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 December 31, 2019

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ________ to ________

Commission file number 333-211719

ASHLAND GLOBAL HOLDINGS INC.

(a Delaware corporation)
I.R.S. No. 81-2587835

8145 Blazer Drive
Wilmington, Delaware 19808
Telephone Number (302) 995-3000

Securities Registered Pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value $.01 per share	ASH	New York Stock Exchange

Securities Registered Pursuant to Section 12(g) of the Act: None

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 ☑

At December 31, 2019, there were 60,247,475 shares of Registrant’s Common Stock outstanding.

PART I - FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

ASHLAND GLOBAL HOLDINGS INC. AND CONSOLIDATED SUBSIDIARIES
STATEMENTS OF CONSOLIDATED COMPREHENSIVE INCOME (LOSS)

	Three months ended December 31	
(In millions except per share data - unaudited)	2019	2018
Sales	$ 533	$ 576
Cost of sales	380	424
Gross profit	153	152
Selling, general and administrative expense	120	143
Research and development expense	16	17
Equity and other income	—	1
Operating income (loss)	17	(7)
Net interest and other expense	10	55
Other net periodic benefit income	—	18
Net income (loss) on divestitures	3	(3)
Income (loss) from continuing operations before income taxes	10	(47)
Income tax expense (benefit)	(24)	24
Income (loss) from continuing operations	34	(71)
Income (loss) from discontinued operations (net of income taxes)	(2)	23
Net income (loss)	$ 32	$ (48)
PER SHARE DATA		
Basic earnings per share - Note M		
Income (loss) from continuing operations	$ 0.57	$ (1.14)
Income (loss) from discontinued operations	(0.03)	0.38
Net income (loss)	$ 0.54	$ (0.76)
Diluted earnings per share - Note M		
Income (loss) from continuing operations	$ 0.56	$ (1.14)
Income (loss) from discontinued operations	(0.03)	0.38
Net income (loss)	$ 0.53	$ (0.76)
COMPREHENSIVE INCOME (LOSS)		
Net income (loss)	$ 32	$ (48)
Other comprehensive income (loss), net of tax		
Unrealized translation gain (loss)	38	(31)
Pension and postretirement obligation adjustment	—	(6)
Other comprehensive income (loss)	38	(37)
Comprehensive income (loss)	$ 70	$ (85)

SEE NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

ASHLAND GLOBAL HOLDINGS INC. AND CONSOLIDATED SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS

(In millions - unaudited)	December 31 2019	September 30 2019
ASSETS		
Current assets		
Cash and cash equivalents	$ 157	$ 232
Accounts receivable (a)	441	481
Inventories - Note F	633	597
Other assets	53	64
Current assets held for sale - Note B	60	59
Total current assets	1,344	1,433
Noncurrent assets		
Property, plant and equipment		
Cost	3,155	3,165
Accumulated depreciation	1,580	1,588
Net property, plant and equipment	1,575	1,577
Goodwill - Note G	2,274	2,253
Intangibles - Note G	1,072	1,088
Operating lease assets, net - Note I	157	—
Restricted investments - Note E	314	310
Asbestos insurance receivable - Note L	156	157
Deferred income taxes	23	23
Other assets	411	410
Total noncurrent assets	5,982	5,818
Total assets	$ 7,326	$ 7,251
LIABILITIES AND EQUITY		
Current liabilities		
Short-term debt - Note H	$ 179	$ 166
Trade and other payables	234	313
Accrued expenses and other liabilities	245	271
Current operating lease obligations - Note I	24	—
Current liabilities held for sale - Note B	6	7
Total current liabilities	688	757
Noncurrent liabilities		
Long-term debt - Note H	1,502	1,501
Asbestos litigation reserve - Note L	540	555
Deferred income taxes	250	264
Employee benefit obligations - Note K	152	150
Operating lease obligations - Note I	143	—
Other liabilities	426	453
Total noncurrent liabilities	3,013	2,923
Commitments and contingencies - Note L		
Stockholders' equity	3,625	3,571
Total liabilities and stockholders' equity	$ 7,326	$ 7,251

(a) Accounts receivable includes an allowance for doubtful accounts of $3 million at both December 31, 2019 and September 30, 2019.

SEE NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

ASHLAND GLOBAL HOLDINGS INC. AND CONSOLIDATED SUBSIDIARIES
STATEMENT OF CONSOLIDATED EQUITY

(In millions - unaudited)	Common stock	Paid-in capital	Retained earnings	Accumulated other comprehensive income (loss) (a)	Total
BALANCE AT SEPTEMBER 30, 2019	$ 1	$ 756	$ 3,224	$ (410)	$ 3,571
Total comprehensive income (loss)					
Net Income			32		32
Other comprehensive income				38	38
Regular dividends, $0.275 per common share			(17)		(17)
Common shares issued under stock incentive and other plans (b)		1			1
BALANCE AT DECEMBER 31, 2019	$ 1	$ 757	$ 3,239	$ (372)	$ 3,625

(a) At December 31, 2019 and September 30, 2019, the after-tax accumulated other comprehensive loss of $372 million and $410 million, respectively, was each comprised of net unrealized translation losses of $370 million and $408 million, respectively, and unrecognized prior service costs of $2 million each.

(b) Common shares issued were 70,461 for the three months ended December 31, 2019.

SEE NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

ASHLAND GLOBAL HOLDINGS INC. AND CONSOLIDATED SUBSIDIARIES
STATEMENTS OF CONDENSED CONSOLIDATED CASH FLOWS

(In millions - unaudited)	Three months ended December 31 2019	2018
CASH FLOWS PROVIDED (USED) BY OPERATING ACTIVITIES FROM CONTINUING OPERATIONS		
Net income (loss)	$ 32	$ (48)
Income (loss) from discontinued operations (net of income taxes)	2	(23)
Adjustments to reconcile income from continuing operations to cash flows from operating activities:		
Depreciation and amortization	61	81
Original issue discount and debt issuance costs amortization	2	2
Deferred income taxes	(12)	3
Stock based compensation expense	4	7
(Income) loss from restricted investments	(13)	28
Excess tax benefit on stock based compensation	—	1
Net (income) loss on divestitures	—	3
Pension contributions	(1)	(1)
Gain on pension and other postretirement plan remeasurements	—	(18)
Change in operating assets and liabilities (a)	(109)	(44)
Total cash flows used by operating activities from continuing operations	(34)	(9)
CASH FLOWS PROVIDED (USED) BY INVESTING ACTIVITIES FROM CONTINUING OPERATIONS		
Additions to property, plant and equipment	(29)	(33)
Proceeds from disposal of property, plant and equipment	—	4
Net purchase of funds restricted for specific transactions	(1)	(2)
Reimbursement from restricted investments	10	8
Proceeds from sales of securities	4	—
Purchase of securities	(4)	—
Proceeds from the settlement of derivative instruments	—	1
Payments for the settlement of derivative instruments	—	(2)
Total cash flows used by investing activities from continuing operations	(20)	(24)
CASH FLOWS PROVIDED (USED) BY FINANCING ACTIVITIES FROM CONTINUING OPERATIONS		
Repayment of long-term debt	—	(1)
Proceeds from (repayment of) short-term debt	14	(26)
Cash dividends paid	(16)	(16)
Stock based compensation employee withholding taxes paid in cash	(5)	(7)
Total cash flows used by financing activities from continuing operations	(7)	(50)
CASH PROVIDED (USED) BY CONTINUING OPERATIONS	(61)	(83)
Cash provided (used) by discontinued operations		
Operating cash flows	(17)	(58)
Investing cash flows	2	(2)
Total cash used by discontinued operations	(15)	(60)
Effect of currency exchange rate changes on cash and cash equivalents	1	(2)
INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(75)	(145)
CASH AND CASH EQUIVALENTS - BEGINNING OF PERIOD	232	294
CASH AND CASH EQUIVALENTS - END OF PERIOD	$ 157	$ 149

(a) Excludes changes resulting from operations acquired, sold or held for sale.

SEE NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

NOTE A – SIGNIFICANT ACCOUNTING POLICIES

Basis of presentation

The accompanying unaudited Condensed Consolidated Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States for interim financial reporting and Securities and Exchange Commission (SEC) regulations. In the opinion of management, all adjustments considered necessary for a fair presentation have been included. Additionally, certain prior period data, primarily related to discontinued operations, have been reclassified in the Consolidated Financial Statements and accompanying notes to conform to the current period presentation, as further described in this section. These statements omit certain information and footnote disclosures required for complete annual financial statements and, therefore, should be read in conjunction with Ashland Global Holdings Inc. and consolidated subsidiaries (Ashland) Annual Report on Form 10-K for the fiscal year ended September 30, 2019. Results of operations for the period ended December 31, 2019 are not necessarily indicative of the expected results for the remaining quarters in the fiscal year.

On August 30, 2019, Ashland completed the sale of its Composites business (excluding Ashland’s maleic anhydride business (Maleic business)) and its butanediol facility in Marl, Germany (Marl facility). This disposal group represented a strategic shift in Ashland’s business and in accordance with U.S. GAAP, qualified as a discontinued operation. Accordingly, Composites (including the Maleic business) and the Marl facility assets, liabilities, operating results and cash flows for all periods presented have been classified as discontinued operations within the Consolidated Financial Statements. See Notes B and C for additional information on this divestiture.

As a result of classifying the Composites reporting segment as a discontinued operation, Ashland is now comprised of two reportable segments: Specialty Ingredients and Intermediates and Solvents. The financial information reported for Intermediates and Solvents excludes the activity from the Marl facility due to the divestiture.

Use of estimates, risks and uncertainties

The preparation of Ashland’s Condensed Consolidated Financial Statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and the disclosures of contingent assets and liabilities. Significant items that are subject to such estimates and assumptions include, but are not limited to, long-lived assets (including goodwill and other intangible assets), income taxes and liabilities and receivables associated with asbestos litigation and environmental remediation. Although management bases its estimates on historical experience and various other assumptions that are believed to be reasonable under the circumstances, actual results could differ significantly from the estimates under different assumptions or conditions.

Ashland’s results are affected by domestic and international economic, political, legislative, regulatory and legal actions. Economic conditions, such as recessionary trends, inflation, interest and monetary exchange rates, government fiscal policies and changes in the prices of certain key raw materials, can have a significant effect on operations. While Ashland maintains reserves for anticipated liabilities and carries various levels of insurance, Ashland could be affected by civil, criminal, regulatory or administrative actions, claims or proceedings relating to asbestos, environmental remediation or other matters.

New accounting pronouncements

A description of new U.S. GAAP accounting standards issued or adopted during the current year is required in interim financial reporting. A detailed listing of new accounting standards relevant to Ashland is included in the Annual Report on Form 10-K for the fiscal year ended September 30, 2019. The following standards relevant to Ashland were either issued or adopted in the current period or will become effective in a subsequent period.

Leases

Effective October 1, 2019, Ashland adopted new accounting guidance related to lease transactions. The adoption of the new lease guidance resulted in the recognition of right-of-use assets and operating lease liabilities of $174 million as of October 1, 2019. The adoption did not have a material impact on Ashland's results of operations, cash flows or debt covenants. Results for reporting periods beginning after October 1, 2019 are presented under the new accounting guidance for leases, while prior period amounts have not been adjusted and continue to be reported in accordance with our historical accounting treatment. Ashland elected the package of practical expedients permitted under the transition guidance within the new standard, which among other things, allowed it to carry forward the historical lease classification.

Ashland determines if an arrangement contains a lease at inception. Ashland recognizes right-of-use assets and liabilities associated with leases based on the present value of the future minimum lease payments over the lease term at the later of the commencement date of the lease or the October 1, 2019 implementation date. Ashland uses its incremental borrowing rate at the recognition date in determining the present value of future payments for leases that do not have a readily determinable implicit rate. Lease terms reflect options to extend or terminate the lease when it is reasonably certain that the option will be exercised. For leases that include residual value guarantees or payments for terminating the lease, Ashland includes these costs in the lease liability when it is probable that we will incur them. Right-of-use assets and obligations for short-term leases (leases with an initial term of 12 months or less) are not recognized in the condensed consolidated balance sheet. Lease expense for short-term leases is recognized on a straight-line basis over the lease term. When contracts contain lease and non-lease components, the Company generally accounted for both components as a single lease component.

For additional information, see Note I.

Other accounting pronouncements

In February 2018, the FASB issued guidance which permits entities to reclassify tax effects stranded in accumulated other comprehensive income (AOCI) as a result of U.S. tax reform legislation to retained earnings. Additionally, this guidance requires entities to disclose whether they made an election to reclassify the tax effects and to disclose their accounting policy for releasing income tax effects from AOCI. This guidance became effective for Ashland on October 1, 2019. Ashland did not elect to reclassify the disproportionate amount in AOCI to retained earnings. Ashland estimated the impact of this guidance to be approximately $3 million. Ashland's accounting policy for releasing income tax effects from AOCI is under the individual units of account method for items sold, terminated or extinguished from AOCI.

In August 2017, the FASB issued accounting guidance amending the existing hedge accounting model to simplify various hedge documentation requirements while also expanding hedging abilities for certain nonfinancial and financial risk components. This guidance became effective for Ashland on October 1, 2019 and had no impact on the Consolidated Financial Statements.

In June 2016, the FASB issued amended accounting guidance related to the measurement of credit losses on financial instruments. The amended accounting guidance changes the impairment model for most financial assets to require measurement and recognition of expected credit losses for financial assets held. The amended accounting guidance is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. This guidance will become effective for Ashland on October 1, 2020. Ashland is in the process of evaluating the effect this amended accounting guidance will have on our consolidated financial position and results of operations; however, we do not expect the amended accounting guidance to have a material impact to Ashland's Consolidated Financial Statements.

NOTE B – DIVESTITURES

Composites and Marl facility

On November 15, 2018, Ashland announced that it had signed a definitive agreement to sell its Composites segment and Intermediates and Solvents Marl facility to INEOS Enterprises in a transaction valued at $1.1 billion. Ashland retained the remaining Intermediates and Solvents facility in Lima, Ohio primarily for its own internal business use.

In late July of 2019, Ashland and INEOS agreed to certain additional changes to the sale agreement. As part of the proposed changes, the purchase price was adjusted to $1.015 billion while Ashland retained the right to the Maleic business, including the retention of any subsequent sale proceeds.

On August 30, 2019 Ashland completed the sale of its Composites business (excluding the Maleic business) and butanediol manufacturing facility in Marl, Germany to INEOS.

Since this disposal group signifies a strategic shift in Ashland's business and had a major effect on Ashland's operations and financial results, the operating results and cash flows related to Composites and the Marl facility, including the Maleic business, have been reflected as discontinued operations in the Statements of Consolidated Comprehensive Income (Loss) and Statements of Condensed Consolidated Cash Flows. See Note C of the Notes to Condensed Consolidated Financial Statements for the results of operations for Composites and the Marl facility, including the Maleic business, for all periods presented.

Certain indirect corporate costs included within the selling, general and administrative expense caption of the Statements of Consolidated Comprehensive Income (Loss) that were previously allocated to the Composites segment and Marl facility do not qualify for classification within discontinued operations and are now reported as selling, general and administrative expense within continuing operations on a consolidated basis and within the Unallocated and other segment. These costs were zero and $12 million during the three months ended December 31, 2019 and 2018, respectively.

Subsequent to the completion of the sale, Ashland is providing certain transition services to INEOS for a fee. While the transition services are expected to vary in duration depending upon the type of service provided, Ashland expects to reduce costs as the transition services are completed. Ashland recognized transition service fee income of $3 million during the three month period ending December 31, 2019.

Held for sale classification

The assets and liabilities of the Maleic business, along with other planned corporate asset divestitures as of December 31, 2019 and September 30, 2019 have been reflected as assets and liabilities held for sale. As a result, in accordance with U.S. GAAP standards, depreciation and amortization were not being recorded within the Statements of Consolidated Comprehensive Income (Loss) and the Condensed Consolidated Balance Sheets. These assets and liabilities are comprised of the following components:

(In millions)	December 31 2019	September 30 2019
Accounts receivable, net	$ 4	$ 5
Inventories	3	3
Net property, plant and equipment	34	34
Goodwill	14	14
Other assets	5	3
Current assets held for sale	$ 60	$ 59
Trade and other payables	$ 5	$ 6
Accrued expenses and other liabilities	1	1
Current liabilities held for sale	$ 6	$ 7

NOTE C– DISCONTINUED OPERATIONS

Ashland has divested certain businesses that have qualified as discontinued operations. The operating results from these divested businesses and subsequent adjustments related to ongoing assessments of certain retained liabilities and tax items have been recorded within the discontinued operations caption in the Statements of Consolidated Comprehensive Income (Loss) for all periods presented and are discussed further within this note.

As previously described in Note B, Ashland has completed the previously announced sale of its Composites business (excluding the Maleic business) and butanediol manufacturing facility in Marl, Germany to INEOS. Ashland determined that this disposal group qualified as a discontinued operation, in accordance with U.S. GAAP, since it represents a strategic shift for Ashland and had a major effect on Ashland's operations and financial results. Accordingly, the operating results and cash flows for Composites business (including the Maleic business) and the Marl facility have been classified as discontinued operations within the Condensed Consolidated Financial Statements for all periods presented.

Components of amounts reflected in the Statements of Consolidated Comprehensive Income (Loss) related to discontinued operations are presented in the following table for the three months ended December 31, 2019 and 2018.

	Three months ended December 31	
(In millions)	2019	2018
Income (loss) from discontinued operations (net of tax)		
Composites/Marl facility	$ —	$ 25
Valvoline	(1)	—
Water Technologies	(1)	(1)
Distribution	—	(1)
	$ (2)	$ 23

The following table presents a reconciliation of the captions within Ashland's Statements of Consolidated Comprehensive Income (Loss) for the income (loss) from discontinued operations attributable to Composites and the Marl facility for the three months ended December 31, 2019 and 2018. Interest expense was allocated to discontinued operations based on Ashland’s mandatory debt prepayments upon the disposition of Composites and the Marl facility for applicable periods only. Although the Maleic business was not sold to INEOS, this business was operated under the Composites business and Marl facility disposal group and will continue to be reported in discontinued operations.

	Three months ended December 31	
(In millions)	2019	2018
Income (loss) from discontinued operations attributable to Composites/Marl facility		
Sales	$ 12	$ 275
Cost of sales	(10)	(217)
Selling, general and administrative expense	(2)	(22)
Research and development expense	—	(3)
Equity and other income	2	3
Pretax operating income of discontinued operations	2	36
Net interest and other financing expense	—	(6)
Pretax income of discontinued operations	2	30
Income tax expense	(2)	(5)
Income from discontinued operations	$ —	$ 25

NOTE D – RESTRUCTURING ACTIVITIES

Company-wide restructuring activities

Ashland periodically implements company-wide restructuring programs related to acquisitions, divestitures and other cost reduction programs in order to enhance profitability through streamlined operations and an improved overall cost structure.

Severance costs

During fiscal 2018, Ashland initiated a company-wide cost reduction program as a result of ongoing strategic asset plans and activities. As part of this restructuring program, Ashland announced a voluntary severance offer (VSO) to certain qualifying employees that was formally approved during 2018. Additionally, during fiscal 2018, an involuntary program for employees was also initiated as part of the restructuring program. During the three months ended December 31, 2019 and 2018, these programs resulted in additional severance expense of $1 million and $4 million, respectively, which was primarily recorded within the selling, general and administrative expense caption of the Statement of Consolidated Comprehensive Income (Loss). As of December 31, 2019, the severance reserve for the company-wide restructuring program was $5 million.

Facility costs

Ashland incurred zero and $7 million of lease abandonment charges during the three months ended December 31, 2019 and 2018, respectively, due to the exit from certain office facilities in conjunction with the company-wide cost reduction program. The costs related to this reserve were recorded within the selling, general and administrative expense caption of the Statements of Consolidated Comprehensive Income (Loss) and are paid over the remaining lease terms. As of December 31, 2019, the reserve for facility costs was $6 million.

The following table details at December 31, 2019, the amount of restructuring reserves related to the programs discussed above, and the related activity in these reserves during the three months ended December 31, 2019. The severance and facility cost reserves were primarily recorded within accrued expenses and other liabilities in the Condensed Consolidated Balance Sheet as of December 31, 2019 and December 31, 2018.

(In millions)	Severance costs	Facility costs	Total
Balance at of September 30, 2019	7	7	14
Restructuring reserve	1	—	1
Utilization (cash paid)	(3)	(1)	(4)
Balance at December 31, 2019	$ 5	$ 6	11

(In millions)	Severance costs	Facility costs	Total
Balance at of September 30, 2018	36	7	43
Restructuring reserve	4	7	11
Utilization (cash paid)	(8)	(3)	(11)
Balance at December 31, 2018	$ 32	$ 11	43

Other restructuring activities

Plant restructuring

During the three months ended December 31, 2018, Specialty Ingredients committed to a cost reduction plan within an existing manufacturing facility. As a result, restructuring charges of $27 million were recorded for the three months ended December 31, 2018 primarily within the cost of sales caption of the Statements of Consolidated Comprehensive Income (Loss) consisting of $19 million in accelerated depreciation and amortization, $5 million in severance and $3 million of plant closure costs. As of December 31, 2019, there was no restructuring reserve related to this plant restructuring.

Executive transition severance costs

During the three months ended December 31, 2019, Ashland incurred severance expense of $3 million attributable to executive management changes within the organization. As of December 31, 2019, the severance reserve associated with this transition was $3 million.

NOTE E – FAIR VALUE MEASUREMENTS

As required by U.S. GAAP, Ashland uses applicable guidance for defining fair value, the initial recording and periodic remeasurement of certain assets and liabilities measured at fair value and related disclosures for instruments measured at fair value. Fair value accounting guidance establishes a fair value hierarchy, which prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). An instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the instrument's fair value measurement. The three levels within the fair value hierarchy are described as follows.

Level 1 – Observable inputs such as unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2 – Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.

Level 3 – Unobservable inputs for the asset or liability for which there is little, if any, market activity at the measurement date. Unobservable inputs reflect Ashland's own assumptions about what market participants would use to price the asset or liability. The inputs are developed based on the best information available in the circumstances, which might include Ashland's own financial data such as internally developed pricing models, discounted cash flow methodologies, as well as instruments for which the fair value determination requires significant management judgment.

For assets that are measured using quoted prices in active markets (Level 1), the total fair value is the published market price per unit multiplied by the number of units held without consideration of transaction costs. Assets and liabilities that are measured using significant other observable inputs (Level 2) are primarily valued by reference to quoted prices of similar assets or liabilities in active markets, adjusted for any terms specific to that asset or liability. For all other assets and liabilities for which unobservable inputs are used (Level 3), fair value is derived using fair value models, such as a discounted cash flow model or other standard pricing models that Ashland deems reasonable.

The following table summarizes financial instruments subject to recurring fair value measurements as of December 31, 2019.

