, conditions or limitations as it determines appropriate as to the timing and manner of any resales by the Grantee or other subsequent transfers by the Grantee of any shares of Stock issued pursuant to vested RSUs, including without limitation (a) restrictions under an insider trading policy, (b) restrictions designed to delay and/or coordinate the timing and manner of sales by Grantee and other holders and (c) restrictions as to the use of a specified brokerage firm for such resales or other transfers.

8. Adjustments . The Committee may make adjustments, consistent with the Section 409A Rules, in the terms and conditions of, and the criteria included in, this Agreement, in recognition of unusual or nonrecurring events (including, without limitation, the events described in Section 4.4 of the Plan) affecting the Company or the financial statements of the Company or of changes in applicable laws, regulations, or accounting principles, whenever the Committee determines that such adjustments are appropriate in order to prevent unintended dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan. The determination of the Committee as to the foregoing adjustments, if any, shall be conclusive and binding on the Grantee under the Plan.

9. Withholding Taxes .

(a) Upon the vesting of any portion of the RSUs, the Grantee shall be required to pay to the Company any applicable Federal, state, local or foreign withholding tax due, if any, as a result of such vesting. The Company’s obligation to deliver the Stock shall be subject to such payment. The Company and its Subsidiaries shall, to the extent permitted by law, have the right to deduct from any payment of any kind otherwise due to the Grantee the minimum statutory amount (or, if and when the Company adopts any applicable accounting standard allowing for greater share withholding, up to such withholding rate that will not cause an adverse accounting consequence or cost) to satisfy Federal, state, local or foreign withholding taxes due with respect to such vesting.

(b) Subject to (i) the Committee's right to disapprove any such election and require the Grantee to pay the required withholding tax, if any, in cash, (ii) any Company policies, and (iii) applicable laws, the Grantee shall have the right to elect to pay the minimum (or, if and when the Company adopts any applicable accounting standard allowing for greater share withholding, up to such withholding rate that will not cause an adverse accounting consequence or cost) required withholding tax payable at vesting by having the Company withhold shares of Stock otherwise issuable upon vesting and settlement. Any such election shall be irrevocable, made in writing and signed by the Grantee. If vesting occurs within a closed window period during which the Grantee is prohibited by the Company's policies from trading in Company securities, the Company shall retain shares to be received at vesting to pay the minimum (or, if and when the Company adopts any applicable accounting standard allowing for greater share withholding, up to such withholding rate that will not cause an adverse accounting consequence or cost) required withholding tax to be paid at vesting. Shares of Stock used to pay any required withholding tax shall be valued at the same time and in the same manner that vested shares of Stock are valued for purposes of determining the required withholding taxes.

10. Employment Rights . The Plan and this Agreement will not confer upon the Grantee any right with respect to the continuance of employment or other service with the Company or any Subsidiary and shall not interfere in any way with any right that the Company or any Subsidiary would otherwise have to terminate any employment or other service of the Grantee at any time.

11. Relation to Other Benefits . Any economic or other benefit to the Grantee under this Agreement shall not be taken into account in determining any benefits to which the Grantee may be entitled under any profit-sharing, retirement or other benefit or compensation plan maintained by the Company or a Subsidiary.

12. Notices . Any notice necessary under this Agreement will be addressed to the Company or the Committee at the principal executive office of the Company and to the Grantee at the address appearing in the personnel records of the Company for such Grantee, or to either party at such other address as either party may designate in writing to the other. Any such notice will be deemed effective upon receipt thereof by the addressee.

13. Agreement Subject to the Plan . The RSUs granted under this Agreement and all of the terms and conditions hereof are subject to all of the terms and conditions of the Plan. In the event of any inconsistency between this Agreement and the Plan, the terms of the Plan shall govern.

14. Amendments . The Committee may amend this Agreement. Any amendment to the Plan will be deemed to be an amendment to this Agreement to the extent that the amendment is applicable hereto; provided, however, that no amendment shall adversely affect the rights of the Grantee under this Agreement without the Grantee's consent, except as required under the tax laws.