(In millions)	Carrying value	Total fair value	Quoted prices in active markets for identical assets Level 1	Significant other observable inputs Level 2	Significant unobservable inputs Level 3
Assets					
Cash and cash equivalents	$ 157	$ 157	$ 157	$ —	$ —
Restricted investments (a)	338	338	338	—	—
Investment of captive insurance company (b)	6	6	6	—	—
Foreign currency derivatives	1	1	—	1	—
Total assets at fair value	$ 502	$ 502	$ 501	$ 1	$ —
Liabilities					
Foreign currency derivatives	$ 2	$ 2	$ —	$ 2	$ —

(a) Included in restricted investments is $24 million classified in the other current assets caption on the Condensed Consolidated Balance Sheets.
(b) Included in other noncurrent assets in the Condensed Consolidated Balance Sheets.

The following table summarizes financial asset instruments subject to recurring fair value measurements as of September 30, 2019.

(In millions)	Carrying value	Total fair value	Quoted prices in active markets for identical assets Level 1	Significant other observable inputs Level 2	Significant unobservable inputs Level 3
Assets					
Cash and cash equivalents	$ 232	$ 232	$ 232	$ —	$ —
Restricted investments (a)	334	334	334	—	—
Investment of captive insurance company (b)	5	5	5	—	—
Foreign currency derivatives	2	2	—	2	—
Total assets at fair value	$ 573	$ 573	$ 571	$ 2	$ —
Liabilities					
Foreign currency derivatives	$ 2	$ 2	$ —	$ 2	$ —

(a) Included in restricted investments is $24 million classified in the other current assets caption on the Condensed Consolidated Balance Sheets.
(b) Included in other noncurrent assets in the Condensed Consolidated Balance Sheets.

Restricted investments

Investment income and realized gains and losses on these company-restricted investments are reported within the net interest and other expense caption on the Statements of Consolidated Comprehensive Income (Loss). The following table provides a summary of the activity within the investment portfolio as of December 31, 2019 and September 30, 2019:

(In millions)	December 31 2019	September 30 2019
Original cost	$ 335	$ 335
Accumulated adjustments, net (a)	(30)	(47)
Adjusted cost, beginning of year	305	288
Investment income (b)	4	10
Net unrealized gain (c)	38	29
Realized gains (c)	—	32
Settlement funds	1	7
Disbursements	(10)	(32)
Fair value	$ 338	$ 334

(a) The accumulated adjustments include investment income, realized gains, disbursements and settlements recorded in previous periods.
(b) Investment income for the demand deposit includes interest income as well as dividend income transferred from the equity and corporate bond mutual funds.
(c) Presented under the original cost method.

The following table presents gross unrealized gains and losses for the restricted investment securities as of December 31, 2019 and September 30, 2019:

(In millions)	Adjusted Cost	Gross Unrealized Gain	Gross Unrealized Loss	Fair Value
As of December 31, 2019				
Demand deposit	$ 8	$ —	$ —	$ 8
Equity mutual fund	120	33	—	153
Corporate bond mutual fund	172	5	—	177
Fair value	$ 300	$ 38	$ —	$ 338
As of September 30, 2019				
Demand deposit	$ 9	$ —	$ —	$ 9
Equity mutual fund	120	24	(2)	142
Corporate bond mutual fund	176	7	—	183
Fair value	$ 305	$ 31	$ (2)	$ 334

The following table presents the investment income, net unrealized gains and losses, realized gains and disbursements related to the investments within the portfolio for the three months ended December 31, 2019 and 2018.

	Three months ended December 31	
(In millions)	2019	2018
Investment income	$ 4	$ 3
Net gains (losses) realized (a)	9	(30)
Disbursements	(10)	(8)

(a) Ashland determined that all unrealized gains and losses were related to equity securities with readily determinable fair values. Due to the new accounting guidance adopted in the first quarter of fiscal 2019, the net unrealized gains (losses) during the three months ended December 31, 2018 and forward were recorded within the net interest and other expense caption in the Statements of Consolidated Comprehensive Income (Loss).

Foreign currency derivatives

Ashland conducts business in a variety of foreign currencies. Accordingly, Ashland regularly uses foreign currency derivative instruments to manage exposure on certain transactions denominated in foreign currencies to curtail potential earnings volatility effects on certain assets and liabilities, including short-term inter-company loans, denominated in currencies other than Ashland's functional currency of an entity. These derivative contracts generally require exchange of one foreign currency for another at a fixed rate at a future date and generally have maturities of less than twelve months. All contracts are valued at fair value with net changes in fair value recorded within the selling, general and administrative expense caption. The impacts of these contracts were largely offset by gains and losses resulting from the impact of changes in exchange rates on transactions denominated in non-functional currencies. The following table summarizes the net gains and losses recognized during the three months ended December 31, 2019 and 2018 within the Statements of Consolidated Comprehensive Income (Loss).

	Three months ended December 31	
(In millions)	2019	2018
Foreign currency derivative gains (losses)	$ 1	$ 1

The following table summarizes the fair values of the outstanding foreign currency derivatives as of December 31, 2019 and September 30, 2019 included in accounts receivable and accrued expenses and other liabilities of the Condensed Consolidated Balance Sheets.

(In millions)	December 31 2019	September 30 2019
Foreign currency derivative assets	$ 1	$ 2
Notional contract values	160	271
Foreign currency derivative liabilities	$ 2	$ 2
Notional contract values	330	168

Other financial instruments

At both December 31, 2019 and September 30, 2019, Ashland's long-term debt (including the current portion and excluding debt issuance cost discounts) had a carrying value of $1,513 million, compared to a fair value of $1,681 million and $1,680 million, respectively. The fair values of long-term debt are based on quoted market prices or, if market prices are not available, the present values of the underlying cash flows discounted at Ashland’s incremental borrowing rates.

NOTE F – INVENTORIES

Inventories are carried at the lower of cost or net realizable value. Inventories are primarily stated at cost using the weighted-average cost method. In addition, certain inventories are valued at cost using the last-in, first-out (LIFO) method.

The following table summarizes Ashland’s inventories as of the reported Condensed Consolidated Balance Sheet dates.

(In millions)	December 31, 2019	September 30, 2019
Finished products	$ 443	$ 400
Raw materials, supplies and work in process	190	197
	$ 633	$ 597

NOTE G – GOODWILL AND OTHER INTANGIBLES

Goodwill

Ashland reviews goodwill and indefinite-lived intangible assets for impairment annually or when events and circumstances indicate an impairment may have occurred. This annual assessment is performed as of July 1 and consists of Ashland determining each reporting unit’s current fair value compared to its current carrying value. For its July 1, 2019 assessment, Ashland determined that its reporting units for the allocation of goodwill were its two reportable segments: Specialty Ingredients and Intermediates and Solvents. At that time, Ashland determined no additional impairment existed.

The following is a progression of goodwill by reportable segment for the three months ended December 31, 2019.

(In millions)	Specialty Ingredients	Intermediates and Solvents (a)	Total
Balance at September 30, 2019	$ 2,253	$ —	$ 2,253
Currency translation	21	—	21
Balance at December 31, 2019	$ 2,274	$ —	$ 2,274

(a) As of December 31, 2019 and September 30, 2019, there was accumulated impairment of $90 million related to the Intermediates and Solvents reportable segment.

Other intangible assets

Intangible assets principally consist of trademarks and trade names, intellectual property and customer and supplier relationships. Intangible assets classified as finite are amortized on a straight-line basis over their estimated useful lives. The cost of trademarks and trade names is amortized principally over 3 to 25 years, intellectual property over 5 to 25 years, and customer and supplier relationships over 3 to 24 years.

Ashland annually reviews indefinite-lived intangible assets for possible impairment or whenever events or changes in circumstances indicate that carrying amounts may not be recoverable.

Intangible assets were comprised of the following as of December 31, 2019 and September 30, 2019.

	December 31, 2019		
(In millions)	Gross carrying amount	Accumulated amortization	Net carrying amount
Definite-lived intangibles			
Trademarks and trade names	$ 66	$ (30)	$ 36
Intellectual property	717	(405)	312
Customer and supplier relationships	750	(304)	446
Total definite-lived intangibles	1,533	(739)	794
Indefinite-lived intangibles			
Trademarks and trade names	278	—	278
Total intangible assets	$ 1,811	$ (739)	$ 1,072

	September 30, 2019		
(In millions)	Gross carrying amount	Accumulated amortization	Net carrying amount
Definite-lived intangibles			
Trademarks and trade names	$ 66	$ (29)	$ 37
Intellectual property	712	(391)	321
Customer and supplier relationships	744	(292)	452
Total definite-lived intangibles	1,522	(712)	810
Indefinite-lived intangibles			
Trademarks and trade names	278	—	278
Total intangible assets	$ 1,800	$ (712)	$ 1,088

Amortization expense recognized on intangible assets was $21 million and $22 million for the three months ended December 31, 2019 and 2018, respectively, and is included in the selling, general and administrative expense caption of the Statements of Consolidated Comprehensive Income (Loss). Estimated amortization expense for future periods is $85 million in 2020 (includes three months actual and nine months estimated), $85 million in 2021, $84 million in 2022, $84 million in 2023 and $70 million in 2024. The amortization expense for future periods is an estimate. Actual amounts may change from such estimated amounts due to fluctuations in foreign currency exchange rates, additional intangible asset acquisitions and divestitures, potential impairment, accelerated amortization, or other events.

NOTE H – DEBT

The following table summarizes Ashland's current and long-term debt as of the dates reported in the Condensed Consolidated Balance Sheets.

(In millions)	December 31, 2019	September 30, 2019
4.750% notes, due 2022	$ 1,081	$ 1,080
6.875% notes, due 2043	374	374
Accounts receivable securitizations	157	144
6.50% junior subordinated notes, due 2029	55	54
Other (a)	14	15
Total debt	1,681	1,667
Short-term debt (includes current portion of long-term debt)	(179)	(166)
Long-term debt (less current portion)	$ 1,502	$ 1,501

(a) Includes $11 million and $12 million of debt issuance cost discounts as of December 31, 2019 and September 30, 2019, respectively. Additionally, as December 31, 2019 and September 30, 2019, Other included a European short-term loan facility with an outstanding balance of $22 million for each period.

The scheduled aggregate maturities of long-term debt by year (including the current portion and excluding debt issuance costs) are as follows as of December 31, 2019: zero remaining in 2020, zero in 2021, $1,083 million in 2022, zero in 2023 and zero in 2024.

See Note R for subsequent events related to Ashland's debt.

Available borrowing capacity

The borrowing capacity remaining under the 2017 $800 million Revolving Credit Facility was $766 million due to a reduction of $34 million for letters of credit outstanding as of December 31, 2019. Ashland's total borrowing capacity at December 31, 2019 was $793 million, which included $27 million of available capacity from the two accounts receivable securitization facilities.

Covenants related to current Ashland debt agreements

Ashland's debt contains usual and customary representations, warranties and affirmative and negative covenants, including financial covenants for leverage and interest coverage ratios, limitations on liens, additional subsidiary indebtedness, restrictions on subsidiary distributions, investments, mergers, sale of assets and restricted payments and other customary limitations. As of December 31, 2019, Ashland is in compliance with all debt agreement covenant restrictions.

The maximum consolidated net leverage ratio permitted under Ashland's most recent credit agreement (the 2017 Credit Agreement) is 4.5. At December 31, 2019, Ashland's calculation of the consolidated net leverage ratio was 2.9.

The minimum required consolidated interest coverage ratio under the 2017 Credit Agreement during its entire duration is 3.0. At December 31, 2019, Ashland's calculation of the interest coverage ratio was 5.9.

NOTE I – LEASING ARRANGEMENTS

Ashland determines if an arrangement is or contains a lease at contract inception and determine its classification as an operating or finance lease at lease commencement. Ashland leases certain office buildings, transportation equipment, warehouses and storage facilities, and equipment. All of Ashland's leases are operating leases. Real estate leases represent approximately 87% of the total lease liability. Operating lease assets and obligations are reflected within operating lease assets, net, current operating lease obligations, and non-current operating lease obligations captions on the Condensed Consolidated Balance Sheets.

Lease expense for these leases is recognized on a straight-line basis over the lease term, with variable lease payments recognized in the period those payments are incurred. The components of lease cost recognized within our Statements of Consolidated Comprehensive Income (Loss) were as follows:

(In millions)	Location		Three months ended December 31, 2019
Lease cost:			
Operating lease cost	Selling, General & Administrative	$	5
Operating lease cost	Cost of Sales		4
Variable lease cost	Selling, General & Administrative		—
Variable lease cost	Cost of Sales		1
Short-term leases	Selling, General & Administrative		—
Total operating lease cost		$	10

The following table summarizes Ashland's lease assets and liabilities as presented in the December 31, 2019 Condensed Consolidated Balance Sheet:

(In millions)		December 31 2019
Assets		
Operating lease assets	$	157
Total lease assets		157
Liabilities		
Current operating lease obligations	$	24
Non-current operating lease obligations		143
Total lease liabilities	$	167

Ashland often has options to renew lease terms for buildings and other assets. The exercise of lease renewal options are generally at our sole discretion. In addition, certain lease arrangements may be terminated prior to their original expiration date at our discretion. Ashland evaluates renewal and termination options at the lease commencement date to determine if we are reasonably certain to exercise the option on the basis of economic factors. The weighted average remaining lease term for our operating leases as of December 31, 2019 was 16 years.

Residual value guarantees are not common within Ashland's lease agreements nor are restrictions or covenants imposed by leases. Ashland has elected the practical expedient to combine lease and non-lease components. The discount rate implicit within our leases is generally not determinable. Therefore, Ashland determines the discount rate based on its incremental borrowing rate. The incremental borrowing rate is determined using a buildup method resulting in an estimated range of secured borrowing rates matching the lease term and the currency of the jurisdiction in which lease payments are made, adjusted for impacts of collateral. Consideration was given to Ashland's own relevant debt issuances as well as debt instruments of comparable companies with similar credit characteristics. The weighted average discount rate used to measure our operating lease liabilities as of December 31, 2019 was 2.9%. There are no leases that have not yet commenced but that create significant rights and obligations for Ashland.

Right-of-use assets exchanged for new operating lease obligations was less than $1 million for the three months ended December 31, 2019.

Cash paid for amounts included in the measurement of operating lease liabilities:

(In millions)		As of December 31, 2019
Operating cash flows from operating leases	$	9

Maturity Analysis of Lease Liabilities

Maturities of lease liabilities are shown below as of December 31, 2019:

(In millions)	As of December 31, 2019	
Remainder of 2020	$	21
2021		27
2022		34
2023		15
2024		13
Thereafter	$	110
Total lease payments		220
Less amount of lease payment representing interest		(53)
Total present value of lease payments	$	167

As of September 30, 2019, under the previous guidance, the future minimum rental payments are as follows:

(In millions)	As of September 30, 2019	
2020	$	29
2021		27
2022		34
2023		15
2024		13
Thereafter		110
Total lease payments	$	228

NOTE J – INCOME TAXES

Current fiscal year

Ashland's effective tax rate in any interim period is subject to adjustments related to discrete items and the mix of domestic and foreign operating results. The overall effective tax rate was a benefit of 240% for the three months ended December 31, 2019. The current quarter tax rate was impacted by income mix, as well as $27 million from favorable tax discrete items primarily from the tax benefit related to the Swiss Tax Reform enacted in the current quarter.

Prior fiscal year

The overall effective tax rate was negative 51% for the three months ended December 31, 2018 and was primarily impacted by income mix, certain nondeductible restructuring costs, as well as, $30 million from unfavorable tax discrete items including the 2017 Tax Cuts and Jobs Act.

Unrecognized tax benefits

Changes in unrecognized tax benefits are summarized as follows for the three months ended December 31, 2019.

(In millions)		
Balance at October 1, 2019	$	165
Increases related to positions taken on items from prior years	$	2
Decreases related to positions taken on items from prior years		(1)
Increases related to positions taken in the current year		1
Lapse of statute of limitations		(1)
Balance at December 31, 2019	$	166

From a combination of statute expirations and audit settlements in the next twelve months, Ashland expects a decrease in the amount accrued for uncertain tax positions of between $1 million and $3 million for continuing operations. It is reasonably possible that there could be other material changes to the amount of uncertain tax positions due to activities of the taxing authorities, settlement of audit issues or the reassessment of existing uncertain tax positions; however, Ashland is not able to estimate the impact of these items at this time.

NOTE K - EMPLOYEE BENEFIT PLANS

Plan contributions

For the three months ended December 31, 2019, Ashland contributed $1 million to its non-U.S. pension plans and zero to its U.S. pension plans. Ashland expects to make additional contributions of approximately $4 million to its non-U.S. plans during the remainder of 2020.

Plan remeasurement

Ashland settled a non-U.S. pension plan during the three months ended December 31, 2018, which required the plan to be remeasured. This remeasurement resulted in a curtailment gain of $18 million.

Components of net periodic benefit costs (income)

The following table details the components of pension and other postretirement benefit costs for continuing operations.

	Pension benefits		Other postretirement benefits	
(In millions)	2019	2018	2019	2018
Three months ended December 31				
Service cost	$ 1	$ 2	$ —	$ —
Interest cost	2	3	1	—
Expected return on plan assets	(3)	(3)	—	—
Curtailment	—	(18)	—	—
Actuarial (gain) loss	—	—	—	—
Total net periodic benefit costs	$ —	$ (16)	$ 1	$ —

For segment reporting purposes, service cost is proportionately allocated to each segment, excluding the Unallocated and other segment, and is recorded within the selling, general and administrative expense and cost of sales captions on the Statements of Consolidated Comprehensive Loss (Income). All other components are recorded within the other net periodic benefit income caption on the Statements of Consolidated Comprehensive Loss (Income).

NOTE L – LITIGATION, CLAIMS AND CONTINGENCIES

Asbestos litigation

Ashland is subject to liabilities from claims alleging personal injury caused by exposure to asbestos. Such claims result from indemnification obligations undertaken in 1990 in connection with the sale of Riley Stoker Corporation (Riley) and the acquisition of Hercules in November 2008. Although Riley, a former subsidiary, was neither a producer nor a manufacturer of asbestos, its industrial boilers contained some asbestos-containing components provided by other companies. Hercules, an indirect wholly-owned subsidiary of Ashland, has liabilities from claims alleging personal injury caused by exposure to asbestos. Such claims typically arise from alleged exposure to asbestos fibers from resin encapsulated pipe and tank products sold by one of Hercules' former subsidiaries to a limited industrial market.

To assist in developing and annually updating independent reserve estimates for future asbestos claims and related costs given various assumptions for Ashland and Hercules asbestos claims, Ashland retained Nathan Associates Inc. (Nathan). The methodology used by Nathan to project future asbestos costs is based largely on recent experience, including claim-filing and settlement rates, disease mix, enacted legislation, open claims and litigation defense. The claim experience of Ashland and Hercules are separately compared to the results of previously conducted third party epidemiological studies estimating the number of people likely to develop asbestos-related diseases. Those studies were undertaken in connection with national analyses of the population expected to have been exposed to asbestos. Using that information, Nathan estimates a range of the number of future claims that may be filed, as well as the related costs that may be incurred in resolving those claims. Changes in asbestos-related liabilities and receivables are recorded on an after-tax basis within the discontinued operations caption in the Statements of Consolidated Comprehensive Income (Loss).

Ashland asbestos-related litigation

The claims alleging personal injury caused by exposure to asbestos asserted against Ashland result primarily from indemnification obligations undertaken in 1990 in connection with the sale of Riley. The amount and timing of settlements and number of open claims can fluctuate from period to period. A summary of Ashland asbestos claims activity, excluding Hercules claims, follows.

	Three months ended December 31		Years ended September 30		
(In thousands)	2019	2018	2019	2018	2017
Open claims - beginning of year	53	53	53	54	57
New claims filed	—	1	2	2	2
Claims settled	—	(1)	(1)	(1)	(1)
Claims dismissed	(2)	—	(1)	(2)	(4)
Open claims - end of period	51	53	53	53	54

Ashland asbestos-related liability

From the range of estimates, Ashland records the amount it believes to be the best estimate of future payments for litigation defense and claim settlement costs, which generally approximates the mid-point of the estimated range of exposure from model results. Ashland reviews this estimate and related assumptions quarterly and annually updates the results of a non-inflated, non-discounted approximate 50-year model developed with the assistance of Nathan.

During the most recent annual update of this estimate completed during the June 2019 quarter, it was determined that the liability for Ashland asbestos-related claims should be increased by $1 million. Total reserves for asbestos claims were $342 million at December 31, 2019 compared to $352 million at September 30, 2019.

A progression of activity in the asbestos reserve is presented in the following table.

	Three months ended December 31		Years ended September 30		
(In millions)	2019	2018	2019	2018	2017
Asbestos reserve - beginning of year	$ 352	$ 380	$ 380	$ 419	$ 415
Reserve adjustment	—	—	1	(8)	36
Amounts paid	(10)	(11)	(29)	(31)	(32)
Asbestos reserve - end of period (a)	$ 342	$ 369	$ 352	$ 380	$ 419

(a) Included $28 million classified in accrued expenses and other liabilities on the Condensed Consolidated Balance Sheets as of both December 31, 2019 and September 30, 2019.

Ashland asbestos-related receivables

Ashland has insurance coverage for certain litigation defense and claim settlement costs incurred in connection with its asbestos claims, and coverage-in-place agreements exist with the insurance companies that provide substantially all of the coverage that will be accessed.

For the Ashland asbestos-related obligations, Ashland has estimated the value of probable insurance recoveries associated with its asbestos reserve based on management's interpretations and estimates surrounding the available or applicable insurance coverage, including an assumption that all solvent insurance carriers remain solvent. A substantial portion of the estimated receivables from insurance companies are expected to be due from domestic insurers.

At December 31, 2019, Ashland's receivable for recoveries of litigation defense and claim settlement costs from insurers amounted to $122 million (excluding the Hercules receivable for asbestos claims) compared to $123 million at September 30, 2019. During the June 2019 quarter, the annual update of the model used for purposes of valuing the asbestos reserve and its impact on valuation of future recoveries from insurers was completed. This model update resulted in a $5 million decrease in the receivable for probable insurance recoveries.

A progression of activity in the Ashland insurance receivable is presented in the following table.

	Three months ended December 31		Years ended September 30		
(In millions)	2019	2018	2019	2018	2017
Insurance receivable - beginning of year	$ 123	$ 140	$ 140	$ 155	$ 151
Receivable adjustment	—	—	(5)	(5)	15
Insurance settlement	—	—	—	—	(5)
Amounts collected	(1)	(1)	(12)	(10)	(6)
Insurance receivable - end of period (a)	$ 122	$ 139	$ 123	$ 140	$ 155

(a) Included $15 million classified in accounts receivable on the Condensed Consolidated Balance Sheets as of both December 31, 2019 and September 30, 2019.

Hercules asbestos-related litigation

Hercules has liabilities from claims alleging personal injury caused by exposure to asbestos. Such claims typically arise from alleged exposure to asbestos fibers from resin encapsulated pipe and tank products which were sold by one of Hercules' former subsidiaries to a limited industrial market. The amount and timing of settlements and number of open claims can fluctuate from period to period. A summary of Hercules' asbestos claims activity follows.

	Three months ended December 31		Years ended September 30		
(In thousands)	2019	2018	2019	2018	2017
Open claims - beginning of year	13	13	13	12	15
New claims filed	—	—	1	2	1
Claims dismissed	—	(1)	(1)	(1)	(4)
Open claims - end of period	13	12	13	13	12

Hercules asbestos-related liability

From the range of estimates, Ashland records the amount it believes to be the best estimate of future payments for litigation defense and claim settlement costs, which generally approximates the mid-point of the estimated range of exposure from model results. Ashland reviews this estimate and related assumptions quarterly and annually updates the results of a non-inflated, non-discounted approximate 50-year model developed with the assistance of Nathan. As a result of the most recent annual update of this estimate, completed during the June 2019 quarter, it was determined that the liability for Hercules asbestos-related claims should be decreased by $10 million. Total reserves for asbestos claims were $247 million at December 31, 2019 compared to $252 million at September 30, 2019.

A progression of activity in the asbestos reserve is presented in the following table.

	Three months ended December 31		Years ended September 30		
(In millions)	2019	2018	2019	2018	2017
Asbestos reserve - beginning of year	$ 252	$ 282	$ 282	$ 323	$ 321
Reserve adjustments	—	—	(10)	(19)	16
Amounts paid	(5)	(6)	(20)	(22)	(14)
Asbestos reserve - end of period (a)	$ 247	$ 276	$ 252	$ 282	$ 323

(a) Included $21 million classified in accrued expenses and other liabilities on the Condensed Consolidated Balance Sheets as of both December 31, 2019 and September 30, 2019.

Hercules asbestos-related receivables

For the Hercules asbestos-related obligations, certain reimbursement obligations pursuant to coverage-in-place agreements with insurance carriers exist. As a result, any increases in the asbestos reserve have been partially offset by probable insurance recoveries. Ashland has estimated the value of probable insurance recoveries associated with its asbestos reserve based on management's interpretations and estimates surrounding the available or applicable insurance coverage, including an assumption that all solvent insurance carriers remain solvent. The estimated receivable consists exclusively of solvent domestic insurers.

As of December 31, 2019, Ashland's receivable for recoveries of litigation defense and claims costs from insurers with respect to Hercules amounted to $49 million. During the June 2019 quarter, the annual update of the model used for purposes of valuing the asbestos reserve and its impact on valuation of future recoveries from insurers was completed. This model update resulted in a decrease of $5 million in the receivable for probable insurance recoveries.

A progression of activity in the Hercules insurance receivable is presented in the following table.

	Three months ended December 31		Years ended September 30		
(In millions)	2019	2018	2019	2018	2017
Insurance receivable - beginning of year	$ 49	$ 54	$ 54	$ 68	$ 63
Receivable adjustment	—	—	(5)	(14)	5
Insurance receivable - end of period	$ 49	$ 54	$ 49	$ 54	$ 68

Asbestos litigation cost projection

Projecting future asbestos costs is subject to numerous variables that are extremely difficult to predict. In addition to the significant uncertainties surrounding the number of claims that might be received, other variables include the type and severity of the disease alleged by each claimant, the long latency period associated with asbestos exposure, mortality rates, dismissal rates, costs of medical treatment, the impact of bankruptcies of other companies that are co-defendants in claims, uncertainties surrounding the litigation process from jurisdiction to jurisdiction and from case to case, and the impact of potential changes in legislative or judicial standards. Furthermore, any predictions with respect to these variables are subject to even greater uncertainty as the projection period lengthens. Considering these inherent uncertainties, Ashland believes that the asbestos reserves for Ashland and Hercules represent the best estimate within a range of possible outcomes. As a part of the process to develop these estimates of future asbestos costs, a range of long-term cost models was developed. These models are based on national studies that predict the number of people likely to develop asbestos-related diseases and are heavily influenced by assumptions regarding long-term inflation rates for indemnity payments and legal defense costs, as well as other variables mentioned previously. Ashland has currently estimated in various models ranging from approximately 40 to 50 year periods that it is reasonably possible that total future litigation defense and claim settlement costs on an inflated and undiscounted basis could range as high as approximately $600 million for the Ashland asbestos-related litigation (current reserve of $342 million) and approximately $450 million for the Hercules asbestos-related litigation (current reserve of $247 million), depending on the combination of assumptions selected in the various models. If actual experience is worse than projected, relative to the number of claims filed, the severity of alleged disease associated with those claims or costs incurred to resolve those claims, or actuarial refinement or improvements to the assumptions used within these models are initiated, Ashland may need to further increase the estimates of the costs associated with asbestos claims and these increases could be material over time.

Environmental remediation and asset retirement obligations

Ashland is subject to various federal, state and local environmental laws and regulations that require environmental assessment or remediation efforts (collectively, environmental remediation) at multiple locations. At December 31, 2019, such locations included 80 waste treatment or disposal sites where Ashland has been identified as a potentially responsible party under Superfund or similar state laws, 113 current and former operating facilities (including certain operating facilities conveyed as part of the MAP Transaction) and about 1,225 service station properties, of which 29 are being actively remediated.

Ashland's reserves for environmental remediation and related environmental litigation amounted to $179 million at December 31, 2019 compared to $186 million at September 30, 2019, of which $137 million at December 31, 2019 and $143 million at September 30, 2019 were classified in other noncurrent liabilities on the Condensed Consolidated Balance Sheets. The remaining reserves were classified in accrued expenses and other liabilities on the Condensed Consolidated Balance Sheets.

The following table provides a reconciliation of the changes in the environmental remediation reserves during the three months ended December 31, 2019 and 2018.

	Three months ended December 31	
(In millions)	2019	2018
Reserve - beginning of period	$ 186	$ 187
Disbursements	(9)	(6)
Revised obligation estimates and accretion	2	3
Reserve - end of period	$ 179	$ 184

The total reserves for environmental remediation reflect Ashland's estimates of the most likely costs that will be incurred over an extended period to remediate identified conditions for which the costs are reasonably estimable, without regard to any third-party recoveries. Engineering studies, probability techniques, historical experience and other factors are used to identify and evaluate remediation alternatives and their related costs in determining the estimated reserves for environmental remediation. Ashland continues to discount certain environmental sites and regularly adjusts its reserves as environmental remediation continues. Ashland has estimated the value of its probable insurance recoveries associated with its environmental reserve based on management's interpretations and estimates surrounding the available or applicable insurance coverage. At December 31, 2019 and September 30, 2019, Ashland's recorded receivable for these probable insurance recoveries was $12 million and $13 million, of which $11 million and $12 million at December 31, 2019 and September 30, 2019 were classified in other noncurrent assets on the Condensed Consolidated Balance Sheets.

Components of environmental remediation expense included within the selling, general and administrative expense caption of the Statements of Consolidated Comprehensive Income (Loss) are presented in the following table for the three months ended December 31, 2019 and 2018.

	Three months ended December 31	
(In millions)	2019	2018
Environmental expense	$ 2	$ 3
Accretion	—	—
Legal expense	2	1
Total expense	4	4
Insurance receivable (a)	—	(1)
Total expense, net of receivable activity	$ 4	$ 3

(a) Activity of $0 denotes value less than $1 million.

Environmental remediation reserves are subject to numerous inherent uncertainties that affect Ashland's ability to estimate its share of the costs. Such uncertainties involve the nature and extent of contamination at each site, the extent of required cleanup efforts under existing environmental regulations, widely varying costs of alternate cleanup methods, changes in environmental regulations, the potential effect of continuing improvements in remediation technology, and the number and financial strength of other potentially responsible parties at multiparty sites. Although it is not possible to predict with certainty the ultimate costs of environmental remediation, Ashland currently estimates that the upper end of the reasonably possible range of future costs for identified sites could be as high as approximately $430 million. The largest reserve for any site is 15% of the remediation reserve.

Other legal proceedings and claims

In addition to the matters described above, there are other various claims, lawsuits and administrative proceedings pending or threatened against Ashland and its current and former subsidiaries. Such actions are with respect to commercial matters, product liability, toxic tort liability, and other environmental matters, which seek remedies or damages, some of which are for substantial amounts. While Ashland cannot predict with certainty the outcome of such actions, it believes that adequate reserves have been recorded and losses already recognized with respect to such actions were immaterial as of December 31, 2019 and September 30, 2019. There is a reasonable possibility that a loss exceeding amounts already recognized may be incurred related to these actions; however, Ashland believes that such potential losses were immaterial as of December 31, 2019.

NOTE M – EARNINGS PER SHARE

The following is the computation of basic and diluted earnings per share (EPS) from continuing operations attributable to Ashland. Stock appreciation rights (SARs), stock options and warrants available to purchase shares outstanding for each reporting period whose grant price was greater than the average market price of Ashland Common Stock for each applicable period were not included in the computation of income from continuing operations per diluted share because the effect of these instruments would be antidilutive. The total number of these shares outstanding was approximately 2 million and 1 million at December 31, 2019 and 2018, respectively. Earnings per share is reported under the treasury stock method.

	Three months ended December 31	
(In millions, except per share data)	2019	2018
Numerator		
Numerator for basic and diluted EPS -		
Income (loss) from continuing operations	$ 34	$ (71)
Denominator		
Denominator for basic EPS - Weighted-average common shares outstanding	60	63
Share based awards convertible to common shares (a)	1	—
Denominator for diluted EPS - Adjusted weighted-average shares and assumed conversions	61	63
EPS from continuing operations		
Basic	$ 0.57	$ (1.14)
Diluted	0.56	(1.14)

(a) As a result of the loss from continuing operations attributable to Ashland during the three months ended December 31, 2018, the effect of the share-based awards convertible to common shares would be antidilutive. In accordance with U.S. GAAP, they have been excluded from the diluted EPS calculation.

NOTE N – EQUITY ITEMS

Stockholder dividends

In May 2019, the Board of Directors of Ashland announced a quarterly cash dividend of 27.5 cents per share to eligible stockholders at record, which represented an increase from previous quarterly cash dividend of 25.0 cents per share. This dividend was paid in the third and fourth quarter of fiscal 2019 and the first quarter of fiscal 2020.

Accumulated other comprehensive income (loss)

Components of other comprehensive income (loss) recorded in the Statements of Consolidated Comprehensive Income (Loss) are presented below, before tax and net of tax effects.

	2019			2018		
(In millions)	Before tax	Tax (expense) benefit	Net of tax	Before tax	Tax (expense) benefit	Net of tax
Three months ended December 31						
Other comprehensive income (loss)						
Unrealized translation gain (loss)	$ 38	$ —	$ 38	$ (31)	$ —	$ (31)
Pension and postretirement obligation adjustment:						
Adjustment of unrecognized prior service costs	—	—	—	(7)	1	(6)
Total other comprehensive income (loss)	$ 38	$ —	$ 38	$ (38)	$ 1	$ (37)

Summary of stockholders' equity

A reconciliation of changes in stockholders' equity are as follows:

	Three months ended December 31	
(In millions)	2019	2018
Common stock and paid in capital		
Balance, beginning of period	$ 757	$ 947
Common shares issued under stock incentive and other plans (a)	1	1
Balance, end of period	758	948
Retained earnings		
Balance, beginning of period	3,224	2,750
Adoption of new accounting pronouncements (b)	—	33
Net income (loss)	32	(48)
Regular dividends	(17)	(16)
Balance, end of period	3,239	2,719
Accumulated other comprehensive income (loss)		
Balance, beginning of period	(410)	(291)
Adoption of new accounting pronouncements (b)	—	(34)
Unrealized translation gain (loss)	38	(31)
Pension and postretirement obligation adjustment	—	(6)
Net change in investment securities	—	—
Balance, end of period	(372)	(362)
Total stockholders' equity	$ 3,625	$ 3,305
Cash dividends declared per common share	0.275	0.250

(a) Common shares issued were 70,461 shares and 140,614 shares for the three months ended December 31, 2019 and 2018, respectively.
(b) Represents the cumulative-effect adjustment related to the adoption of the new guidance related to the accounting for equity securities and tax effects of intercompany transfers during fiscal 2019.

NOTE O – STOCK INCENTIVE PLANS

Ashland has stock incentive plans under which key employees or directors are granted stock appreciation rights (SARs), performance awards or nonvested stock awards. Each program is typically a long-term incentive plan designed to link employee compensation with increased shareholder value or reward superior performance and encourage continued employment with Ashland. Ashland recognizes compensation expense for the grant date fair value of stock-based awards over the applicable vesting period.

The components of Ashland's pre-tax stock-based compensation expense included in continuing operations are as follows:

	Three months ended December 31	
(In millions)	2019 (a)	2018 (b)
SARs	$ 2	$ 2
Nonvested stock awards	2	4
Performance share awards	1	—
	$ 5	$ 6

(a) Included $1 million of expense related to cash-settled nonvested restricted stock awards and zero related to cash-settled performance units during the three months ended December 31, 2019.
(b) Included $1 million of expense related to cash-settled nonvested restricted stock awards and $2 million of income related to cash-settled performance units during the three months ended December 31, 2018.

SARs

SARs are granted to employees or directors at a price equal to the fair market value of the stock on the date of grant and typically become exercisable over periods of one to three years. Unexercised SARs generally lapse ten years after the date of grant. SARs granted for the three months ended December 31, 2019 and 2018 were 231 thousand and 300 thousand, respectively. As of December 31, 2019, there was $7 million of total unrecognized compensation costs related to SARs. That cost is expected to be recognized over a weighted-average period of 2.2 years. Ashland estimates the fair value of SARs granted using the Black-Scholes option-pricing model. This model requires several assumptions, which Ashland has developed and updates based on historical trends and current market observations. The accuracy of these assumptions is critical to the estimate of fair value for these equity instruments.

Nonvested stock awards

Nonvested stock awards are granted to employees or directors at a price equal to the fair market value of the stock on the date of grant and generally vest over a one-to-three-year period. However, such shares or units are subject to forfeiture upon termination of service before the vesting period ends. Only nonvested stock awards granted in the form of shares entitle employees or directors to vote the shares. Dividends on nonvested stock awards granted are in the form of additional units or shares of nonvested stock awards, which are subject to vesting and forfeiture provisions.

Stock-settled nonvested stock awards

Nonvested stock awards granted in the form of shares were 86 thousand and 81 thousand for the three months ended December 31, 2019 and 2018, respectively. As of December 31, 2019, there was $10 million of total unrecognized compensation costs related to these nonvested stock awards. That cost is expected to be recognized over a weighted-average period of 2.1 years.

Cash-settled nonvested stock awards

Certain nonvested stock awards are granted to employees and are settled in cash upon vesting. As of December 31, 2019, 92 thousand cash-settled nonvested stock awards were outstanding. The value of these cash-settled nonvested stock awards changes in connection with changes in the fair market value of the Ashland Common Stock. These awards generally vest over a period of three years. The expense recognized related to cash-settled nonvested stock awards was $1 million and $1 million during the three months ended December 31, 2019 and 2018, respectively.

Executive performance incentive and retention program

During 2016, certain executives were granted performance-based restricted shares of Ashland in order to provide an incentive to remain employed in the period after the full separation of Ashland and Valvoline. At December 31, 2019, all shares outstanding in connection with these awards were paid. The expense recognition for these awards commenced upon completing the full separation of Valvoline which occurred on May 12, 2017 and resulted in zero and $1 million of expense for the three months ended December 31, 2019 and 2018, respectively.

Performance awards

Ashland sponsors a long-term incentive plan that awards performance shares/units to certain key employees that are partially tied to Ashland's overall financial performance relative to internal targets. Additionally, certain outstanding performance awards are tied to Ashland's overall financial performance relative to the financial performance of selected industry peer groups. Awards are granted annually, with each award covering a three-year vesting period. Awards settled in shares are recorded as a component of stockholders' equity while awards settled in cash are recorded as a liability within the Condensed Consolidated Balance Sheets.

The performance measure used to determine the actual number of performance shares/units issuable upon vesting is the financial performance of Ashland compared to award targets. The financial performance award metric is considered a performance condition under applicable U.S. GAAP. Additionally, the actual number of performance shares/units issuable upon vesting for some grants can be potentially increased or decreased based on a TSR performance modifier relative to peers of Ashland. For awards granted in fiscal 2018, 2019 and 2020, each performance share/unit is convertible to one share of Ashland Common Stock.

Nonvested performance shares/units do not entitle employees to vote the shares or to receive any dividends thereon. Performance shares/units granted for the three months ended December 31, 2019 and 2018 were 51 thousand and 78 thousand, respectively. As of December 31, 2019, there was $8 million of total unrecognized compensation costs related to performance shares/units. That cost is expected to be recognized over a weighted-average period of 2.5 years.

NOTE P – REVENUE

Revenue recognition

Ashland's revenue is measured as the amount of consideration it expects to receive in exchange for transferring goods or providing services and is recognized when performance obligations are satisfied under the terms of contracts with customers. Ashland generally utilizes standardized language for the terms of contracts, unless a separate agreement has been entered into with a customer that supersedes the standard language.

A performance obligation is deemed to be satisfied by Ashland when control of the product or service is transferred to the customer. The transaction price of a contract, or the amount Ashland expects to receive upon satisfaction of all performance obligations, is determined by reference to the contract's terms and includes adjustments, if applicable, for any variable consideration, such as volume discounts, rebates, refunds and right to return. Where a contract contains more than one distinct performance obligation, the transaction price is allocated to each performance obligation based on the standalone selling price of each performance obligation, although these situations do not occur frequently and are generally not included within Ashland's contracts. Any unsatisfied performance obligations are not material. Standalone selling prices are based on prices Ashland charges to customers, which in some cases is based on established market prices. Ashland generally collects the cash from its customers within 60 days of the product delivery date. Sales and other similar taxes collected from customers on behalf of third parties are excluded from the contract price.

All of Ashland's revenue is derived from contracts with customers, and nearly all contracts with customers contain one performance obligation for the transfer of goods where such performance obligation is satisfied at a point in time. Control of a product is deemed to be transferred to the customer generally upon shipment or delivery. Costs for shipping and handling activities, whether performed before or after the customer obtains control of the goods, are accounted for as fulfillment costs when not reimbursed.

Costs incurred to obtain contracts with customers have historically not been significant and are expensed immediately as the amortization period is generally one year or less. Ashland records bad debt expense in specific situations when it is determined that the customer is unable to meet its financial obligation.

Trade receivables

Trade receivables are defined as receivables arising from contracts with customers and are recorded within the accounts receivable caption within the Condensed Consolidated Balance Sheets. Ashland's trade receivables were $409 million and $435 million as of December 31, 2019 and September 30, 2019, respectively.

Disaggregation of revenue

Ashland disaggregates its revenue from contracts with customers by segment, geographical region and product category, as Ashland believes these categories best depict how management reviews the financial performance of its operations. See the following tables for details:

Sales by geography for the three months ended December 31

(In millions)	Specialty Ingredients		Intermediates and Solvents	
Geography	2019	2018	2019	2018
North America	$ 198	$ 219	$ 15	$ 11
Europe	161	170	5	5
Asia Pacific	103	116	7	6
Latin America & other	43	48	1	1
	$ 505	$ 553	$ 28	$ 23

Sales by product category for the three months ended December 31

(In millions)	2019	2018
Specialty Ingredients		
Cellulosics	$ 178	$ 189
Poly-vinyl pyrrolidones	93	95
Adhesives	74	82
Actives	37	37
Vinyl ethers	20	24
Pharmachem	40	59
Other (a)	63	67
	$ 505	$ 553
Intermediates and Solvents		
Derivatives	$ 23	$ 20
Butanediol	5	3
	$ 28	$ 23

(a) Other includes no product category in excess of 10% of sales.

NOTE Q – REPORTABLE SEGMENT INFORMATION

Ashland determines its reportable segments based on how operations are managed internally for the products and services sold to customers, including how the results are reviewed by the chief operating decision maker, which includes determining resource allocation methodologies used for reportable segments. Operating income is the primary measure on the Statements of Consolidated Comprehensive Income (Loss) that is reviewed by the chief operating decision maker in assessing each reportable segment's financial performance. Ashland does not aggregate operating segments to arrive at these reportable segments.

Change in Reportable Segments

Ashland's reportable segments were impacted during fiscal year 2019 due to the disposal of the Composites reportable segment and Intermediates and Solvents Marl facility and reclassification to discontinued operations. As a result, Ashland's operations are managed by the chief operating decision maker within the following two reportable segments: Specialty Ingredients and Intermediates and Solvents.

Reportable segment business descriptions

Specialty Ingredients offers industry-leading products, technologies and resources for solving formulation and product-performance challenges. Using natural, synthetic and semisynthetic polymers derived from cellulose ethers, vinyl pyrrolidones, acrylic polymers, polyester and polyurethane-based adhesives, and plant and seed extract, Specialty Ingredients offers comprehensive and innovative solutions for consumer and industrial applications. Key customers include pharmaceutical companies; makers of personal care products, food and beverages; makers of nutraceuticals and supplements; manufacturers of paint, coatings and construction materials; packaging and converting; and oilfield service companies.

Intermediates and Solvents is a leading producer of 1,4 butanediol and related derivatives, including tetrahydrofuran and n-methylpyrrolidone. These products are used as chemical intermediates in the production of engineering polymers and polyurethanes, and as specialty process solvents in a wide array of applications including electronics, pharmaceuticals, water filtration membranes and more. Butanediol is also supplied to Ashland's Specialty Ingredients business for use as a raw material.

On August 30, 2019, Ashland completed the sale if its Composites segment (excluding the Maleic business) and Intermediates and Solvents Marl facility. As a result, the financial information for Intermediates and Solvents excludes the activity from the Marl facility due to the divestiture and have been restated in prior periods

Unallocated and Other generally includes items such as certain significant company-wide restructuring activities, including internal separation costs, and legacy costs or adjustments that relate to divested businesses that are no longer operated by Ashland.

Reportable segment results

Results of Ashland's reportable segments are presented based on its management and internal accounting structure. The structure is specific to Ashland; therefore, the financial results of Ashland's reportable segments are not necessarily comparable with similar information for other comparable companies. Ashland allocates all significant costs to its reportable segments except for certain significant company-wide restructuring activities and other costs or adjustments that relate to former businesses that Ashland no longer operates. The service cost component of pension and other postretirement benefits costs is allocated to each reportable segment on a ratable basis; while the remaining components of pension and other postretirement benefits costs are recorded within the other net periodic benefit income caption on the Statements of Consolidated Comprehensive Income (Loss). Ashland refines its expense allocation methodologies to the reportable segments from time to time as internal accounting practices are improved, more refined information becomes available and the industry or market changes. Significant revisions to Ashland's methodologies are adjusted for all segments on a retrospective basis.

The following table presents various financial information for each reportable segment for the three months ended December 31, 2019 and 2018.

	Three months ended December 31	
(In millions - unaudited)	2019	2018
SALES		
Specialty Ingredients	$ 505	$ 553
Intermediates and Solvents	28	23
	$ 533	$ 576
OPERATING INCOME (LOSS)		
Specialty Ingredients	$ 44	$ 26
Intermediates and Solvents	(12)	—
Unallocated and other	(15)	(33)
	$ 17	$ (7)

NOTE R – SUBSEQUENT EVENTS

Credit Agreements and Refinancing

During January 2020, Ashland LLC and Ashland Services B.V., indirect wholly owned subsidiaries of Ashland, entered into a new senior unsecured credit agreement (the 2020 Credit Agreement) with a group of lenders, replacing the 2017 Credit Agreement. The 2020 Credit Agreement provides for (i) a $600 million unsecured five-year revolving credit facility (the revolving credit facility) and (ii) a $250 million unsecured five-year delayed draw term loan facility (the term loan facility). The Credit Agreement is guaranteed by Ashland Global Holdings Inc. and Ashland Chemco Inc., and the obligations of Ashland Services B.V. under the revolving credit facility are guaranteed by Ashland LLC.