15. Severability . In the event that one or more of the provisions of this Agreement is invalidated for any reason by a court of competent jurisdiction, any provision so invalidated shall be deemed to be separable from the other provisions hereof, and the remaining provisions hereof will continue to be valid and fully enforceable.

16. Governing Law . This Agreement will be construed and governed in accordance with the laws of the State of Delaware without regard to its conflict of laws principles.

17. Certain Defined Terms . In addition to the terms defined elsewhere herein, when used in the Agreement, terms with initial capital letters have the meaning given such term under the Plan, as in effect from time to time.

This Agreement is effective as of Grant Date.

AEROJET ROCKETDYNE HOLDINGS, INC.

By: ____________________________________
Arjun L. Kampani
Vice President, General Counsel and Secretary

The undersigned Grantee hereby acknowledges receipt of an executed original of this Restricted Stock Unit Agreement and accepts the right to receive the Restricted Stock Units subject to the terms and conditions of the Plan and the terms and conditions herein above set forth.

Electronic Signature

Participant Name

AEROJET ROCKETDYNE HOLDINGS, INC.
2019 EQUITY AND PERFORMANCE INCENTIVE PLAN

Restricted Stock Unit Agreement

WHEREAS, Participant Name (the “Grantee”) is an employee of Aerojet Rocketdyne Holdings, Inc. (the “Company”) or a Subsidiary of the Company (a “Subsidiary”); and

WHEREAS, the grant of an award of restricted stock units has been duly authorized by a resolution of the Organization & Compensation Committee (the “Committee”) of the Board of Directors.

NOW, THEREFORE, pursuant to the Company’s 2019 Equity and Performance Incentive Plan (the “Plan”), the Company hereby grants to the Grantee, as of Grant Date (the “Date of Grant”), Number of Awards Granted restricted stock units (the “Restricted Stock Units” or the “RSUs”). Each Restricted Stock Unit represents the right to receive one share of the Company’s common stock, par value $0.10 per share (the “Stock”), subject to the terms and conditions of the Plan and this Restricted Stock Unit Agreement (the “Agreement”).

1. Issuance of Stock . Any Stock underlying the RSUs that becomes vested in accordance with the terms and conditions of this Agreement shall be settled as soon as practicable following vesting and in no case after the later of (i) the last day of the calendar year in which the Stock underlying the RSUs becomes vested and (ii) the fifteenth (15^{th}) day of the third (3^{rd}) calendar month following such vesting date. Any Stock issued pursuant to this Agreement shall be fully paid and nonassessable and shall be represented by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company.

2. Restrictions on Transfer of RSUs . The RSUs subject to this Agreement may not be transferred, sold, pledged, exchanged, assigned or otherwise encumbered or disposed of by the Grantee and all rights with respect to the RSUs granted hereunder shall be available only to the Grantee during the Grantee’s lifetime. Any purported transfer, encumbrance or other disposition of the RSUs covered by this Agreement that is in violation of this Section will be null and void, and the other party to any such purported transaction will not obtain any rights to or interest in the RSUs covered by this Agreement. When and as permitted by the Plan, the Company may waive the restrictions set forth in this Section with respect to all or any portion of the RSUs covered by this Agreement.

3. Vesting of RSUs .

(a) Provided that the Grantee remains in continuous employment as an employee of the Company or Subsidiary through such date, the RSUs covered by this Agreement will become vested and nonforfeitable on:

Vesting Schedule

(b) For the purposes of this Agreement, the continuous employment of the Grantee with the Company or a Subsidiary shall not be deemed to have been interrupted, and the Grantee will not be deemed to have ceased to be an employee of the Company or a Subsidiary, by reason of (A) the transfer of his employment among the Company and its Subsidiaries or (B) an approved leave of absence.

(c) Notwithstanding the provisions of Subsection (a) of this Section, all of the RSUs covered by this Agreement will become immediately vested and nonforfeitable upon the occurrence of a change in control of the Company that shall occur while the Grantee is an employee of the Company. For the purposes of this Agreement, the term “change in control” will have the meaning given such term under the Plan as in effect on the Date of Grant.