The agreement contains financial covenants for leverage and interest coverage ratios akin to those in effect under the 2017 Credit Agreement. The maximum net leverage ratio permitted under the 2020 Credit Agreement is 4.0. The minimum required consolidated interest coverage ratio under the 2020 Credit Agreement is 3.0. The Credit Agreement contains usual and customary representations, warranties and affirmative and negative covenants, including financial covenants for leverage and interest coverage ratios, limitations on liens, additional indebtedness, further negative pledges, investments, mergers, sale of assets and restricted payments, and other customary limitations.

Note Issuance

During January 2020, Ashland Services B.V. completed the issuance of 2.00% senior unsecured notes due 2028 with an aggregate principal amount of €500 million (the 2028 Notes). The notes are senior unsecured obligations of Ashland Services B.V and initially guaranteed on an unsecured basis by each of Ashland Global Holdings Inc. and Ashland LLC. Ashland used the net proceeds of the offering (after deducting initial purchasers' discounts and other fees and expenses), together with the proceeds of the new term loan facility and other funds of Ashland LLC or its subsidiaries, to purchase the existing notes described below in cash tender offers, and to pay fees and expenses associated therewith.

Existing Notes Tender

Proceeds from the new senior unsecured notes, together with the proceeds of the unsecured delayed draw term loan facility and other funds, were used to fund a cash tender offers for Ashland LLC's 4.750% Senior Notes due 2022 (the 2022 Notes), Ashland LLC's 6.875% Senior Notes due 2043 (the 2043 Notes), Hercules LLC's 6.600% Debentures due 2027 (the 2027 Debentures), and Hercules LLC's 6.500% Junior Subordinated Debentures due 2029 (the 2029 Junior Debentures), and to pay associated fees and expenses. In January, Ashland exercised its early settlement of the tender offers resulting in $671 million principal amount of 2022 Notes being tendered for an aggregate purchase price of up to $712 million, $92 million principal amount of 2043 Notes being tendered, less than $1 million principal amount of 2027 Debentures being tendered and $3 million principal amount of 2029 Junior Debentures being tendered. The aggregate purchase price for the 2043 Notes, 2027 Debentures and 2029 Junior Debentures was up to $113 million.

In connection with the tender, Ashland expects to recognize greater than $60 million in expense related to accelerated amortization of debt issuance costs, accelerated accretion on debt discounts and premiums, and bond tender premiums.

FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements including, without limitation, statements made under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operation" (MD&A), within the meaning of Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended. Ashland has identified some of these forward-looking statements with words such as "anticipates," "believes," "expects," "estimates," "is likely," "predicts," "projects," "forecasts," "objectives," "may," "will," "should," "plans" and "intends" and the negative of these words or other comparable terminology. Ashland may from time to time make forward-looking statements in its Annual Report to Shareholders, quarterly reports and other filings with the Securities and Exchange Commission (SEC), news releases and other written and oral communications. These forward-looking statements are based on Ashland's expectations and assumptions, as of the date such statements are made, regarding Ashland's future operating performance and financial condition, as well as the economy and other future events or circumstances. Ashland's expectations and assumptions include, without limitation, those mentioned within the MD&A, internal forecasts and analyses of current and future market conditions and trends, management plans and strategies, operating efficiencies and economic conditions (such as prices, supply and demand, cost of raw materials, and the ability to recover raw-material cost increases through price increases), and risks and uncertainties associated with the following: the impact of acquisitions and/or divestitures Ashland has made or may make (including the possibility that Ashland may not realize the anticipated benefits from such transactions); Ashland's substantial indebtedness (including the possibility that such indebtedness and related restrictive covenants may adversely affect Ashland's future cash flows, results of operations, financial condition and its ability to repay debt); severe weather, natural disasters, cyber events and legal proceedings and claims (including product recalls, environmental and asbestos matters); and without limitation, risks and uncertainties affecting Ashland that are contained in "Use of estimates, risks and uncertainties" in Note A of Notes to Consolidated Financial Statements and in Item 1A in its most recent Form 10-K filed with the SEC, which is available on Ashland's website at http://investor.ashland.com or on the SEC's website at http://www.sec.gov. Various risks and uncertainties may cause actual results to differ materially from those stated, projected or implied by any forward-looking statements. Ashland believes its expectations and assumptions are reasonable, but there can be no assurance that the expectations reflected herein will be achieved. Unless legally required, Ashland undertakes no obligation to update any forward-looking statements made in this Form 10-Q whether as a result of new information, future events or otherwise. Information on Ashland's website is not incorporated into or a part of this Form 10-Q.

ASHLAND GLOBAL HOLDINGS INC. AND CONSOLIDATED SUBSIDIARIES
MANAGEMENT'S DISCUSSION AND ANALYSIS

The following discussion should be read in conjunction with the Condensed Consolidated Financial Statements and the accompanying Notes to Condensed Consolidated Financial Statements herein.

BUSINESS OVERVIEW

Ashland profile

Ashland is a premier global leader in providing specialty materials to customers in a wide range of consumer and industrial markets, including adhesives, architectural coatings, construction, energy, food and beverage, personal care and pharmaceutical. With approximately 4,700 employees worldwide, Ashland serves customers in more than 100 countries.

Ashland's sales generated outside of North America were 60% each for the three months ended December 31, 2019 and 2018. Sales by region expressed as a percentage of total consolidated sales for the three months ended December 31 were as follows:

	Three months ended December 31	
Sales by Geography	2019	2018
North America (a)	40%	40%
Europe	31%	31%
Asia Pacific	21%	21%
Latin America & other	8%	8%
	100%	100%

(a) Ashland includes only U.S. and Canada in its North America designation.

Reportable segments

Ashland's businesses are managed within the following two reportable segments: Specialty Ingredients and Intermediates and Solvents. For further descriptions of each reportable segment, see "Results of Operations – Reportable Segment Review" beginning on page 43.

The contribution to sales by each reportable segment expressed as a percentage of total consolidated sales for the three months ended December 31 were as follows:

	Three months ended December 31	
Sales by Reportable Segment	2019	2018
Specialty Ingredients	95%	96%
Intermediates and Solvents	5%	4%
	100%	100%

KEY DEVELOPMENTS

Business results

Ashland recorded net income of $32 million in the current quarter compared to a net loss of $48 million in the prior year quarter. Ashland's Adjusted EBITDA decreased by 12% to $88 million (see U.S. GAAP reconciliation below under consolidated review). The decrease in Adjusted EBITDA was primarily due to lower sales volumes within the Specialty Ingredients reportable segment and a catalyst changeover at the Intermediates and Solvents Lima facility resulting in additional turnaround spend and lost absorption during the current quarter. These items were partially offset by lower selling, general and administrative expenses as a result of the current company-wide cost reduction program and improved pricing versus changes in raw material costs.

Composites segment and Marl facility

On November 15, 2018, Ashland announced that it had signed a definitive agreement to sell its Composites segment and Intermediates and Solvents Marl facility to INEOS Enterprises in a transaction valued at $1.1 billion. Ashland retained the remaining Intermediates and Solvents facility in Lima, Ohio primarily for its own internal business use.

In late July of 2019, Ashland and INEOS agreed to certain additional changes to the sale agreement. As part of the proposed changes, the purchase price was adjusted to $1.015 billion while Ashland retained the right to the Maleic business, including the retention of any subsequent sale proceeds.

On August 30, 2019 Ashland completed the previously announced sale of its Composites business (excluding the Maleic business) and butanediol manufacturing facility in Marl, Germany to INEOS.

Since this disposal group signifies a strategic shift in Ashland's business and had a major effect on Ashland's operations and financial results, the operating results and cash flows related to Composites and the Marl facility, including the Maleic business, have been reflected as discontinued operations in the Statements of Consolidated Comprehensive Income (Loss) and Statements of Consolidated Cash Flows. See Note C of the Notes to Condensed Consolidated Financial Statements for the results of operations for Composites and the Marl facility, including the Maleic business, for all periods presented.

Certain indirect corporate costs included within the selling, general and administrative expense caption of the Statements of Consolidated Comprehensive Income (Loss) that were previously allocated to the Composites segment and Marl facility do not qualify for classification within discontinued operations and are now reported as selling, general and administrative expense within continuing operations on a consolidated basis and within the Unallocated and other segment. These costs were zero and $12 million during the three months ended December 31, 2019 and 2018, respectively.

Subsequent to the completion of the sale, Ashland is providing certain transition services to INEOS for a fee. While the transition services are expected to vary in duration depending upon the type of service provided, Ashland expects to reduce costs as the transition services are completed. Ashland recognized transition service fee income of $3 million during the three month period ending December 31, 2019.

Restructuring Plans

In early May 2018, Ashland announced a company-wide restructuring program to accelerate EBITDA margin growth by creating a leaner, more cost competitive company with improved operating efficiency, faster decision making and a stronger customer focus. Under this program, Ashland intended to eliminate a total of $120 million of existing allocated costs, direct expenses within Specialty Ingredients SG&A, and facility-related costs as follows:

- Approximately $70 million of costs allocated to the Composites business and to the butanediol manufacturing facility in Marl, Germany, are expected to be offset or eliminated through transfers and reductions. This reduction is intended to eliminate stranded costs.
- Approximately $50 million of additional costs to be eliminated to drive improved profitability in Specialty Ingredients and adjusted EBITDA margin.

Ashland achieved the full $120 million in run-rate savings by December 31, 2019 meeting this programs objectives.

RESULTS OF OPERATIONS – CONSOLIDATED REVIEW

Use of non-GAAP measures

Ashland has included within this document the following non-GAAP measures, on both a consolidated and reportable segment basis, which are not defined within U.S. GAAP and do not purport to be alternatives to net income or cash flows from operating activities as a measure of operating performance or cash flows:

- EBITDA – net income (loss), plus income tax expense (benefit), net interest and other expenses, and depreciation and amortization.
- Adjusted EBITDA – EBITDA adjusted for noncontrolling interests, discontinued operations, net income (loss) on acquisitions and divestitures, other income and (expense) and key items (including the remeasurement gains and losses related to pension and other postretirement plans).
- Adjusted EBITDA margin – Adjusted EBITDA divided by sales.
- Adjusted diluted earnings per share (EPS) – income (loss) from continuing operations, adjusted for key items, net of tax, divided by the average outstanding diluted shares for the applicable period.
- Free cash flow – operating cash flows less capital expenditures and certain other adjustments as applicable.

Management believes the use of EBITDA and Adjusted EBITDA measures on a consolidated and reportable segment basis assists investors in understanding the ongoing operating performance by presenting comparable financial results between periods. Ashland believes that by removing the impact of depreciation and amortization and excluding certain non-cash charges, amounts spent on interest and taxes and certain other charges that are highly variable from year to year, EBITDA and Adjusted EBITDA provide Ashland's investors with performance measures that reflect the impact to operations from trends in changes in sales, margin and operating expenses, providing a perspective not immediately apparent from net income and operating income. The adjustments Ashland makes to derive the non-GAAP measures of EBITDA and Adjusted EBITDA exclude items which may cause short-term fluctuations in net income and operating income and which Ashland does not consider to be the fundamental attributes or primary drivers of its business. EBITDA and Adjusted EBITDA provide disclosure on the same basis as that used by Ashland's management to evaluate financial performance on a consolidated and reportable segment basis and provide consistency in our financial reporting, facilitate internal and external comparisons of Ashland's historical operating performance and its business units and provide continuity to investors for comparability purposes.

The Adjusted diluted EPS metric enables Ashland to demonstrate what effect key items have on an earnings per diluted share basis by taking income (loss) from continuing operations, adjusted for key items after tax that have been identified in the Adjusted EBITDA table, and dividing by the average outstanding diluted shares for the applicable period. Ashland's management believes this presentation is helpful to illustrate how the key items have impacted this metric during the applicable period.

The free cash flow metric enables Ashland to provide a better indication of the ongoing cash being generated that is ultimately available for both debt and equity holders as well as other investment opportunities. Unlike cash flow provided by operating activities, free cash flow includes the impact of capital expenditures from continuing operations, providing a more complete picture of cash generation. Free cash flow has certain limitations, including that it does not reflect adjustment for certain non-discretionary cash flows such as mandatory debt repayments. The amount of mandatory versus discretionary expenditures can vary significantly between periods.

Although Ashland may provide forward-looking guidance for Adjusted EBITDA, Adjusted diluted EPS and free cash flow, Ashland is not reaffirming or providing forward-looking guidance for U.S. GAAP-reported financial measures or a reconciliation of forward-looking non-GAAP financial measures to the most directly comparable U.S. GAAP measure because it is unable to predict with reasonable certainty the ultimate outcome of certain significant items that affect these metrics such as domestic and international economic, political, legislative, regulatory and legal actions. In addition, certain economic conditions, such as recessionary trends, inflation, interest and monetary exchange rates, government fiscal policies and changes in the prices of certain key raw materials, can have a significant effect on operations and are difficult to predict with certainty.

These non-GAAP measures should be considered supplemental in nature and should not be construed as more significant than comparable measures defined by U.S. GAAP. Limitations associated with the use of these non-GAAP measures include that these measures do not present all of the amounts associated with our results as determined in accordance with U.S. GAAP. The non-GAAP measures provided are used by Ashland management and may not be determined in a manner consistent with the methodologies used by other companies. EBITDA and Adjusted EBITDA provide a supplemental presentation of Ashland's operating performance on a consolidated and reportable segment basis. Adjusted EBITDA generally includes adjustments for items that impact comparability between periods. In addition, certain financial covenants related to Ashland's 2017 Credit Agreement are based on similar non-GAAP measures and are defined further in the sections that refer to this metric.

Consolidated review

Net income

Ashland's net income is primarily affected by results within operating income, net interest and other expense, income taxes, discontinued operations and other significant events or transactions that are unusual or nonrecurring.

Key financial results for the three months ended December 31, 2019 and 2018 included the following:

- Ashland's net income amounted to $32 million compared to a loss of $48 million for the three months ended December 31, 2019 and 2018, respectively, or income of $0.53 and a loss of $0.76 diluted earnings per share, respectively.
- Discontinued operations, which are reported net of taxes, resulted in a loss of $2 million and income of $23 million during the three months ended December 31, 2019 and 2018, respectively.
- Results from continuing operations, which excludes results from discontinued operations, amounted to income of $34 million and a loss of $71 million for the three months ended December 31, 2019 and 2018, respectively.
- The effective income tax rates were a benefit of 240% and expense of 51% for the three months ended December 31, 2019 and 2018, respectively, and were significantly impacted by certain tax discrete items in both the current and prior year quarters.
- Ashland incurred pretax net interest and other expense of $10 million and $55 million for the three months ended December 31, 2019 and 2018, respectively. This includes gains of $9 million and losses of $30 million for gains/losses on restricted investments.
- Other net periodic benefit income of $18 million for the three months ended December 31, 2018.
- Net income/loss on divestitures totaled income of $3 million and a loss of $3 million for the three months ended December 31, 2019 and 2018, respectively.
- Operating (loss) income amounted to an income of $17 million and a loss of $7 million for the three months ended December 31, 2019 and 2018, respectively.

For further information on the items reported above, see the discussion in the comparative Statements of Consolidated Comprehensive Income (Loss) caption review analysis.

Operating income

Operating income (loss) amounted to an income of $17 million and a loss of $7 million for the three months ended December 31, 2019 and 2018, respectively. The current and prior year quarters' operating income included certain key items that were excluded to arrive at Adjusted EBITDA and are quantified in the table below. These operating key items for the applicable periods are summarized as follows:

- Restructuring, separation and other costs – Ashland periodically implements company-wide cost reduction programs related to acquisitions, divestitures and other cost reduction programs in order to enhance profitability through streamlined operations and an improved overall cost structure. Ashland often incurs severance, facility and integration costs associated with these programs.

- Accelerated depreciation – As a result of various restructuring activities at certain office facilities and manufacturing facilities during the prior year quarter, Ashland recorded accelerated depreciation due to changes in the expected useful life of certain property, plant and equipment.

Operating income for the three months ended December 31, 2019 and 2018 included depreciation and amortization of $61 million and $62 million, respectively (which excluded accelerated depreciation and amortization of $19 million for the three months ended 2018).

Non-operating key items affecting EBITDA

- Gain on pension and other postretirement plan remeasurements – Ashland recognized a remeasurement gain due to the settlement of a non-U.S. pension plan during the prior year quarter. See Note K of the Notes to Condensed Consolidated Financial Statements for more information.
- Net income (loss) on divestitures – Ashland recorded a loss related to the impairment of an investment in the prior year quarter.

EBITDA and Adjusted EBITDA

EBITDA totaled $79 million and $93 million for the three months ended December 31, 2019 and 2018, respectively. EBITDA and Adjusted EBITDA results in the table below have been prepared to illustrate the ongoing effects of Ashland's operations, which exclude certain key items previously described. Management believes the use of such non-GAAP measures on a consolidated and reportable segment basis assists investors in understanding the ongoing operating performance by presenting the financial results between periods on a more comparable basis.

	Three months ended December 31	
(In millions)	2019	2018
Net income (loss)	$ 32	$ (48)
Income tax expense (benefit)	(24)	24
Net interest and other expense	10	55
Depreciation and amortization (a)	61	62
EBITDA	79	93
Loss (income) from discontinued operations (net of tax)	2	(23)
Key items included in EBITDA:		
Restructuring, separation and other costs	7	26
Accelerated depreciation	—	19
Gain on pension and other postretirement plan remeasurements	—	(18)
Net loss on divestitures	—	3
Total key items included in EBITDA	7	30
Adjusted EBITDA	$ 88	$ 100
Total key items included in EBITDA	$ 7	$ 30
Unrealized (gain) loss on securities (b)	(9)	30
Total key items, before tax	$ (2)	$ 60

(a) Excludes $19 million of accelerated depreciation for the three months ended December 31, 2018.
(b) Due to the adoption of new accounting guidance in the prior year quarter, the unrealized losses on certain investment securities directly impact earnings and are recorded within the net interest and other expense caption on the Statements of Consolidated Comprehensive Income (Loss). See Note E of the Notes to Condensed Consolidated Financial Statements for more information.

Diluted EPS and Adjusted Diluted EPS

The following table reflects the U.S. GAAP calculation for the income (loss) from continuing operations adjusted for the cumulative diluted EPS effect for key items after tax that have been identified in the Adjusted EBITDA table in the previous section. Key items are defined as the financial effects from significant transactions that may have caused short-term fluctuations in net income and/or operating income which Ashland believes do not accurately reflect Ashland's underlying business performance and trends. The Adjusted diluted EPS for the income (loss) from continuing operations in the following table has been prepared to illustrate the ongoing effects of Ashland's operations. Management believes investors and analysts use this financial measure in assessing Ashland's business performance and that presenting this non-GAAP measure on a consolidated basis assists investors in better understanding Ashland's ongoing business performance and enhances their ability to compare period-to-period financial results.

	Three months ended December 31	
	2019	2018
Diluted EPS from continuing operations (as reported)	$ 0.56	$ (1.14)
Key items, before tax:		
Restructuring, separation and other costs	0.12	0.71
Gain on pension and other postretirement plan remeasurements	—	(0.29)
Unrealized (gain) loss on securities	(0.15)	0.47
Net loss on divestitures	—	0.05
Key items, before tax	(0.03)	0.94
Tax effect of key items (a)	0.02	(0.11)
Key items, after tax	(0.01)	0.83
Tax specific key items:		
Deferred tax rate changes	—	0.03
One-time transition tax	—	0.35
Restructuring and separation activity	—	0.02
Other tax reform	(0.42)	0.05
Tax specific key items (b)	(0.42)	0.45
Total key items	(0.43)	1.28
Adjusted diluted EPS from continuing operations (non-GAAP)	$ 0.13	$ 0.14

(a) Represents the diluted EPS impact from the tax effect of the key items that are previously identified above.
(b) Represents the diluted EPS impact from tax specific financial transactions, tax law changes or other matters that fall within the definition of key items. For additional explanation of these tax specific key items, see the income tax expense (benefit) discussion within the following caption review section.

Statements of Consolidated Comprehensive Income (Loss) – caption review

A comparative analysis of the Statements of Consolidated Comprehensive Income (Loss) by caption is provided as follows for the three months ended December 31, 2019 and 2018.

	Three months ended December 31		
(In millions)	2019	2018	Change
Sales	$ 533	$ 576	$ (43)

The following table provides a reconciliation of the change in sales between the three months ended December 31, 2019 and 2018.

(In millions)	Three months ended December 31, 2019
Volume/product mix	$ (28)
Plant realignment	(7)
Currency exchange	(4)
Pricing	(4)
Change in sales	$ (43)

Sales for the current quarter decreased $43 million compared to the prior year quarter. Lower volume, the impact of plant realignments, unfavorable foreign currency exchange and lower pricing each decreased sales by $28 million, $7 million $4 million and $4 million, respectively.

	Three months ended December 31		
(In millions)	2019	2018	Change
Cost of sales	$ 380	$ 424	$ (44)
Gross profit as a percent of sales	28.7%	26.4%	

Fluctuations in cost of sales are driven primarily by raw material prices, volume and changes in product mix, currency exchange, acquisitions and divestitures and other certain charges incurred as a result of changes or events within the businesses or restructuring activities. The following table provides a quantified reconciliation of the changes in cost of sales between the three months ended December 31, 2019 and 2018.

(In millions)	Three months ended December 31, 2019
Changes in:	
Plant closure costs	$ (34)
Volume/product mix	(11)
Currency exchange	(2)
Production and raw material costs	3
Change in cost of sales	$ (44)

Cost of sales for the current quarter decreased $44 million compared to the prior year quarter. The closure of a manufacturing facility during the prior year quarter, unfavorable volume and favorable currency exchange decreased cost of sales by $34 million, $11 million and $2 million, respectively. These decreases were partially offset by higher production and raw material costs which increased cost of sales by $3.

	Three months ended December 31		
(In millions)	2019	2018	Change
Selling, general and administrative expense	$ 120	$ 143	$ (23)
As a percent of sales	22.5%	24.8%	

Selling, general and administrative expense for the current quarter decreased $23 million compared to the prior year quarter driving expenses as a percent of sales favorable compared to the prior year quarter. Key drivers of the fluctuation in selling, general and administrative expense compared to the prior year quarter were:

- $10 million of lower operating costs compared to the prior year quarter, primarily due to the overall company-wide cost reduction program.
- $7 million and $18 million of key items for restructuring, separation and other costs during the current and prior year quarters, respectively.
- $2 million of favorable foreign currency exchange compared to the prior year quarter.

	Three months ended December 31		
(In millions)	2019	2018	Change
Research and development expense	$ 16	$ 17	$ (1)

Research and development expense declined compared to the prior year quarter, primarily due to the overall company-wide cost reduction program.

	Three months ended December 31		
(In millions)	2019	2018	Change
Equity and other income			
Equity income (a)	$ —	$ —	$ —
Other income	—	1	(1)
	$ —	$ 1	$ (1)

(a) Activity of $0 denotes value less than $1 million.

Equity and other income remained relatively consistent compared to the prior year quarter.

	Three months ended December 31		
(In millions)	2019	2018	Change
Net interest and other expense (income)			
Interest expense	$ 23	$ 27	$ (4)
Interest income	(1)	(1)	—
Loss (income) from restricted investments	(13)	28	(41)
Other financing costs	1	1	—
	$ 10	$ 55	$ (45)

Net interest and other financing expense decreased by $45 million during the current quarter compared to the prior year quarter. The decrease is primarily due to the impact of restricted investments, which generated income of $13 million in the current quarter compared to losses of $28 million in the prior year quarter. Interest expense decreased $4 million due to lower debt levels during the current quarter compared to the prior year quarter.

	Three months ended December 31		
(In millions)	2019	2018	Change
Other net periodic benefit income	$ —	$ 18	$ (18)

Other net periodic benefit income during the prior year quarter related to the curtailment gain from the settlement of a non-U.S. pension plan.

	Three months ended December 31		
(In millions)	2019	2018	Change
Net income (loss) on divestitures	$ 3	$ (3)	$ 6

The activity in the current quarter was related to post-closing adjustments for certain divestitures, while activity in the prior year quarter related to the impairment of an investment.

	Three months ended December 31		
(In millions)	2019	2018	Change
Income tax expense (benefit)	$ (24)	$ 24	$ (48)
Effective tax rate	(240)%	51%	

Ashland's effective tax rate in any interim period is subject to adjustments related to discrete items and the mix of domestic and foreign operating results. The overall effective tax rate was negative 240% for the three months ended December 31, 2019 and was primarily impacted by income mix, certain nondeductible restructuring costs as well as $27 million from favorable tax discrete items primarily from the tax benefit related to the Swiss Tax Reform enacted in the current quarter.

The overall effective tax rate was 51% for the three months ended December 31, 2018 and was primarily impacted by the prior year quarter income mix and net unfavorable tax discrete adjustments of $30 million related to the enactment of the US Tax Cuts and Jobs Act of 2017 (Tax Act).

Adjusted income tax expense (benefit)

Key items are defined as the financial effects from significant transactions that may have caused short-term fluctuations in net income and/or operating income which Ashland believes do not accurately reflect Ashland's underlying business performance and trends. Tax specific key items are defined as the financial effects from tax specific financial transactions, tax law changes or other matters that fall within the definition of key items as previously described. The effective tax rate, excluding key items, which is a non-GAAP measure, has been prepared to illustrate the ongoing tax effects of Ashland's operations. Management believes investors and analysts use this financial measure in assessing Ashland's business performance and that presenting this non-GAAP measure on a consolidated basis assists investors in better understanding Ashland's ongoing business performance and enhancing their ability to compare period-to-period financial results.

The effective tax rate during the three months ended December 31, 2019 and 2018 was significantly impacted by the following tax specific key items:

- Deferred tax rate changes – Includes the impact from the remeasurement of Ashland's domestic deferred tax balances resulting from the enactment of the Tax Act as well as the impact from deferred rate changes for other jurisdictions;
- One-time transition tax – Includes the impact from the one-time transition tax resulting from the enactment of the Tax Act;
- Restructuring and separation activity – Includes the impact from company-wide cost reduction programs; and
- Other tax reform – Includes the impact from other items related to the Tax Act and other tax law changes including Swiss Tax Reform. The Swiss Tax Reform benefit is an estimate based on ten year income projections and is subject to approval by the Swiss tax authorities. Ashland will monitor this amount and make adjustments as appropriate in future periods. These adjustments also include the impact from the deductibility of compensation items and miscellaneous state tax items.

The following table is a calculation of the effective tax rate, excluding these key items.

	Three months ended December 31	
(In millions)	2019	2018
Loss from continuing operations before income taxes	$ 10	$ (47)
Key items (pre-tax) (a)	(2)	60
Adjusted income from continuing operations before income taxes	$ 8	$ 13
Income tax expense (benefit)	$ (24)	$ 24
Income tax rate adjustments:		
Tax effect of key items	(1)	8
Tax specific key items: (b)		
Deferred tax rate changes	—	(2)
One-time transition tax	—	(22)
Restructuring and separation activity	—	(1)
Other tax reform	25	(3)
Total income tax rate adjustments	24	(20)
Adjusted income tax expense	$ —	$ 4
Effective tax rate, excluding key items (Non-GAAP) (c)	3%	29%

(a) See Adjusted EBITDA reconciliation table previously disclosed in this MD&A for a summary of the key items, before tax.

(b) For additional information on the effect that these tax specific key items had on EPS, see the Adjusted Diluted EPS table previously disclosed in this MD&A.
(c) Due to rounding conventions, the effective tax rate presented may not recalculate precisely based on the numbers disclosed within this table.

	Three months ended December 31		
(In millions)	2019	2018	Change
Income (loss) from discontinued operation (net of taxes)			
Composites/Marl facility	$ —	$ 25	$ (25)
Valvoline	(1)	—	(1)
Water Technologies	(1)	(1)	—
Distribution	—	(1)	1
	$ (2)	$ 23	$ (25)

As a result of the divestiture of the Composites segment and Marl facility, the related operating results have been reflected as discontinued operations (net of tax) within the Statements of Consolidated Comprehensive Income (Loss). See Note B for more information on this divestiture. In the current quarter, for the Maleic business component of the Composites business not sold to INEOS, the sales and pre-tax operating income included in discontinued operations were $12 million and $2 million, respectively. In the prior year quarter, the sales and pre-tax operating income included in discontinued operations were $275 million and $36 million, respectively. The prior year quarter was primarily attributable to the operations of the Composites segment and the Marl facility sold to INEOS during August 2019.

The activity related to Water Technologies, Valvoline and Distribution was related to post-closing adjustments.

Other comprehensive income (loss)

A comparative analysis of the components of other comprehensive income (loss) is provided below for the three months ended December 31, 2019 and 2018.

	Three months ended December 31		
(In millions)	2019	2018	Change
Other comprehensive income (loss) (net of taxes)			
Unrealized translation gain (loss)	$ 38	$ (31)	$ 69
Pension and postretirement obligation adjustment	—	(6)	6
	$ 38	$ (37)	$ 75

Total other comprehensive income, net of tax, for the current quarter increased $75 million compared to the prior year quarter as a result of the following components:

- For the three months ended December 31, 2019, the change in unrealized gain (loss) from foreign currency translation adjustments resulted in a gain of $38 million compared to a loss of $31 million for the three months ended December 31, 2018. The fluctuations in unrealized translation gains and losses are primarily due to translating foreign subsidiary financial statements from local currencies to U.S. Dollars.
- For the three months ended December 31, 2018, the pension and postretirement obligation adjustment included $6 million of prior service costs recognized within other comprehensive income (loss) due to pension plan remeasurements.

RESULTS OF OPERATIONS – REPORTABLE SEGMENT REVIEW

Ashland's operations are managed within the following two reportable segments: Specialty Ingredients and Intermediates and Solvents.

Results of Ashland's reportable segments are presented based on its management and internal accounting structure. The structure is specific to Ashland; therefore, the financial results of Ashland's reportable segments are not necessarily comparable with similar information for other companies. Ashland allocates all significant costs to its reportable segments except for certain significant company-wide restructuring activities and other costs or adjustments that relate to former businesses that Ashland no longer operates. The service cost component of pension and other postretirement benefits costs is allocated to each reportable segment on a ratable basis; while the remaining components of pension and other postretirement benefits costs are recorded within the other net periodic benefit income caption on the Statements of Consolidated Comprehensive Income (Loss). Ashland refines its expense allocation methodologies to the reportable segments from time to time as internal accounting practices are improved, more refined information becomes available and the industry or market changes. Significant revisions to Ashland's methodologies are adjusted for all segments on a retrospective basis.

Beginning in the second quarter of fiscal 2020, Ashland will change the manner in which it manages the business, moving from a functionally led to a business led organization. This change recognizes that Ashland has a diverse portfolio of businesses with different value propositions for the markets Ashland serves. The organizational change will allow Ashland to align its business models, resources and cost structure to the specific needs of each business and enable greater ownership and accountability for both short- and long-term performance. Ashland will realign its segment reporting structure commensurate with this organizational change.

The EBITDA and Adjusted EBITDA amounts presented within this business section are provided as a means to enhance the understanding of financial measurements that Ashland has internally determined to be relevant measures of comparison for each segment. Each of these non-GAAP measures is defined as follows: EBITDA (operating income (loss) plus depreciation and amortization), Adjusted EBITDA (EBITDA adjusted for key items, which may include pro forma effects for significant acquisitions or divestitures, as applicable), and Adjusted EBITDA margin (Adjusted EBITDA, which may include pro forma adjustments, divided by sales or sales adjusted for pro forma results). Ashland does not allocate items to each reportable segment below operating income, such as interest expense and income taxes. As a result, reportable segment EBITDA and Adjusted EBITDA are reconciled directly to operating income since it is the most directly comparable caption to the Statements of Consolidated Comprehensive Income (Loss).

The following table discloses sales, operating income, depreciation and amortization and statistical operating information by reportable segment for the three months ended December 31, 2019 and 2018.

	Three months ended December 31	
(In millions)	2019	2018
Sales		
Specialty Ingredients	$ 505	$ 553
Intermediates and Solvents	28	23
	$ 533	$ 576
Operating income (loss)		
Specialty Ingredients	$ 44	$ 26
Intermediates and Solvents	(12)	—
Unallocated and other	(15)	(33)
	$ 17	$ (7)
Depreciation and amortization		
Specialty Ingredients	$ 58	$ 77
Intermediates and Solvents	3	3
Unallocated and other	—	1
	$ 61	$ 81
Operating information		
Specialty Ingredients		
Sales per shipping day	$ 7.7	$ 8.9
Metric tons sold (thousands)	67.2	72.8
Gross profit as a percent of sales (a)	32.2%	27.1%
Intermediates and Solvents		
Sales per shipping day	$ 0.4	$ 0.4
Metric tons sold (thousands)	9.9	6.8
Gross profit as a percent of sales (a)	(35.6)%	10.0%

(a) Gross profit is defined as sales, less cost of sales divided by sales.

Sales by region expressed as a percentage of reportable segment sales for the three months ended December 31, 2019 and 2018 were as follows. Ashland includes only U.S. and Canada in its North American designation.

	Three months ended December 31, 2019	
Sales by Geography	Specialty Ingredients	Intermediates and Solvents
North America	39%	53%
Europe	32%	19%
Asia Pacific	20%	24%
Latin America & other	9%	4%
	100%	100%

	Three months ended December 31, 2018	
Sales by Geography	Specialty Ingredients	Intermediates and Solvents
North America	40%	50%
Europe	31%	21%
Asia Pacific	21%	26%
Latin America & other	8%	3%
	100%	100%

Specialty Ingredients

Specialty Ingredients offers industry-leading products, technologies and resources for solving formulation and product-performance challenges. Using natural, synthetic and semisynthetic polymers derived from cellulose ethers, vinyl pyrrolidones, acrylic polymers, polyester and polyurethane-based adhesives, and plant and seed extract, Specialty Ingredients offers comprehensive and innovative solutions for consumer and industrial applications. Key customers include pharmaceutical companies; makers of personal care products, food and beverages manufacturers; makers of nutraceuticals and supplements; manufacturers of paint, coatings and construction materials; packaging and converting; and oilfield service companies.

December 2019 quarter compared to December 2018 quarter

Specialty Ingredients’ sales decreased $48 million to $505 million in the current quarter. Lower volume and mix, the impact of plant realignments, unfavorable currency exchange and lower pricing decreased sales by $35 million, $7 million, $4 million and $2 million, respectively.

Gross profit during the current quarter increased $12 million compared to the prior year quarter. The net impact of pricing and costs increased gross profit by $32 million, which included $26 million for the impact of the planned closure of a manufacturing facility during the prior year quarter (which included $19 million of accelerated depreciation and amortization).

Additionally, unfavorable foreign currency exchange and lower volume decreased gross profit by $2 million and $16 million, respectively. In total, gross profit margin during the current quarter increased 5.1 percentage points as compared to the prior year quarter to 32.2%.

Selling, general and administrative expenses (which include research and development expenses throughout the reportable segment discussion and analysis) decreased $5 million compared to the prior year quarter due to lower operating costs and favorable foreign currency exchange, which represented $4 million and $1 million of the total decrease, respectively. Equity and other income increased $1 million compared to the prior year quarter.

Operating income totaled $44 million for the current quarter compared to $26 million in the prior year quarter. Current quarter EBITDA increased $18 million to $102 million, while Adjusted EBITDA decreased $10 million to $102 million. Adjusted EBITDA margin decreased 0.1 percentage points in the current quarter to 20.2%.

EBITDA and adjusted EBITDA reconciliation

The following EBITDA and Adjusted EBITDA presentation for the three months ended December 31, 2019 and 2018 below is provided as a means to enhance the understanding of financial measurements that Ashland has internally determined to be relevant measures of comparison for the results of Specialty Ingredients. Adjusted EBITDA results have been prepared to illustrate the ongoing effects of Ashland's operations, which exclude certain key items. The key items within the prior year quarter related to $28 million of restructuring costs associated with the planned closure of a manufacturing facility (which included $19 million of accelerated depreciation).

	Three months ended December 31	
(In millions)	2019	2018
Operating income	$ 44	$ 26
Depreciation and amortization (a)	58	58
EBITDA	102	84
Accelerated depreciation	—	19
Severance and other restructuring costs	—	9
Adjusted EBITDA	$ 102	$ 112

(a) Excludes $19 million of accelerated depreciation for the three months ended December 31, 2018.

Intermediates and Solvents

Intermediates and Solvents is a leading producer of 1,4 butanediol and related derivatives, including tetrahydrofuran and n-methylpyrrolidone. These products are used as chemical intermediates in the production of engineering polymers and polyurethanes, and as specialty process solvents in a wide array of applications including electronics, pharmaceuticals, water filtration membranes and more. Butanediol is also supplied to Ashland's Specialty Ingredients business for use as a raw material.

December 2019 quarter compared to December 2018 quarter

Intermediates and Solvents' sales increased $5 million to $28 million in the current quarter. Volume increased sales by $7 million, while lower pricing decreased sales by $2 million.

Gross profit decreased $12 million during the current quarter compared to the prior year quarter primarily due to a $10 million decrease for increased production costs, primarily driven by the Lima facility changeover resulting in additional turnaround spend and absorption lost during the current quarter, and a $2 million reduction for lower pricing. Gross profit margin decreased 45.6 percentage points as compared to the prior year quarter to (35.6)%.

Selling, general and administrative expenses remained consisted with the prior year quarter.

Operating income was a loss of $12 million in the current quarter compared to zero in the prior year quarter. EBITDA decreased $12 million to a loss of $9 million in the current quarter, while EBITDA margin decreased 45.1 percentage points in the current quarter to (32.1)%.

EBITDA reconciliation

The following EBITDA presentation for the three months ended December 31, 2019 and 2018 is provided as a means to enhance the understanding of financial measurements that Ashland has internally determined to be relevant measures of comparison for the results of Intermediates and Solvents. There were no unusual or key items that affected comparability for EBITDA during the current and prior year quarters or periods.

	Three months ended December 31	
(In millions)	2019	2018
Operating income	$ (12)	$ —
Depreciation and amortization	3	3
EBITDA	$ (9)	$ 3

Unallocated and other

The following table summarizes the key components of the Unallocated and other segment's operating income (loss) for the three months ended December 31, 2019 and 2018.

	Three months ended December 31	
(In millions)	2019	2018
Restructuring activities	$ (7)	$ (29)
Environmental expenses	(3)	(2)
Other expenses (primarily legacy expenses)	(5)	(2)
Total expense	$ (15)	$ (33)

December 2019 quarter compared to December 2018 quarter

Unallocated and other recorded expense of $15 million and $33 million for the three months ended December 31, 2019 and 2018, respectively. The current and prior year quarters included charges for restructuring activities of $7 million and $29 million, respectively, which were comprised of the following items:

- $4 million of executive transition costs during the current quarter;
- $3 million and $17 million of severance, lease abandonment and other restructuring costs related to company-wide cost reduction programs during the current and prior year quarters; and
- $12 million of stranded divestiture costs during prior year quarter, primarily related to the planned divestiture of the Composites segment and Marl facility.

FINANCIAL POSITION

Liquidity

Ashland had $157 million in cash and cash equivalents as of December 31, 2019, of which $145 million was held by foreign subsidiaries and had no significant limitations that would prohibit remitting the funds to satisfy corporate obligations. In certain circumstances, if such amounts were repatriated to the United States, additional taxes might need to be accrued and paid depending on the source of the earnings remitted. Ashland currently has no plans to repatriate any amounts for which additional taxes would need to be accrued.

Ashland's cash flows from operating, investing and financing activities, as reflected in the Statements of Condensed Consolidated Cash Flows, are summarized as follows for the three months ended December 31, 2019 and 2018.

	Three months ended December 31	
(In millions)	2019	2018
Cash provided (used) by:		
Operating activities from continuing operations	$ (34)	$ (9)
Investing activities from continuing operations	(20)	(24)
Financing activities from continuing operations	(7)	(50)
Discontinued operations	(15)	(60)
Effect of currency exchange rate changes on cash and cash equivalents	1	(2)
Net decrease in cash and cash equivalents	$ (75)	$ (145)

Operating activities

The following discloses the cash flows associated with Ashland's operating activities for the three months ended December 31, 2019 and 2018.

	Three months ended December 31	
(In millions)	2019	2018
Cash flows provided (used) by operating activities from continuing operations		
Net income (loss)	$ 32	$ (48)
Income (loss) from discontinued operations (net of income taxes)	2	(23)
Adjustments to reconcile income from continuing operations to		
cash flows from operating activities:		
Depreciation and amortization	61	81
Original issue discount and debt issuance costs amortization	2	2
Deferred income taxes	(12)	3
Stock based compensation expense	4	7
(Income) loss from restricted investments	(13)	28
Excess tax benefit on stock based compensation	—	1
Net loss on divestitures	—	3
Pension contributions	(1)	(1)
Gain on pension and other postretirement plan remeasurements	—	(18)
Change in operating assets and liabilities (a)	(109)	(44)
Total cash flows used by operating activities from continuing operations	$ (34)	$ (9)

(a) Excludes changes resulting from operations acquired or sold.

Cash flows used from operating activities from continuing operations amounted to cash outflows of $34 million and $9 million in the current and prior year quarters, respectively.

Operating Activities – Operating Assets and Liabilities

The cash results during each quarter are primarily driven by net income (loss), excluding discontinued operation results, adjusted for certain non-cash items including depreciation and amortization (including original issue discount and debt issuance cost amortization), as well as changes in working capital, which are fluctuations within accounts receivable, inventory, trade payables and accrued expenses. Ashland continues to emphasize working capital management as a high priority and focus.

Changes in net working capital accounted for outflows of $94 million and $47 million for the three months ended December 31, 2019 and 2018, respectively, and were driven by the following:

- Accounts receivable – There were cash inflows of $40 million and $76 million during the current and prior year quarters, respectively, which were primarily due to collections in excess of sales during the first quarter of each fiscal year.
- Inventory – There were cash outflows of $38 million and $21 million during the current and prior year quarters, respectively, which were primarily driven by sales volumes.
- Trade and other payables – There were cash outflows of $96 million and $102 million during the current and prior year quarters, respectively, and primarily related to the timing of certain payments.

The remaining changes to operating assets and liabilities resulted in an outflow of $15 million and an inflow of $3 million in the current and prior year quarters, respectively, and were primarily due to income taxes paid or income tax refunds, interest paid, and adjustments to certain accruals and other long-term assets and liabilities.

Operating Activities – Summary

Operating cash flows for the current quarter included income from continuing operations of $34 million. Additionally, the current quarter included non-cash adjustments of $61 million for depreciation and amortization, $4 million for stock-based compensation expense and $13 million for income on restricted investments.

Operating cash flows for the prior year quarter included a loss from continuing operations of $71 million. Additionally, the prior year quarter included a non-cash adjustment of $81 million for depreciation and amortization, $7 million for stock-based compensation expense, $28 million for the loss on restricted investments and $18 million for the gain on pension and other postretirement plan remeasurements.

Investing activities

The following discloses the cash flows associated with Ashland's investing activities for the three months ended December 31, 2019 and 2018.

	Three months ended December 31	
(In millions)	2019	2018
Cash flows provided (used) by investing activities from continuing operations		
Additions to property, plant and equipment	$ (29)	$ (33)
Proceeds from disposal of property, plant and equipment	—	4
Net purchase of funds restricted for specific transactions	(1)	(2)
Reimbursement from restricted investments	10	8
Proceeds from sales of securities	4	—
Purchase of securities	(4)	—
Proceeds from the settlement of derivative instruments	—	1
Payments for the settlement of derivative instruments	—	(2)
Total cash flows used by investing activities from continuing operations	$ (20)	$ (24)

Cash used by investing activities was $20 million and $24 million for the current and prior year quarters, respectively. The significant cash investing activities for the current quarter primarily related to cash outflows of $29 million for property additions compared to $33 million in the prior year quarter. Additionally, there were reimbursements from the restricted renewable annual asbestos trust of $10 million during the current quarter compared to $8 million in the prior year quarter.

Financing activities

The following discloses the cash flows associated with Ashland's financing activities for the three months ended December 31, 2019 and 2018.

	Three months ended December 31	
(In millions)	2019	2018
Cash flows provided (used) by financing activities from continuing operations		
Repayment of long-term debt	—	(1)
Proceeds from (repayment of) short-term debt	14	(26)
Cash dividends paid	(16)	(16)
Stock based compensation employee withholding taxes paid in cash	(5)	(7)
Total cash flows used by financing activities from continuing operations	$ (7)	$ (50)

Cash flows (used) provided by financing activities resulted in outflows of $7 million for the current quarter as compared to $50 million for the prior year quarter.

Significant cash financing activities for the current quarter included short-term cash inflows of $14 million, primarily related to draws on the 2017 Revolving Credit Facility. The current quarter included cash dividends paid of $0.275 per share, for a total of $16 million.

Significant cash financing activities for the prior year quarter included short-term debt net cash outflows of $26 million related to debt outstanding on the 2017 Revolving Credit Facility. The prior year quarter included cash dividends paid of $0.25 per share, for a total of $16 million.

The following discloses the cash flows associated with Ashland's discontinued operations for the three months ended December 31, 2019 and 2018.

	Three months ended December 31	
(In millions)	2019	2018
Cash provided (used) by discontinued operations		
Operating cash flows	$ (17)	$ (58)
Investing cash flows	2	(2)
Total cash used by discontinued operations	$ (15)	$ (60)

Cash flows for discontinued operations in the current quarter related to previously divested businesses, including net payments of asbestos and environmental liabilities.