4. Forfeiture of RSUs .

(a) The RSUs covered by this Agreement that have not become vested and nonforfeitable in accordance with Section 3 hereof shall be forfeited upon Grantee’s Termination of Employment unless the Committee determines to provide otherwise. In the event of a forfeiture, the RSUs covered by this Agreement that have not become vested and nonforfeitable in accordance with Section 3 hereof shall be cancelled.

(b) Notwithstanding the provisions of Section 3 hereof, all of the RSUs covered by this Agreement, and any Stock that has been issued upon vesting of the RSUs, shall be subject to cancellation, forfeiture or recoupment upon the occurrence of any of the following events: (i) termination of the Grantee’s employment for cause; (ii) the Grantee’s violation of material Company or Subsidiary policies or breach of applicable noncompetition or confidentiality covenants; and (iii) conduct by the Grantee that is detrimental to the business or reputation of the Company or its Subsidiary.

5. Dividend Equivalents, Voting and Other Rights as a Shareholder . The Grantee will not have any of the rights of a shareholder with respect to the Stock underlying the RSUs covered by this Agreement, including voting rights, unless and

until such shares of Stock settled for such RSUs shall have been issued by the Company to the Grantee (as evidenced on the appropriate books of the Company or of a duly authorized transfer agent of the Company). Notwithstanding the foregoing, the RSUs shall accrue dividend equivalents with respect to dividends that would otherwise be paid on the shares of Stock underlying such RSUs during the period from the Date of Grant to the date such shares of Stock are delivered in accordance with Section 1. As of any date that the Company pays a cash dividend on its Stock, the Company shall credit the Grantee with a dollar amount equal to (i) the per share cash dividend paid by the Company on its Stock on such date, multiplied by (ii) the total number of RSUs subject to this award that are outstanding immediately prior to the record date for such dividend (the "Dividend Equivalent Right"). Any such Dividend Equivalent Rights credited pursuant to the preceding sentence shall be subject to the same vesting conditions, payment and all other terms and conditions applicable to the original RSUs to which they relate, including tax withholding obligations, except that any vested Dividend Equivalent Rights shall in all cases be paid in cash.

6. Compliance with Law. The Company will make reasonable efforts to comply with all applicable federal and state securities laws; provided, however, notwithstanding any other provision of this Agreement, the Company shall not be obligated to issue any Stock pursuant to this Agreement if the issuance thereof would result in a violation of any such law.

7. Restrictions on Resale of Stock. The Company may impose such restrictions, conditions or limitations as it determines appropriate as to the timing and manner of any resales by the Grantee or other subsequent transfers by the Grantee of any shares of Stock issued pursuant to vested RSUs, including without limitation (a) restrictions under an insider trading policy, (b) restrictions designed to delay and/or coordinate the timing and manner of sales by Grantee and other holders and (c) restrictions as to the use of a specified brokerage firm for such resales or other transfers.

8. Adjustments. The Committee may make adjustments, consistent with the Section 409A Rules, in the terms and conditions of, and the criteria included in, this Agreement, in recognition of unusual or nonrecurring events (including, without limitation, the events described in Section 4.4 of the Plan) affecting the Company or the financial statements of the Company or of changes in applicable laws, regulations, or accounting principles, whenever the Committee determines that such adjustments are appropriate in order to prevent unintended dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan. The determination of the Committee as to the foregoing adjustments, if any, shall be conclusive and binding on the Grantee under the Plan.

9. Withholding Taxes.

(a) Upon the vesting of any portion of the RSUs, the Grantee shall be required to pay to the Company any applicable Federal, state, local or foreign withholding tax due, if any, as a result of such vesting. The Company's obligation to deliver the Stock shall be subject to such payment. The Company and its Subsidiaries shall, to the extent permitted by law, have the right to deduct from any payment of any kind otherwise due to the Grantee the minimum statutory amount (or, if and when the Company adopts any applicable accounting standard allowing for greater share withholding, up to such withholding rate that will not cause an adverse accounting consequence or cost) to satisfy Federal, state, local or foreign withholding taxes due with respect to such vesting.