Cash flows for discontinued operations in the prior year quarter included cash outflows of $44 million related to the activity of Composites and the Marl facility. The remaining cash flows for discontinued operations related to other previously divested businesses, including net payments of asbestos and environmental liabilities.

Free cash flow and other liquidity resources

The following represents Ashland's calculation of free cash flow for the disclosed quarters. Free cash flow does not reflect adjustments for certain non-discretionary cash flows such as mandatory debt repayments.

	Three months ended December 31	
(In millions)	2019	2018
Total cash flows used by operating activities from continuing operations	$ (34)	$ (9)
Adjustments:		
Additions to property, plant and equipment	(29)	(33)
Free cash flows (a)	$ (63)	$ (42)

(a) Includes $6 million and $19 million of restructuring payments for the three months ended December 31, 2019 and 2018, respectively.

Working capital (current assets minus current liabilities, excluding long-term debt due within one year) amounted to $656 million and $676 million as of December 31, 2019 and September 30, 2019, respectively. Liquid assets (cash, cash equivalents and accounts receivable) amounted to 88% and 94% of current liabilities (excluding current liabilities held for sale) as of December 31, 2019 and September 30, 2019, respectively.

The following summary reflects Ashland's cash and unused borrowing capacity as of December 31, 2019 and September 30, 2019.

(In millions)	December 31 2019	September 30 2019
Cash and investment securities		
Cash and cash equivalents	$ 157	$ 232
Unused borrowing capacity		
Revolving credit facility	$ 766	$ 752
Accounts receivable securitizations	27	48

The borrowing capacity remaining under the $800 million revolving credit facility was $766 million due to a reduction of $34 million for letters of credit outstanding at December 31, 2019. In total, Ashland's available liquidity position, which includes cash, the revolving credit facility and the accounts receivable securitization facilities, was $950 million at December 31, 2019, compared to $1,032 million at September 30, 2019.

Capital resources

Debt

The following summary reflects Ashland's debt as of December 31, 2019 and September 30, 2019.

(In millions)		December 31 2019		September 30 2019
Short-term debt (includes current portion of long-term debt)	$	179	$	166
Long-term debt (less current portion and debt issuance cost discounts) (a)		1,502		1,501
Total debt	$	1,681	$	1,667

(a) Includes $11 million and $12 million of debt issuance cost discounts as of December 31, 2019 and September 30, 2019, respectively.

Debt as a percent of capital employed was 32% at December 31, 2019 and at September 30, 2019. At December 31, 2019, Ashland's total debt had an outstanding principal balance of $1,739 million, discounts of $47 million, and debt issuance costs of $11 million. The scheduled aggregate maturities of long-term debt by year (including the current portion and excluding debt issuance costs) are as follows: zero remaining in 2020, zero in 2021, $1083 million in 2022, zero in 2023 and zero in 2024.

See Note R of the Notes to Condensed Consolidated Financial Statements for subsequent events related to Ashland's debt.

Ashland credit ratings

Ashland's corporate credit rating with Standard & Poor's is BB+, while Moody's Investor Services is Ba1. Moody's Investor Services and Standard & Poor's outlooks both remained at stable. Subsequent changes to these ratings may have an effect on Ashland's borrowing rate or ability to access capital markets in the future.

Ashland debt covenant restrictions

Ashland's most recent credit agreement (the 2017 Credit Agreement) contains usual and customary representations, warranties and affirmative and negative covenants, including financial covenants for leverage and interest coverage ratios, limitations on liens, additional subsidiary indebtedness, restrictions on subsidiary distributions, investments, mergers, sale of assets and restricted payments and other customary limitations. As of December 31, 2019, Ashland is in compliance with all debt agreement covenant restrictions under the 2017 Credit Agreement.

The maximum consolidated net leverage ratio permitted under the 2017 Credit Agreement is 4.5. The 2017 Credit Agreement defines the consolidated net leverage ratio as the ratio of consolidated indebtedness minus unrestricted cash and cash equivalents to consolidated EBITDA (Covenant Adjusted EBITDA) for any measurement period. In general, the 2017 Credit Agreement defines Covenant Adjusted EBITDA as net income plus consolidated interest charges, taxes, depreciation and amortization expense, fees and expenses related to capital market transactions and proposed or actual acquisitions and divestitures, restructuring and integration charges, noncash stock and equity compensation expense, and any other nonrecurring expenses or losses that do not represent a cash item in such period or any future period; less any noncash gains or other items increasing net income. The computation of Covenant Adjusted EBITDA differs from the calculation of EBITDA and Adjusted EBITDA, which have been reconciled above in the "consolidated review" section. In general, consolidated indebtedness includes debt plus all purchase money indebtedness, banker's acceptances and bank guaranties, deferred purchase price of property or services, attributable indebtedness and guarantees. At December 31, 2019, Ashland's calculation of the consolidated net leverage ratio was 2.9.

The minimum required consolidated interest coverage ratio under the 2017 Credit Agreement is 3.0. The 2017 Credit Agreement defines the consolidated interest coverage ratio as the ratio of Covenant Adjusted EBITDA to consolidated interest charges for any measurement period. At December 31, 2019, Ashland's calculation of the consolidated interest coverage ratio was 5.9.

Any change in Covenant Adjusted EBITDA of $100 million would have an approximate 0.5x effect on the consolidated net leverage ratio and a 1.1x effect on the consolidated interest coverage ratio. The average change in consolidated indebtedness of $100 million would affect the consolidated leverage ratio by approximately 0.2x.

Additional capital resources

Cash projection

Ashland projects that cash flow from operations and other available financial resources such as cash on hand and revolving credit should be sufficient to meet investing and financing requirements to enable Ashland to comply with the covenants and other terms of its financing obligations. These projections are based on various assumptions that include, but are not limited to: operational results, capital expenditures, working capital needs and tax payments and receipts.

Total equity

Total equity increased $54 million since September 30, 2019 to $3,625 million at December 31, 2019. The increase of $54 million was due to net income of $32 million, deferred translation gains of $38 million, and $1 million of common shares issued under stock incentive and other plans offset by dividends of $17 million.

Stockholder dividends

In May 2019, the Board of Directors of Ashland announced a quarterly cash dividend of 27.5 cents per share to eligible stockholders at record, which represented an increase from previous quarterly cash dividend of 25.0 cents per share. This dividend was paid in the third and fourth quarter of fiscal 2019 and the first quarter of fiscal 2020.

Capital expenditures

Capital expenditures were $29 million for the three months ended December 31, 2019 compared to $33 million for the three months ended December 31, 2018.

CRITICAL ACCOUNTING POLICIES

The preparation of Ashland's Condensed Consolidated Financial Statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, sales and expenses, and the disclosures of contingent assets and liabilities. Significant items that are subject to such estimates and assumptions include, but are not limited to, long-lived assets (including goodwill and other intangible assets), income taxes, other liabilities and receivables associated with asbestos litigation and environmental remediation. These accounting policies are discussed in detail in "Management's Discussion and Analysis – Critical Accounting Policies" in Ashland's Annual Report on Form 10-K for the fiscal year ended September 30, 2019. Although management bases its estimates on historical experience and various other assumptions that are believed to be reasonable under the circumstances, actual results could differ significantly from the estimates under different assumptions or conditions. Management has reviewed the estimates affecting these items with the Audit Committee of Ashland's Board of Directors. No material changes have been made to the valuation techniques during the three months ended December 31, 2019.

Goodwill and other indefinite-lived intangible assets

Ashland reviews goodwill and other indefinite-lived intangible assets for impairment annually as of July 1 or when events and circumstances indicate an impairment may have occurred. There were no events giving rise to an interim impairment assessment at December 31, 2019, although Ashland continues to closely monitor its Specialty Ingredients (ASI) reporting unit's performance and the impact of recent declines in sales and continued competitive pricing pressures among other items.

Ashland's assessment of an impairment on any of these assets classified currently as having indefinite lives, including goodwill, could change in future periods if significant events happen and/or circumstances change that effect the previously mentioned assumptions included in Ashland's Form 10-K, which could result in impairment charges in future periods. Significant assumptions inherent in the valuation methodologies include, but are not limited to, such estimates as future projected business results, growth rates, the weighted average cost of capital for market participant, royalty and discount rates, and internal segmentation realignments.

Ashland's planned completion of the organizational changes to move from a functionally led to a business led organization could cause a change in reporting units in future periods, thereby requiring quantitative impairment assessments at that time.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Ashland’s market risk exposure at December 31, 2019 is generally consistent with the types of market risk exposures presented in Ashland’s Annual Report on Form 10-K for the fiscal year ended September 30, 2019.

ITEM 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures - As of the end of the period covered by this quarterly report, Ashland, under the supervision and with the participation of its management, including Ashland’s Chief Executive Officer and its Chief Financial Officer, evaluated the effectiveness of Ashland’s disclosure controls and procedures pursuant to Rule 13a-15(b) and 15d-15(b) promulgated under the Securities Exchange Act of 1934, as amended. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures were effective as of December 31, 2019.

Changes in Internal Control over Financial Reporting - During the three months ended December 31, 2019, there were no significant changes in Ashland’s internal control over financial reporting, or in other factors, that occurred during the period covered by this quarterly report that have materially affected, or are reasonably likely to materially affect, Ashland’s internal control over financial reporting.

PART II – OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

The following is a description of Ashland's material legal proceedings.

Asbestos-Related Litigation

Ashland is subject to liabilities from claims alleging personal injury caused by exposure to asbestos. Such claims result primarily from indemnification obligations undertaken in 1990 in connection with the sale of Riley Stoker Corporation (Riley), a former subsidiary. Although Riley was neither a producer nor a manufacturer of asbestos, its industrial boilers contained some asbestos-containing components provided by other companies.

Hercules LLC (formerly Hercules Incorporated), an indirect wholly-owned subsidiary of Ashland, is also subject to liabilities from asbestos-related personal injury lawsuits involving claims which typically arise from alleged exposure to asbestos fibers from resin encapsulated pipe and tank products which were sold by one of Hercules' former subsidiaries to a limited industrial market.

Ashland and Hercules are also defendants in lawsuits alleging exposure to asbestos at facilities formerly or presently owned or operated by Ashland or Hercules.

For additional detailed information regarding liabilities arising from asbestos-related litigation, see Note L of Notes to Condensed Consolidated Financial Statements in this quarterly report on Form 10-Q.

Environmental Proceedings

(a) CERCLA and Similar State Law Sites - Under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 and similar state laws, Ashland and its subsidiaries may be subject to joint and several liability for cleanup costs in connection with alleged releases of hazardous substances at sites where it has been identified as a "potentially responsible party" (PRP). As of December 31, 2019, Ashland and its subsidiaries have been identified as a PRP by U.S. federal and state authorities, or by private parties seeking contribution, for the cost of environmental investigation and/or cleanup at 80 waste treatment or disposal sites. These sites are currently subject to ongoing investigation and remedial activities, overseen by the United States Environmental Protection Agency (USEPA) or a state agency, in which Ashland or its subsidiaries are typically participating as a member of a PRP group. Generally, the types of relief sought include remediation of contaminated soil and/or groundwater, reimbursement for past costs of site cleanup and administrative oversight and/or long-term monitoring of environmental conditions at the sites. The ultimate costs are not predictable with assurance.

(b) Hattiesburg, Mississippi Resource Conservation and Recovery Act Matter - In November 2008, the Mississippi Department of Environmental Quality (MDEQ) issued a Notice of Violation to Hercules' now-closed Hattiesburg, Mississippi manufacturing facility alleging that a process water impoundment basin at the facility had been operated as a hazardous waste storage and treatment facility without a permit in violation of the Resource Conservation and Recovery Act. In May 2011, the USEPA issued an inspection report from a September 2010 inspection with allegations similar to those of the MDEQ and promulgated an information request. Ashland has been working with the MDEQ and USEPA to settle this matter in the context of the shutdown and ongoing remediation of the Hattiesburg facility. The USEPA proposed a settlement penalty in excess of $100,000. While it is reasonable to believe that this matter will involve a penalty from the MDEQ and/or the USEPA exceeding $100,000, the potential penalty with respect to this enforcement matter should not be material to Ashland.

(c) Lower Passaic River, New Jersey Matters - Ashland, through two formerly owned facilities, and ISP, through a now-closed facility, have been identified as PRPs, along with approximately 70 other companies (the Cooperating Parties Group or the CPG), in a May 2007 Administrative Order of Consent (AOC) with the USEPA. The parties are required to perform a remedial investigation and feasibility study (RI/FS) of the entire 17 miles of the Passaic River. In June 2007, the USEPA separately commenced a Focused Feasibility Study (FFS) as an interim measure. In accordance with the 2007 AOC, in June 2012 the CPG voluntarily entered into another AOC for an interim removal action focused solely at mile 10.9 of the Passaic River. The allocations for the 2007 AOC and the 2012 removal action are based on interim allocations, are immaterial and have been accrued. In April 2014, the USEPA released the FFS. The CPG submitted the Draft RI/FS Report on April 30, 2015. The USEPA has released the FFS Record of Decision for the lower 8 miles and recently reached an agreement with another chemical company to conduct and pay for the remedial design. This chemical company has sued Ashland, ISP and numerous other defendants to recover past and future costs pursuant to the CERCLA. Ashland, ISP and numerous other defendants have filed a Motion to Dismiss all of the claims. Ashland and ISP are participating in an USEPA allocation process. The release of the FFS Record of Decision, the current allocations proceedings and the lawsuit are not expected to be material to Ashland.

(d) Freetown, MA Resource Conservation and Recovery Act (RCRA) Matter - On September 27, 2018, the USEPA issued a Complaint, Compliance Order and Opportunity for Hearing to ISP Freetown Fine Chemicals, Inc.'s facility in Assonet, Massachusetts alleging various violations of the RCRA relating to certain distillation tanks at the facility and seeking a penalty of $203,792. Ashland disputes USEPA's stated interpretation of the RCRA regulations and their applicability to these tanks. While this matter could result in a penalty from USEPA in excess of $100,000, the potential penalty is not expected to be material to Ashland.

For additional information regarding environmental matters and reserves, see Note L of Notes to Condensed Consolidated Financial Statements in this quarterly report on Form 10-Q.

Other Pending Legal Proceedings

In addition to the matters described above, there are other various claims, lawsuits and administrative proceedings pending or threatened against Ashland and its current and former subsidiaries. Such actions are with respect to commercial matters, product liability, toxic tort liability and other environmental matters which seek remedies or damages, some of which are for substantial amounts. While Ashland cannot predict with certainty the outcome of such actions, it believes that adequate reserves have been recorded and losses already recognized with respect to such actions were immaterial as of December 31, 2019. There is a reasonable possibility that a loss exceeding amounts already recognized may be incurred related to these actions; however, Ashland believes that such potential losses were immaterial as of December 31, 2019.

ITEM 1A. RISK FACTORS

During the period covered by this report, there were no material changes from the risk factors previously disclosed in Ashland’s Annual Report on Form 10-K for the fiscal year ended September 30, 2019.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

There was no share repurchase activity during the three months ended December 31, 2019.

Issuer Purchases of Equity Securities

Q1 Fiscal Periods	Total Number of Shares Purchased	Average Price Paid Per Share, including commission	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (in millions)(a)
October 1, 2019 to October 31, 2019	—	$ —	—	$ 800
November 1, 2019 to November 30, 2019	15,196 (b)	78.65	—	800
December 1, 2019 to December 31, 2019	—	—	—	800
Total	15,196		—	$ 800

(a) During March 2018, Ashland’s Board of Directors approved a new $1 billion stock repurchase program, which replaced the previous stock repurchase program. The Company's stock repurchase program does not obligate it to acquire any specific number of shares. Under the program, shares may be repurchased in privately negotiated and/or open market transactions, including under plans complying with Rule 10b5-1 of the Exchange Act. As of December 31, 2019, $800 million remains available for repurchase under this authorization.

(b) Shares withheld from employees to cover their withholding requirements for personal income taxes related to the vesting of restricted stock.

ITEM 6. EXHIBITS

(a) Exhibits

4.1	Indenture dated January 23, 2020, among Ashland Services B.V., Ashland Global Holdings Inc., Ashland LLC and U.S. Bank National Association, as trustee, in respect of the Senior Euro-Denominated Notes due 2028 (filed as Exhibit 4.1 to Ashland's Form 8-K filed on January 23, 2020 (SEC File No. 333-211719) and incorporated herein by reference).
10.1	Credit Agreement dated as of January 10, 2020, among Ashland Global Holdings Inc., Ashland Chemco Inc., Ashland LLC, Ashland Services B.V., each lender from time to time party thereto, the Bank of Nova Scotia, as administrative agent, swing line lender and a letter of credit issuer, each other letter of credit issuer from time to time party thereto and Citibank, N.A., as syndication agent (filed as Exhibit 10.1 to Ashland's Form 8-K filed on January 10, 2020 (SEC File No. 333-211719) and incorporated herein by reference).
10.2*	Separation Agreement and General Release between Jack William Heitman, Jr. and Ashland LLC, effective as of December 31, 2019.
10.3*	Separation Agreement and General Release between William A. Wulfsohn and Ashland LLC, effective as of December 31, 2019.
10.4*	Form of Chief Executive Officer Change in Control Agreement.
31.1*	Certificate of Guillermo Novo, Chief Executive Officer of Ashland pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certificate of J. Kevin Willis, Chief Financial Officer of Ashland pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32*	Certificate of Guillermo Novo, Chief Executive Officer of Ashland, and J. Kevin Willis, Chief Financial Officer of Ashland pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS**	Inline XBRL Instance Document.
101.SCH**	Inline XBRL Taxonomy Extension Schema Document.
101.CAL**	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF**	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB**	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE**	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101).

* Filed herewith.

** Attached as Exhibit 101 to this report are the following documents formatted in XBRL (Extensible Business Reporting Language): (i) Statements of Consolidated Comprehensive Income (Loss) for the three months ended December 31, 2019 and December 31, 2018; (ii) Condensed Consolidated Balance Sheets at December 31, 2019 and September 30, 2019; (iii) Statements of Consolidated Equity at December 31, 2019; (iv) Statements of Condensed Consolidated Cash Flows for the three months ended December 31, 2019 and December 31, 2018; and (v) Notes to Condensed Consolidated Financial Statements.

SM Service mark, Ashland or its subsidiaries, registered in various countries.

™ Trademark, Ashland or its subsidiaries, registered in various countries.

SIGNATURE

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.

Ashland Global Holdings Inc.
(Registrant)

January 29, 2020

/s/ J. Kevin Willis
J. Kevin Willis
Senior Vice President and Chief Financial Officer
(on behalf of the Registrant and as principal
financial officer)

SEPARATION AGREEMENT AND GENERAL RELEASE

Section 1. SPECIAL SEVERANCE BENEFITS

I, Jack William Heitman, Jr. (EE# redacted), understand that on **December 31, 2019** ("Termination Date"), my employment with Ashland LLC (the "Company" or "Ashland") ended. I am signing this Separation Agreement and General Release (the "Separation Agreement") in return for the special severance benefits offered to me by Ashland, which are more than would otherwise be provided to me upon termination. Specifically, I understand that I will receive the severance benefits more fully described in **Attachment I** (Summary of Benefits), which is hereby incorporated by reference.

Section 2. COMPLETE RELEASE OF LIABILITY

(a) **General Release.** In exchange for these special severance benefits offered by Ashland, I completely release any and all claims I may have at this time, whether known or unknown, against Ashland, its parents, divisions, subsidiaries, insurers and affiliates, their predecessors, successors and assigns, and their officers, directors or employees (collectively referred to hereafter as "Releasees"). This Release is intended to be a broad release and shall apply to any relief from Releasees, no matter how denominated, including, but not limited to, claims for future employment, rights or causes of action for wages, backpay, front pay, compensatory damages, punitive damages, or attorney's fees. I also agree that I will not file any such claim and I hereby agree to indemnify and hold Releasees harmless from any such claim.

(b) **Extent of Release.** This Release includes all claims I may have against Releasees which relate either to the time of my employment or to my termination, except the claims mentioned in Section 2(c) below. Some of the types of claims that I am releasing, although there also may be others not listed here, are claims under local, state or federal law relating to:

1. Discrimination on the basis of age, sex, race, color, national origin, religion, disability, veteran status, or any other category protected under applicable law;

2. Restrictions, if any, upon the rights of Ashland to terminate its employees at will, including (i) violation of public policy, (ii) breach of any express or implied covenant of the employment contract, and (iii) breach of any covenant of good faith and fair dealing;

3. Discrimination on the basis of age, including claims under the Age Discrimination in Employment Act (the "ADEA"), which is located at 29 United States Code, Sections 621 through 634;

4. Payments, if any, that might otherwise be owed and payable to me pursuant to the Workers' Adjustment and Retraining Notification (WARN) Act; and

5. Civil actions relating to negligence, defamation, invasion of privacy, fraud, misrepresentation, or infliction of emotional or mental distress.

(c) **<u>Exceptions to Release.</u>** The only claims against Releasees that this release does not include are claims related to:

1. Benefits to which I am entitled under this special severance offer;

2. Any applicable worker's compensation or unemployment compensation laws;

3. My rights under those benefit plans offered to employees of the Company that are governed by the Employee Retirement Income Security Act of 1974, as amended (ERISA), in effect as of my Termination Date; and

4. Any claims that the law states may not be waived.

I further understand that nothing in this Agreement is intended to or shall prevent, impede, or interfere with my non-waivable right, without prior notice to Releasees, to provide information to the government, participate in investigations, file a complaint, testify in proceedings regarding Releasees' past or future conduct, or engage in any future activities protected under the whistleblower statutes of other government agency, or the right to receive payment from a government agency for information provided directly to the government agency pursuant to a government-administered whistleblower award program.

<u>Section 3.</u> **<u>CONSEQUENCES OF BREACHING MY PROMISES IN SECTION 2</u>**

If I breach my promise in Section 2 of this General Release and file a claim or lawsuit based on what I released in this General Release, I agree to pay for all liabilities and costs incurred by Releasees, including reasonable attorneys' fees, in defending against my claim or lawsuit. Provided, however, that this provision shall not apply to any alleged breach due to a challenge of the validity of the ADEA waiver contained herein.

<u>Section 4.</u> **<u>CONFIDENTIALITY</u>**

I understand and agree that I have acquired Company Information as defined herein. I further understand and agree that such Company Information has been disclosed to me in confidence and for Company use only. I will not disclose or communicate Company Information to any third party, and I will not make use of Company Information on my own behalf, or on behalf of any third party. Further, I agree that I will continue to be bound by the terms of any non-competition, non-solicitation, non-disclosure and/or confidentiality agreements in effect on my Termination Date, whether executed by me during the course of my employment with the Ashland, or executed by me during the course of my employment with a prior employer and subsequently assigned to Ashland, the terms and conditions of which are incorporated herein by reference. Provided that the Confidentiality provisions of this Agreement will not be breached in the event I disclose Company Information to the U.S. Securities and Exchange Commission, to the extent necessary to report suspected or actual violations of U.S. securities laws, or where my disclosure of Company Information is protected under the whistleblower statutes administered by the Occupational Safety and Health Administration, U.S. Securities and Exchange Commission, the Equal Opportunity Employment Commission, the National Labor Relations Board, or any other government agency. I also understand that I am not required to inform Releasees, in advance or otherwise, that such disclosure(s) has been made. I am further advised that if I disclose Company Information that constitutes a trade secret to which the Defend Trade Secrets Act (18 USC Section 1833(b)) applies, then I will not be held criminally or civilly liable under any federal or state trade secret law, or considered to be in violation of the confidentiality provisions of this Agreement if my disclosure is made solely for the purpose of reporting or investigating a suspected violation of law and in confidence to a federal, state, or local government official, whether directly or indirectly, or to an attorney; or where my disclosure is made in a complaint or other document filed in a lawsuit or other proceeding against Releasees, and such filing is made under seal.