(b) Subject to (i) the Committee's right to disapprove any such election and require the Grantee to pay the required withholding tax, if any, in cash, (ii) any Company policies, and (iii) applicable laws, the Grantee shall have the right to elect to pay the minimum (or, if and when the Company adopts any applicable accounting standard allowing for greater share withholding, up to such withholding rate that will not cause an adverse accounting consequence or cost) required withholding tax payable at vesting by having the Company withhold shares of Stock otherwise issuable upon vesting and settlement. Any such election shall be irrevocable, made in writing and signed by the Grantee. If vesting occurs within a closed window period during which the Grantee is prohibited by the Company's policies from trading in Company securities, the Company shall retain shares to be received at vesting to pay the minimum (or, if and when the Company adopts any applicable accounting standard allowing for greater share withholding, up to such withholding rate that will not cause an adverse accounting consequence or cost) required withholding tax to be paid at vesting. Shares of Stock used to pay any required withholding tax shall be valued at the same time and in the same manner that vested shares of Stock are valued for purposes of determining the required withholding taxes.

10. Employment Rights. The Plan and this Agreement will not confer upon the Grantee any right with respect to the continuance of employment or other service with the Company or any Subsidiary and shall not interfere in any way with any right that the Company or any Subsidiary would otherwise have to terminate any employment or other service of the Grantee at any time.

11. Relation to Other Benefits. Any economic or other benefit to the Grantee under this Agreement shall not be taken into account in determining any benefits to which the Grantee may be entitled under any profit-sharing, retirement or other benefit or compensation plan maintained by the Company or a Subsidiary.

12. Notices. Any notice necessary under this Agreement will be addressed to the Company or the Committee at the principal executive office of the Company and to the Grantee at the address appearing in the personnel records of the Company for such Grantee, or to either party at such other address as either party may designate in writing to the other. Any such notice will be deemed effective upon receipt thereof by the addressee.

13. Agreement Subject to the Plan . The RSUs granted under this Agreement and all of the terms and conditions hereof are subject to all of the terms and conditions of the Plan. In the event of any inconsistency between this Agreement and the Plan, the terms of the Plan shall govern.

14. Amendments . The Committee may amend this Agreement. Any amendment to the Plan will be deemed to be an amendment to this Agreement to the extent that the amendment is applicable hereto; provided, however, that no amendment shall adversely affect the rights of the Grantee under this Agreement without the Grantee's consent, except as required under the tax laws.

15. Severability . In the event that one or more of the provisions of this Agreement is invalidated for any reason by a court of competent jurisdiction, any provision so invalidated shall be deemed to be separable from the other provisions hereof, and the remaining provisions hereof will continue to be valid and fully enforceable.

16. Governing Law . This Agreement will be construed and governed in accordance with the laws of the State of Delaware without regard to its conflict of laws principles.

17. Certain Defined Terms . In addition to the terms defined elsewhere herein, when used in the Agreement, terms with initial capital letters have the meaning given such term under the Plan, as in effect from time to time.

This Agreement is effective as of Grant Date.

AEROJET ROCKETDYNE HOLDINGS, INC.

By: ______________________________

Arjun L. Kampani
Vice President, General Counsel and Secretary

The undersigned Grantee hereby acknowledges receipt of an executed original of this Restricted Stock Unit Agreement and accepts the right to receive the Restricted Stock Units subject to the terms and conditions of the Plan and the terms and conditions herein above set forth.

Electronic Signature

Participant Name

Exhibit 31.1

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: April 28, 2020

/s/ Eileen P. Drake

Eileen P. Drake

Chief Executive Officer and President
(Principal Executive Officer)

Exhibit 31.2

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: April 28, 2020

/s/ Paul R. Lundstrom

Paul R. Lundstrom
Vice President of Finance and Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

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 March 31, 2020 (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: April 28, 2020

The undersigned hereby certifies that to his knowledge the quarterly report on Form 10-Q of Aerojet Rocketdyne Holdings, Inc. for the period ended March 31, 2020 (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 of Finance and Chief Financial Officer
(Principal Financial Officer)

Date: April 28, 2020