Section 5. **RETURN OF COMPANY INFORMATION AND PROPERTY**

I agree that on or prior to my Termination Date I returned to Ashland all Company Information and related reports, maps, files, memoranda, and records; credit cards, cardkey passes; door and file keys; computer access codes; software; and other physical or personal property which I received or prepared or helped prepare in connection with my employment.

I further represent that I have not retained and will not retain any copies, duplicates, reproductions, or excerpts thereof, except as otherwise provided above in Section 4. I understand that the term “Company Information” as used in this Agreement refers to information obtained during my employment with Ashland or any other Releasees, and includes (a) confidential information including, without limitation, information received from third parties under confidential conditions; and (b) other technical, business, or financial information, the use or disclosure of which might reasonably be construed to be contrary to the interests of Ashland.

Section 6. **ADVICE TO CONSULT WITH ATTORNEY**

I understand that I am advised to consult with an attorney before signing this General Release.

Section 7. **PERIOD FOR REVIEW AND COVERAGE OF OFFER**

I understand and agree that I have been given at least 45 days to review and consider this General Release. I understand that I may use as much or as little of this period of time as I wish to prior to reaching a decision regarding the signing of this General Release. I understand that if I sign this General Release prior to my

Termination Date or if I do not sign, date, and return this General Release by hand, or by a mailing postmarked on or before by **February 14, 2020** the General Release will not be valid and I will not be eligible to receive the special severance benefits under the terms of this special severance offer, and I will not be eligible for any benefits under Ashland's Severance Pay Plan, or under any other severance pay plan or program of Releasees.

I further acknowledge that I have been advised that the offer has been made to all employees in my department whose service is being terminated, as set out in Attachment II, hereto, and has not been offered to those so noted on Attachment II. I understand that additional information can be obtained upon request from my Human Resources representative.

Section 8. **EFFECTIVE DATE AND MY RIGHT TO REVOKE GENERAL RELEASE**

In accordance with federal law, I understand that this General Release may be revoked by me at any time within seven (7) calendar days after the date of execution noted below. To be effective, the revocation must be in writing and delivered to Julie Hopkins, Senior Group Counsel – Labor, Employment & Litigation and Chief Privacy Officer, 50 E. RiverCenter Boulevard, Suite 1600, Covington, KY 41011, either by hand or mail within a seven (7) day period following my execution of this General Release. If delivered by mail, the recision must be:

1. Postmarked within the seven (7) day period;
2. Properly addressed as noted above; and
3. Sent by Certified Mail, Return Receipt Requested.

I understand that this Separation Agreement and the General Release contained herein, and my acceptance of it shall not become effective or enforceable until the first day immediately following the last day of the seven (7) day revocation period (the "Effective Date").

Section 9. **GOVERNING LAW**

It is agreed that this General Release shall be interpreted in accordance with the laws of the Commonwealth of Kentucky.

Section 10. **PARTIAL INVALIDITY OF THE GENERAL RELEASE**

I agree that if any term or provision of this General Release is determined by a court or other appropriate authority to be invalid, void, or unenforceable for any reason, the remainder of the terms and provisions of this General Release shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

Section 11. **MMSEA REPORTING REQUIREMENTS**

I understand that pursuant to Section 111 of the Medicare, Medicaid, and SCHIP Extension Act of 2007 (MMSEA), if I have applied for Medicare prior to the execution of this Agreement, or if I am likely to become eligible for Medicare within twelve (12) months thereafter, the Centers for Medicare Services will be notified of this Agreement.

Section 12. **COMPLETE AGREEMENT**

It is agreed that the foregoing constitutes the entire agreement between the Employee and Releasees, and that except for those written agreements specifically incorporated herein by reference, there are no other agreements, oral or written, express or implied, relating to any matters covered by this Agreement, or any other agreement in effect and relating to any other matter whatsoever, whether or not within the knowledge or contemplation of either of the Parties at the time of execution of this Agreement.

I M P O R T A N T   N O T I C E

I acknowledge that:

- **I have read this General Release and I understand fully its final and binding effect;**
- **The only promises made to me to sign this General Release are those stated herein;**
- **I am signing this General Release knowingly and voluntarily; and**
- **I have no other claim or expectation of any additional pay or benefits incident to my Employment. The benefits I am receiving for this General Release are in lieu of, and fully satisfy, all monetary amounts, if any, to which I might otherwise be entitled under federal or state statute or common law.**

ASHLAND LLC

/s/ Jack William Heitman, Jr.
JACK WILLIAM HEITMAN, JR
Employee # redacted

/s/ Anne T. Schumann
Signature of Company Representative

January 1, 2020
Date of Execution by Employee

SVP, Chief Human Resources and Information Technology Officer
Title of Company Representative

Attachment 1

SUMMARY OF SPECIAL SEVERANCE BENEFITS,
EMPLOYEE BENEFITS AND MISCELLANEOUS PROVISIONS

On December 31, 2019 (your "Termination Date"), your employment with Ashland ended. After your Termination Date, you will receive severance benefits equal to **78 weeks** of base pay, calculated based on your salary band and your rate of base pay in effect as of your Termination Date.

Your severance benefit is payable to you by Ashland in a lump sum, less applicable withholding of taxes, etc., as soon as is practicable, but not more than 15 days, following the Effective Date of this Separation Agreement, as defined in Section 8 of this Separation Agreement.

You are being offered the special severance benefits, described in this Attachment I, in exchange for your promises and covenants contained in this Separation Agreement. You understand and agree that if you fail to properly execute and return this Separation Agreement within the time period specified in Section 7 of this Separation Agreement, or you revoke your acceptance of it within the 7-day window provided in Section 8 of this Separation Agreement, then the Separation Agreement will not become effective, and you will not be eligible for any of the special severance benefits described in this Attachment I, or any benefits under Ashland's Severance Pay Plan or any other severance pay plan or program of Releasees.

In addition, with respect to those special severance benefits relating to favorable treatment under certain employee benefit plans and programs, you understand that in the event this Separation Agreement does not become effect as provided above, then you will not receive this favorable treatment, and instead you will only be eligible to receive those benefits that are required to be paid to you under the relevant plans or programs in the event of your termination.

The following summarizes selected terms and conditions from some of the employee benefit plans in which you may have participated. The actual terms of these plans are in their plan documents. You should refer to the relevant summary plan description for more information on a particular plan and the effect that your severance has with regard to that plan.

In general, you cannot continue participation in any employee benefit plan after your Termination Date. If you were enrolled in a group health plan, you may be able to continue coverage by making what is called a COBRA election. You cannot elect to have any premiums you may have to pay for COBRA coverage deducted from any payments you are receiving under the terms of this Separation Agreement.

PENSION PLAN

If you are eligible to receive a benefit under a Company sponsored pension plan, your benefit will be based on the plan terms and the Company's records of your employment and plan benefit. If you have a vested benefit, then you will be eligible to elect to begin your pension benefit as of the date specified within the applicable plan.

MEDICAL AND DENTAL

If you are enrolled in the Medical or Dental Plan on your Termination Date, you will be eligible for COBRA continuation coverage at no cost to you, for a period equal to three (3) weeks for each completed year of service, provided that there is a minimum free coverage period of 20 weeks, and a maximum free coverage period of 52 weeks. Your free COBRA coverage period is **33 weeks**. Additionally, if your free COBRA continuation coverage period extends only partially into a month, your COBRA continuation coverage will be at no cost for that entire month. After your free COBRA continuation coverage ends, you may be eligible to continue coverage at the rates that apply to terminated employees. Generally, the maximum COBRA continuation coverage period is 18 months. The free COBRA continuation coverage period counts toward this 18-month limit. COBRA continuation coverage is not automatic; to be eligible for COBRA continuation coverage, including the initial period during which coverage is provided at no cost to you, you must first make a timely election of COBRA coverage. You make a timely election by completing and returning the COBRA election form that will be sent to you by the Ashland Benefits Service Center. If you have any questions please contact the Ashland Benefits Service Center at (844) 345-2745 (Monday-Friday 8:00 am – 5:00 pm EST).

HEALTH SAVINGS ACCOUNT

If you are enrolled in a Health Savings Plan on your Termination Date, then thereafter you can continue to make contributions to your HSA so long as you continue to participate in a medical plan that qualifies as a High Deductible Health Plan (HDHP). This could occur as a result of electing COBRA continuation coverage under your current Company-provided medical plan or as a result of your enrollment in a medical plan offered by a third-party that qualifies as a HDHP. Once your coverage under a HDHP ends, your ability to contribute to the HSA for future periods ends. You may be able to make retroactive contributions to the plan if there were prior periods when you could have made contributions but did not do so. Generally, your ability to contribute for periods in a calendar year when you were covered by a HDHP ends on April 15th of the subsequent calendar year. Regardless of whether you make any further contributions to your HSA after your Termination Date, the funds in your HSA are yours to keep, and can be used to pay for eligible medical expenses for you and your tax dependents in accordance with all applicable withdrawal rules. For more information, refer to IRS Publication 969 (www.irs.gov/pub/irs-pdf/p969.pdf) or contact your tax advisor.

LIFE INSURANCE

Your Company provided noncontributory life insurance coverage, contributory life coverage, spouse and dependent child life coverage, and group accidental death and dismemberment coverage will end on your Termination Date.

You may be eligible to continue your noncontributory and/or contributory life insurance coverage, spouse and dependent child life coverages after your Termination Date. Continuing these coverages, though, is strictly between you and the applicable insurance companies that provide this coverage. You have a 31-day window following your Termination Date to arrange to continue these coverages. To find out more about your ability to continue these coverages please contact Ashland's Benefits Department at: benefits@ashland.com or (844) 592-5322. A conversion privilege is not available for the group life accidental death and dismemberment portion of your coverage.

FLEXIBLE SPENDING ACCOUNTS PLAN

If you were a participant in the Flexible Spending Accounts Plan on your Termination Date, then any amount you have remaining in the Dependent Day Care Account and/or the Health Care Account is available to reimburse you for covered services incurred before your Termination Date. Thereafter, you may have rights to continue your Health Care Account coverage by making a COBRA election. Ashland's Employee Benefits Department will provide you with a summary of your COBRA rights that will tell you how to elect to continue coverage under the Health Care Account. A COBRA election can only continue your participation in the Health Care Account through the end of the calendar year in which your Termination Date occurs.

Any amount you have remaining in the Dependent Care Account and/or the Health Care Account is available to reimburse you for covered services incurred before the date your coverage under the particular account ends. Claims for services performed after your coverage ends are not eligible for reimbursement. Claims for reimbursement must be filed by June 30 in the calendar year following the year in which the covered expenses were incurred. Any amounts in your accounts that are not used will be forfeited according to IRS rules.

EMPLOYEE SAVINGS PLAN

Upon your Termination Date, you have a number of withdrawal options. If your account is valued at more than $1,000 on your Termination Date, you have the option of leaving your account in the plan. If your account is valued at $1,000 or less, it will be paid to you as a mandatory lump sum cash-out. If you have an unpaid loan, you may continue to make monthly payments after your Termination Date. Fidelity will send you payment instructions approximately 4 weeks following your Termination Date. To receive Savings Plan information, call Fidelity Investments at (800) 827-4526. You may also access Savings Plan information on the internet by clicking "Access My Account" under NetBenefits at www.401k .com.

LONG TERM DISABILITY, SUPPLEMENTAL LONG TERM DISABILITY; VOLUNTARY ACCIDENTAL DEATH AND DISMEMBERMENT; OCCUPATIONAL ACCIDENTAL DEATH AND DISMEMBERMENT; TRAVEL ACCIDENT INSURANCE AND ADOPTION ASSISTANCE PROGRAM

If you are enrolled in one or more of these plans on your Termination Date, your eligibility for coverage under the applicable plan(s) ends on your Termination Date.

If you were covered by the voluntary accidental death and dismemberment plan you may be eligible for conversion privileges within 31 days of your Termination Date. To find out if this applies to you, or to obtain contact information for the applicable insurance company, please contact If you have any questions please contact Ashland’s Benefits Department at: benefits@ashland.com or (844) 592-5322.

VISION COST ASSISTANCE PLAN

If you are enrolled for this coverage, it will end on your Termination Date, although you may be able to elect COBRA continuation of coverage at that time. After your Termination Date Ashland’s Vision Plan COBRA administrator will provide you with a summary of your COBRA rights that will tell you how to elect to continue coverage.

MISCELLANEOUS PROVISIONS

UNUSED VACATION/SICK PAY

Because your employment is terminating on the last day of the calendar year, you will receive a lump sum payment for your accrued 2020 vacation. In accordance with Ashland’s vacation and sick pay policies, you will be paid for up to 40 hours of unused 2019 vacation pay, however you will not be paid for any additional unused 2019 vacation or any unused sick pay.

INCENTIVE PAY PLAN

If you were a participant in an incentive pay plan during FY 2019 and/or FY2020, then if and when payments are made, you will be eligible to receive a payment under the applicable plan(s) for that portion of the applicable plan year during which you were actively employed. Any payments will be made in accordance with all other terms and conditions of the applicable plan.

EQUITY AWARDS

With respect to your existing unvested equity awards, you will receive accelerated, prorata vesting of the outstanding portion of those RSU and SAR awards, calculated from the date of the applicable grant(s) through your Termination Date, and using the stock price at the close of the market on your Termination Date. The non-accelerated portions of your current unvested equity awards will be forfeited.

PERFORMANCE UNIT AWARDS (LTIP)

If and when payments are made to active employees, if eligible, you will receive a pro-rata payment under Ashland's Long Term Incentive Plan (LTIP) for each outstanding grant made to you under the LTIP. All payments under the LTIP will be pro-rated through your Termination Date, in accordance with the Company’s customary pro-rata practices, calculated based on actual plan measures through the entire applicable plan cycle (including adjustments for unusual items), and made consistent with all other terms and conditions specified in the LTIP and the applicable award agreement.

OTHER EXECUTIVE COMPENSATION PLANS OR PROGRAMS

Your eligibility to receive benefits under any other executive compensation plans or programs offered by Ashland is governed exclusively by the terms and conditions of such plans, and nothing in this Agreement impairs any rights you may otherwise have under those plans or programs.

CREDIT UNION

If you are a member of the Credit Union at the time of your Termination Date, you will be able to participate in the Credit Union after your Termination Date. You will need to contact the Credit Union directly to discuss handling of Credit Union business.

EDUCATIONAL REIMBURSEMENT

If the course has been approved for reimbursement prior to your Termination Date and will be completed within six (6) months of your Termination Date, you will be reimbursed for approved costs provided you complete the course within policy guidelines.

Once the course has been successfully completed and you have received your "final" grade showing you have met the qualifications for reimbursement, you must log back into the Tuition Reimbursement System (https://ashland.tuitionmanager.com) and submit a reimbursement request for each course. You will be required to upload a copy of your final grade and an itemized invoice.

If you have any questions, please contact the Education Assistance Administrator at educationassistance@ashland.com.

MATCHING GIFTS

Participation in the Matching Gifts Program will cease upon your Termination Date.

EMPLOYEE ASSISTANCE PROGRAM

Your participation in the Employee Assistance Program will end on your Termination Date.

EXPENSES

If you have incurred any expenses that are reimbursable by Ashland, you should submit an approved Expense Report to your supervisor, along with required receipts immediately. In the event there is an outstanding balance owed to Ashland for any charges on your corporate credit card or purchasing card account(s) that are not properly reimbursable under the Company's reimbursement policies, you understand and agree that Ashland will make deductions from your severance benefits in order to cover such balance(s).

OUTPLACEMENT ASSISTANCE

You will be provided with outplacement assistance services following your Termination Date to assist you in your search and transition into other employment. This assistance will be provided to you through a third-party selected by the Company, and will be provided at no expense to you. Please contact your Human Resources Representative for more information about this benefit.

UNEMPLOYMENT COMPENSATION

State laws control whether you are eligible to receive unemployment compensation. If you decide to file for unemployment compensation, Ashland is obligated to inform the state's unemployment commission of the nature of your termination.

VERIFICATION OF EMPLOYMENT

Ashland will only verify dates of employment and last job title, department and work location. Ashland will only release other information concerning your employment as required by law, or at your request and with your written consent.

SECTION 409A

It is intended that the special severance benefits described in this Attachment 1 shall be exempt from the requirements of Section 409A of the Internal Revenue Code of 1986, as amended ("Section 409A"). With regard to any provision herein that provides for reimbursement costs and expenses or in-kind benefits, except as permitted by Section 409A: (1) the right to reimbursement or in-kind benefits shall not be subject to liquidation or exchange for another benefit; (2) the amount of expenses eligible for reimbursement, or in-kind benefits, provided during any taxable year shall not affect the expenses eligible for reimbursement, or in-kind benefits to be provided, in any other taxable year; and (3) such payments shall be made on or before the last day of you taxable year following the taxable year in which the expense occurred, or such earlier date as required hereunder.

FUTURE CORRESPONDENCE

Any future information from the Company will be sent to the address you currently have on file (i.e. employee benefit information, W-2's, etc.). Should your address change in the near future you should contact Ashland's Benefits Department at: benefits@ashland.com or (844) 592-5322. If you have an account established with one of the Company's benefits vendors, you should also contact that vendor to advise of any changes to your physical or e-mail addresses.

IMPORTANT NOTE ABOUT THIS SUMMARY

Details on the benefits from the employee benefit plans discussed above are provided in the summary plan description booklet for each plan. In all events, the rights and obligations of Ashland, and all covered employees, beneficiaries or other claimants are governed solely by the terms of the official documents under which each particular plan, policy or program is operated.

REMINDER

Once You Have Signed Both Originals of This Document, Please Return Both Original Signed Agreements to:

Betty Lange
Human Resources
Ashland LLC
500 Hercules Road
Building 8134
Wilmington, Delaware 19808

A Fully Executed Original Agreement will be returned to your home address.

SEPARATION AGREEMENT AND GENERAL RELEASE

Section 1. SPECIAL SEVERANCE BENEFITS

I, William A. Wulfsohn, understand that on **December 31, 2019** ("Separation Date"), my employment with Ashland LLC (the "Company" or "Ashland"), and my tenure as Chief Executive Officer and Chairman of the Board of Ashland Global Holdings Inc., ended. I am signing this Separation Agreement and General Release (the "Separation Agreement") in return for the special severance benefits offered to me by Ashland, which are more than would otherwise be provided to me upon my separation from employment. Specifically, I understand that I will receive the severance benefits more fully described in **Attachment I** (Summary of Benefits), which is hereby incorporated by reference.

Section 2. COMPLETE RELEASE OF LIABILITY

(a) **General Release.** In exchange for these special severance benefits offered by Ashland, I completely release any and all claims I may have at this time, whether known or unknown, against Ashland, its parents, divisions, subsidiaries, insurers and affiliates, their predecessors, successors and assigns, and each of their officers, directors or employees (collectively referred to hereafter as "Releasees"). This Release is intended to be a broad release and shall apply to any relief from Releasees, no matter how denominated, including, but not limited to, claims for future employment, rights or causes of action for wages, backpay, front pay, compensatory damages, punitive damages, or attorney's fees. I also agree that I will not file any such claim and I hereby agree to indemnify and hold Releasees harmless from any such claim.

(b) **Extent of Release.** This Release includes all claims I may have against Releasees which relate either to the time of my employment or to my separation from employment, except the claims mentioned in Section 2(c) below. Some of the types of claims that I am releasing, although there also may be others not listed here, are claims under local, state or federal law relating to:

1. Discrimination on the basis of age, sex, race, color, national origin, religion, disability, veteran status, or any other category protected under applicable law;

2. Restrictions, if any, upon the rights of Ashland to terminate its employees at will, including (i) violation of public policy, (ii) breach of any express or implied covenant of the employment contract, and (iii) breach of any covenant of good faith and fair dealing;

3. Discrimination on the basis of age, including claims under the Age Discrimination in Employment Act (the "ADEA"), which is located at 29 United States Code, Sections 621 through 634;

4. Payments, if any, that might otherwise be owed and payable to me pursuant to the Workers' Adjustment and Retraining Notification (WARN) Act; and

5. Civil actions relating to negligence, defamation, invasion of privacy, fraud, misrepresentation, or infliction of emotional or mental distress.

(c) **Exceptions to Release.** The only claims against Releasees that this release does not include are claims related to:

1. Claims for benefits to which I am entitled under this special severance offer and described in Attachment I (Summary of Benefits);

2. Any applicable worker's compensation or unemployment compensation laws;

3. My rights under those benefit plans offered to employees of Ashland that are governed by the Employee Retirement Income Security Act of 1974, as amended (ERISA), in effect as of my Separation Date;

4. Any rights I have under any D&O insurance policy maintained by any of the Releasees; and

5. Any claims that the law states may not be waived.

I further understand that nothing in this Separation Agreement is intended to or shall prevent, impede, or interfere with my non-waivable right, without prior notice to Releasees, to provide information to the government, participate in investigations, file a complaint, testify in proceedings regarding Releasees' past or future conduct, or engage in any future activities protected under the whistleblower statutes or other government agency regulations, or the right to receive payment from a government agency for information provided directly to the government agency pursuant to a government-administered whistleblower award program.

Section 3. **CONSEQUENCES OF BREACHING MY PROMISES IN SECTION 2**

I hereby represent that I have no lawsuits, claims or actions pending in my name, or on behalf of any other person or entity, against any of the Releasees, and that I do not intend to bring any claims on my own behalf or on behalf of any other person or entity against any of the Releasees.

If I breach my promise in Section 2 or this Section 3 of this General Release and file a claim or lawsuit based on what I released in this General Release, I agree to pay for all liabilities and costs incurred by Releasees, including reasonable attorneys' fees, in defending against my claim or lawsuit; provided, however, that this provision shall not apply to any alleged breach due to a challenge of the validity of the ADEA waiver contained herein.

Section 4. CONFIDENTIALITY AND NON-COMPETITION

I understand and agree that as a result of my employment with Ashland, I have come into contact with, had access to and learned various technical and non-technical Confidential Information relating to the Company's operations, including the operations of subsidiaries and affiliates of the Company. "Confidential Information" includes financial and business information such as information with respect to costs, commissions, fees, profits, sales, markets, mailing lists, strategies, customer information, customer identities, names and addresses, customer services and customer products, methods, procedures, devices and other means used by the Company, or any of its subsidiaries and affiliates, in the conduct of its business; marketing plans and strategies; innovative programs and services; acquisition or divestiture plans and strategies; data processing computer programs, databases, formulae, software codes, secret processes, financial products and adaptations thereto; inventions, research projects, and all other matters of a technical nature; names and addresses of the vendors and suppliers used by the Company, or any of its subsidiaries and affiliates; financial arrangements with the vendors and suppliers, and vendor and supplier representatives responsible for entering into contracts with the Company, or any of its subsidiaries and affiliates; information with respect to the finances, budgets, funding, investments, costs, and similar financial information of the Company, or any of its subsidiaries and affiliates; information regarding clients of Company, or any of its subsidiaries and affiliates, including but not limited to their names, service and product histories, and addresses, and referrals to prospective clients; and information with respect to the experience, qualifications, abilities and job performance of employees of the Company, or any of its subsidiaries and affiliates. Confidential Information can be in any form including but not limited to, oral, written or machine readable, including electronic files. Notwithstanding the above, except with respect to personally identifiable information ("PII") about individuals obtained in the course of my employment with the Company, which shall always be treated as Confidential Information, Confidential Information shall not include any information that is in the public domain, through no unauthorized act on my part; or which was rightfully in my possession free of any obligation of confidence at or subsequent to the time it was communicated to me by the Company.

I acknowledge and agree that disclosing, divulging, revealing or otherwise using any of the aforesaid Confidential Information, other than as specifically authorized by the Company, will be highly detrimental to the business of the Company and serious loss of business and pecuniary damage may result therefrom. Accordingly, I specifically covenant and agree to hold all such Confidential Information in the strictest confidence, and I will not, without the Company's prior written consent, disclose, divulge or reveal it to any person whomsoever, or use it for any purpose other than the exclusive benefit of the Company, whether such Confidential Information is contained in my memory or embodied in writing or other physical form. I specifically agree that this obligation of Confidentiality shall continue for so long as I have knowledge of such Confidential Information.

Notwithstanding the foregoing, the Confidentiality provisions of this Separation Agreement will not be breached in the event I disclose Confidential Information to the U.S. Securities and Exchange Commission (the "SEC"), to the extent necessary to report suspected or actual violations of U.S. securities laws, or where my disclosure of Confidential Information is protected under the whistleblower statutes administered by the Occupational Safety and Health Administration, the SEC, the Equal Opportunity Employment Commission, the National Labor Relations Board, or any other government agency. I also understand that I am not required to inform Releasees, in advance or otherwise, that such disclosure(s) has been made. In addition, I understand that nothing in or about this Separation Agreement prohibits me from: (i) filing and, as provided for under Section 21F of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), maintaining the confidentiality of a claim with the SEC; (ii) providing confidential information about this Separation Agreement or the Company or any of its affiliates to the SEC, or providing the SEC with information that would otherwise violate any section of this Separation Agreement, to the extent permitted by Section 21F of the Exchange Act; (iii) cooperating, participating or assisting in an SEC investigation or proceeding without notifying the Company; or (iv) receiving a monetary award as set forth in Section 21F of the Exchange Act. I am further advised that if I disclose Confidential Information that constitutes a trade secret to which the Defend Trade Secrets Act (18 USC Section 1833(b)) applies, then I will not be held criminally or civilly liable under any federal or state trade secret law, or considered to be in violation of the confidentiality provisions of this Separation Agreement if my disclosure is made solely for the purpose of reporting or investigating a suspected violation of law and in confidence to a federal, state, or local government official, whether directly or indirectly, or to an attorney; or where my disclosure is made in a complaint or other document filed in a lawsuit or other proceeding against Releasees, and such filing is made under seal. However, except as otherwise provided above, I understand and agree that if I am served with or otherwise presented with a court order or lawful subpoena to testify or produce information to a third party or public entity, including but not limited to a state of the U.S. or the United States government, which might require me to disclose Confidential Information, then within 24 hours of my receipt of such court order or lawful subpoena, and prior to responding to the same, I will notify Ashland's General Counsel that I have been ordered or subpoenaed to provide information that might include Confidential Information, and I will provide a copy of the court order or lawful subpoena to Ashland's General Counsel.

I further agree that during the period of twenty-four (24) months following my Separation Date, I will not, without the express written permission of the then Chief Executive Officer of the Company, (1) engage directly or indirectly in any manner or capacity as principal, agent, partner, officer, director, employee or otherwise in any business or activity that is competitive with the business conducted by the Company or any of its subsidiaries or affiliates; or (2) perform any other act or engage in any other activity that is determined by the Board of Directors of Ashland Global Holdings Inc., based upon its business judgment, to be detrimental to the best interests of the Company. This would include, but is not limited to, actions such as soliciting or encouraging any existing or former employee, director, contractor, consultant, customer or supplier of the Company to terminate an existing relationship with the Company for any reason, or otherwise violate any contracts or covenants existing between them and the Company; making disparaging or defamatory statements (including but not limited to statements that amount to libel or slander) about the Company, its businesses, officers, directors, or employees; or taking any other actions which might reasonably be expected to cause or lead to unwanted or unfavorable publicity, or otherwise cause harm to the Company or any of the foregoing.

I also understand that my eligibility to receive benefits under certain executive compensation plans and programs of the Company may also be subject to additional restrictive covenants, and my eligibility to receive those benefits continue to be governed by the terms and conditions of the relevant plans and programs, the terms and conditions of which are also incorporated herein by reference, and nothing contained in this Separation Agreement shall be construed to relieve me of my obligations thereunder. I further agree that I will continue to be bound by the terms of any non-competition, non-solicitation, non-disclosure and/or confidentiality agreements in effect on my Separation Date, the terms and conditions of which are incorporated herein by reference.

I acknowledge and agree that compliance with the covenants set forth in this Separation Agreement is necessary to protect the business and goodwill of the Company and that any breach of these covenants will result in irreparable and continuing harm to the Company, for which money damages may not provide adequate relief. Accordingly, in the event of any breach or anticipatory breach of these covenants by me, I agree that the Company shall be entitled to the following particular forms of relief as a result of such breach, in addition to any liquidated damages or other remedies available to it at law or equity: (1) injunctions, both preliminary and permanent, enjoining or restraining such breach or anticipatory breach, and I hereby consent to the issuance thereof forthwith and without bond by any court of competent jurisdiction; and (2) recovery of all reasonable sums and costs, including attorney’s fees, incurred by the Company if it successfully enforces the covenants.

Section 5. RETURN OF COMPANY INFORMATION AND PROPERTY

I agree that on or prior to my Separation Date I returned to Ashland all Company Information and related reports, maps, files, memoranda, and records; credit cards, cardkey passes; door and file keys; computer access codes; software; and other physical or personal property which I received or prepared or helped prepare in connection with my employment.

I further represent that I have not retained and will not retain any copies, duplicates, reproductions, or excerpts thereof, except as otherwise provided above in Section 4. I understand that the term “Company Information” as used in this Separation Agreement refers to information obtained during my employment with Ashland or any other Releasees, and includes (a) “Confidential Information” as more fully defined above; and (b) other technical, business, or financial information, the use or disclosure of which might reasonably be construed to be contrary to the interests of Ashland.

<u>Section 6.</u> **<u>ADVICE TO CONSULT WITH ATTORNEY</u>**

I understand that I am advised to consult with an attorney before signing this General Release.

<u>Section 7.</u> **<u>PERIOD FOR REVIEW AND COVERAGE OF OFFER</u>**

I understand and agree that I have been given at least 21 days to review and consider this General Release. I understand that I may use as much or as little of this period of time as I wish to prior to reaching a decision regarding the signing of this General Release. I understand that if I sign this General Release prior to my Separation Date or if I do not sign, date, and return this General Release by hand, or by a mailing postmarked on or before by **January 21, 2020** the General Release will not be valid and I will not be eligible to receive the special severance benefits under the terms of this special severance offer, and I will not be eligible for any benefits under Ashland's Severance Pay Plan, or under any other severance pay plan or program of Releasees.

<u>Section 8.</u> **<u>EFFECTIVE DATE AND MY RIGHT TO REVOKE GENERAL RELEASE</u>**

In accordance with federal law, I understand that this General Release may be revoked by me at any time within seven (7) calendar days after the date of execution noted below. To be effective, the revocation must be in writing and delivered to Julie Hopkins, Senior Group Counsel – Labor, Employment & Litigation and Chief Privacy Officer, 50 E. RiverCenter Boulevard, Suite 500, Covington, KY 41011, either by hand or mail within a seven (7) day period following my execution of this General Release. If delivered by mail, the recision must be:

1. Postmarked within the seven (7) day period;
2. Properly addressed as noted above; and
3. Sent by Certified Mail, Return Receipt Requested.

I understand that this Separation Agreement and the General Release contained herein, and my acceptance of it shall not become effective or enforceable until the first day immediately following the last day of the seven (7) day revocation period (the "Effective Date").

<u>Section 9.</u> **<u>GOVERNING LAW</u>**

It is agreed that this General Release shall be interpreted in accordance with the laws of the Commonwealth of Kentucky.

<u>Section 10.</u> **<u>PARTIAL INVALIDITY OF THE GENERAL RELEASE</u>**

I agree that if any term or provision of this General Release is determined by a court or other appropriate authority to be invalid, void, or unenforceable for any reason, the remainder of the terms and provisions of this General Release shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

Section 11. **MMSEA REPORTING REQUIREMENTS**

I understand that pursuant to Section 111 of the Medicare, Medicaid, and SCHIP Extension Act of 2007 (MMSEA), if I have applied for Medicare prior to the execution of this Separation Agreement, or if I am likely to become eligible for Medicare within twelve (12) months thereafter, the Centers for Medicare Services will be notified of this Separation Agreement.

Section 12. **COMPLETE AGREEMENT**

It is agreed that the foregoing constitutes the entire agreement between the Employee and Releasees, and that except for those written agreements specifically incorporated herein by reference, there are no other agreements, oral or written, express or implied, relating to any matters covered by this Separation Agreement, or any other agreement in effect and relating to any other matter whatsoever, whether or not within the knowledge or contemplation of either of the Parties at the time of execution of this Separation Agreement.

IMPORTANT NOTICE

I acknowledge that:

- **I have read this General Release and I understand fully its final and binding effect;**
- **The only promises made to me to sign this General Release are those stated herein;**
- **I am signing this General Release knowingly and voluntarily; and**
- **I have no other claim or expectation of any additional pay or benefits incident to my Employment. The benefits I am receiving for this General Release are in lieu of, and fully satisfy, all monetary amounts, if any, to which I might otherwise be entitled under federal or state statute or common law.**

	ASHLAND LLC
/s/ William A. Wulfsohn	/s/ Anne T. Schumann
WILLIAM A. WULFSOHN	Signature of Company Representative
January 7, 2020	SVP, Chief Human Resources and Information Technology Officer
Date of Execution by Employee	Title of Company Representative

Attachment I

SUMMARY OF SPECIAL SEVERANCE BENEFITS,
EMPLOYEE BENEFITS AND MISCELLANEOUS PROVISIONS

On December 31, 2019, (your "Separation Date"), your employment with Ashland ended. After your Separation Date, you will receive severance benefits equal to **104 weeks** of your base pay, at the rate in effect as of your Separation Date (the "Severance Benefit"). Your Severance Benefit is payable to you by Ashland in a lump sum, less applicable withholding of taxes, etc., within five (5) business days following the first day of the seventh calendar month following the month in which your Separation Date occurs.

You are being offered the Severance Benefit and the additional special severance benefits described in this Attachment I in exchange for your promises and covenants contained in this Separation Agreement. You understand and agree that if you fail to properly execute and return this Separation Agreement within the time period specified in Section 7 of this Separation Agreement, or you revoke your acceptance of it within the 7-day window provided in Section 8 of this Separation Agreement, then the Separation Agreement will not become effective, and you will not be eligible for any of the severance benefits described in this Attachment I (including those severance benefits relating to favorable treatment under certain employee benefit plans and programs), or any benefits under Ashland's Severance Pay Plan or any other severance pay plan or program of Releasees.

The following summarizes selected terms and conditions from some of the employee benefit plans in which you may have participated. The actual terms of these plans are in their plan documents. You should refer to the relevant summary plan description for more information on a particular plan and the effect that your severance has with regard to that plan.

In general, you cannot continue participation in any employee benefit plan after your Separation Date. If you were enrolled in a group health plan, you may be able to continue coverage by making what is called a COBRA election. You cannot elect to have any premiums you may have to pay for COBRA coverage deducted from any payments you are receiving under the terms of this Separation Agreement.

MEDICAL AND DENTAL

If you are enrolled in the Medical or Dental Plan on your Separation Date, you will be eligible for COBRA continuation coverage at no cost to you, for a period equal to three (3) weeks for each completed year of service, provided that there is a minimum free coverage period of 20 weeks, and a maximum free coverage period of 52 weeks. Your free COBRA coverage period is **20 weeks**. Additionally, if your free COBRA continuation coverage period extends only partially into a month, your COBRA continuation coverage will be at no cost for that entire month. After your free COBRA continuation coverage ends, you may be eligible to continue coverage at the rates that apply to terminated employees. Generally, the maximum COBRA continuation coverage period is 18 months. The free COBRA continuation coverage period counts toward this 18-month limit.

COBRA continuation coverage is not automatic; to be eligible for COBRA continuation coverage, including the initial period during which coverage is provided at no cost to you, you must first make a timely election of COBRA coverage. You make a timely election by completing and returning the COBRA election form that will be sent to you by the Ashland Benefits Service Center. If you have any questions please contact the Ashland Benefits Service Center at (844) 345-2745 (Monday-Friday 8:00 am – 5:00 pm EST).

HEALTH SAVINGS ACCOUNT

If you are enrolled in a Health Savings Plan on your Separation Date, then thereafter you can continue to make contributions to your HSA so long as you continue to participate in a medical plan that qualifies as a High Deductible Health Plan (HDHP). This could occur as a result of electing COBRA continuation coverage under your current Company-provided medical plan or as a result of your enrollment in a medical plan offered by a third-party that qualifies as a HDHP. Once your coverage under a HDHP ends, your ability to contribute to the HSA for future periods ends. You may be able to make retroactive contributions to the plan if there were prior periods when you could have made contributions but did not do so. Generally, your ability to contribute for periods in a calendar year when you were covered by a HDHP ends on April 15th of the subsequent calendar year. Regardless of whether you make any further contributions to your HSA after your Separation Date, the funds in your HSA are yours to keep, and can be used to pay for eligible medical expenses for you and your tax dependents in accordance with all applicable withdrawal rules. For more information, refer to IRS Publication 969 (www.irs.gov/pub/irs-pdf/p969.pdf) or contact your tax advisor.

LIFE INSURANCE

Your Company provided noncontributory life insurance coverage, contributory life coverage, spouse and dependent child life coverage, and group accidental death and dismemberment coverage will end on your Separation Date.

You may be eligible to continue your noncontributory and/or contributory life insurance coverage, spouse and dependent child life coverages after your Separation Date. Continuing these coverages, though, is strictly between you and the applicable insurance companies that provide this coverage. You have a 31-day window following your Separation Date to arrange to continue these coverages. To find out more about your ability to continue these coverages please contact Ashland's Benefits Department at: benefits@ashland.com or (844) 592-5322. A conversion privilege is not available for the group life accidental death and dismemberment portion of your coverage.

FLEXIBLE SPENDING ACCOUNTS PLAN

If you were a participant in the Flexible Spending Accounts Plan on your Separation Date, then any amount you have remaining in the Dependent Day Care Account and/or the Health Care Account is available to reimburse you for covered services incurred before your Separation Date. Thereafter, you may have rights to continue your Health Care Account coverage by making a COBRA election. Ashland's Employee Benefits Department will provide you with a summary of your COBRA rights that will tell you how to elect to continue coverage under the Health Care Account. A COBRA election can only continue your participation in the Health Care Account through the end of the calendar year in which your Separation Date occurs.

Any amount you have remaining in the Dependent Care Account and/or the Health Care Account is available to reimburse you for covered services incurred before the date your coverage under the particular account ends. Claims for services performed after your coverage ends are not eligible for reimbursement. Claims for reimbursement must be filed by June 30 in the calendar year following the year in which the covered expenses were incurred. Any amounts in your accounts that are not used will be forfeited according to IRS rules.

EMPLOYEE SAVINGS PLAN

Upon your Separation Date, you have a number of withdrawal options. If your account is valued at more than $1,000 on your Separation Date, you have the option of leaving your account in the plan. If your account is valued at $1,000 or less, it will be paid to you as a mandatory lump sum cash-out. If you have an unpaid loan, you may continue to make monthly payments after your Separation Date. Fidelity will send you payment instructions approximately 4 weeks following your Separation Date. To receive Savings Plan information, call Fidelity Investments at (800) 827-4526. You may also access Savings Plan information on the internet by clicking “Access My Account” under NetBenefits at www.401k .com.

LONG TERM DISABILITY, SUPPLEMENTAL LONG TERM DISABILITY; VOLUNTARY ACCIDENTAL DEATH AND DISMEMBERMENT; OCCUPATIONAL ACCIDENTAL DEATH AND DISMEMBERMENT; TRAVEL ACCIDENT INSURANCE AND ADOPTION ASSISTANCE PROGRAM

If you are enrolled in one or more of these plans on your Separation Date, your eligibility for coverage under the applicable plan(s) ends on your Separation Date.

If you were covered by the voluntary accidental death and dismemberment plan you may be eligible for conversion privileges within 31 days of your Separation Date. To find out if this applies to you, or to obtain contact information for the applicable insurance company, please contact Ashland’s Benefits Department at: benefits@ashland.com or (844) 592-5322.

VISION COST ASSISTANCE PLAN

If you are enrolled for this coverage, it will end on your Separation Date, although you may be able to elect COBRA continuation of coverage at that time. After your Separation Date Ashland's Vision Plan COBRA administrator will provide you with a summary of your COBRA rights that will tell you how to elect to continue coverage.

MISCELLANEOUS PROVISIONS

UNUSED VACATION/SICK PAY

Because your employment is terminating on the last day of the calendar year, you will receive a lump sum payment for your accrued 2020 vacation, and up to 40 hours of unused 2019 vacation. In accordance with Ashland's vacation and sick pay policies, you will not be paid for any additional unused 2019 vacation or any unused sick pay.

ANNUAL (SHORT TERM) INCENTIVE PAY

If and when payments are made, you will be eligible to receive a pro-rata payment under the annual incentive compensation plan in which you were a participant, which will be calculated based on that portion of FY 2020 during which you were actively employed. Any payment will be made based on actual performance for FY 2020 and in accordance with all other terms and conditions of the plan, including with respect to timing of payments.

EQUITY AWARDS

With respect to your existing unvested equity awards, you will receive accelerated, pro-rata vesting of the outstanding portion of those RSU and SAR awards, calculated based on the portion of the vesting period that elapsed from the date of the applicable grant(s) through your Separation Date. Such vested awards will be settled as soon as practicable, and no later than fifteen days following, the Effective Date of the Separation Agreement. The non-accelerated portions of your current unvested equity awards will be forfeited.

Once vested, shares you received via RSU awards are yours to hold or sell without a time limitation. However as a result of your separation from employment, you must exercise any previously vested SARs which you held on your Termination Date, as well as any SARs which become vested under the accelerated vesting provisions provided for above, within the exercise window provided under the applicable grant(s) that applies to terminated employees. **Any vested SARs which are not exercised within the applicable window provided to terminated employees will be forfeited.** If you have any questions concerning the applicable window(s) for exercising your vested SARs, please contact Shea Blackburn in the Executive Compensation group at 859-815-3720.

PERFORMANCE UNIT AWARDS (LTIP)

If and when payments are made to active employees, if eligible, you will receive a pro-rata payment under Ashland's Long Term Incentive Plan (LTIP) for each outstanding grant made to you under the LTIP. All payments under the LTIP will be pro-rated through your Separation Date, in accordance with the Company's customary pro-rata practices, calculated based on actual plan measures through the entire applicable plan cycle (including adjustments for unusual items), and made consistent with all other terms and conditions specified in the LTIP and the applicable award agreement, including with respect to timing of payment.

OTHER EXECUTIVE COMPENSATION PLANS OR PROGRAMS

Your eligibility to receive benefits under any other executive compensation plans or programs offered by Ashland is governed exclusively by the terms and conditions of such plans, and nothing in this Separation Agreement impairs any rights you may otherwise have under those plans or programs.

CREDIT UNION

If you are a member of the Credit Union at the time of your Separation Date, you will be able to participate in the Credit Union after your Separation Date. You will need to contact the Credit Union directly to discuss handling of Credit Union business.

MATCHING GIFTS

Participation in the Matching Gifts Program will cease upon your Separation Date.

EMPLOYEE ASSISTANCE PROGRAM

Your participation in the Employee Assistance Program will cease upon your Separation Date.

EXPENSES

If you have incurred any expenses that are reimbursable by Ashland, you should submit an approved Expense Report, along with required receipts immediately. In the event there is an outstanding balance owed to Ashland for any charges on your corporate credit card or purchasing card account(s) that are not properly reimbursable under the Company's reimbursement policies, you understand and agree that Ashland will make deductions from your severance benefits in order to cover such balance(s).

OUTPLACEMENT ASSISTANCE

You are being provided with executive level outplacement assistance services for the 12 month period following your Separation Date, to assist you in your search and transition into other employment. Ashland will pay up to $5,200 for these services which will be provided by the third-party vendor of your choice. When submitting invoices for these services to Ashland, you may either request that Ashland reimburse you for the costs you have incurred, or alternatively request that Ashland remit payment for the invoiced services directly to the outplacement vendor. Please contact your Human Resources Representative for more information about this benefit.

FINANCIAL PLANNING

You will continue to receive financial planning from AYCO for calendar year 2020 at Ashland's expense, and in addition you will be reimbursed for up to $10,000 of eligible financial planning expenses which you incur through the end of calendar year 2020.

UNEMPLOYMENT COMPENSATION

State laws control whether you are eligible to receive unemployment compensation. If you decide to file for unemployment compensation, Ashland is obligated to inform the state's unemployment commission of the nature of your separation from employment.

VERIFICATION OF EMPLOYMENT

Ashland will only verify dates of employment and last job title, department and work location. Ashland will only release other information concerning your employment as required by law, or at your request and with your written consent.

SECTION 409A

It is intended that the special severance benefits described in this Attachment I shall comply with, or be exempt from, the requirements of Section 409A. In no event, however, shall this paragraph or any provisions of this Attachment I or the Separation Agreement be construed to require Ashland to provide any gross-up for tax consequences under Section 409A of the Code of payments made under this Separation Agreement and Ashland shall have no responsibility for tax consequences under Section 409A of the Code to you (or your beneficiaries) resulting from the terms or operation of this Attachment I or the Separation Agreement. Notwithstanding anything to the contrary in this Attachment I or the Separation Agreement, if at the time of your separation from employment, you are a "specified employee," as defined in Section 1.409A-1(i) of the Treasury Regulations, any and all amounts payable under this Attachment I or the Separation Agreement on account of such separation from service that constitute deferred compensation and would (but for this provision) be payable within six (6) months following the date of your separation from employment, shall instead be paid on the next business day following the expiration of such six-month period or, if earlier, upon your death; except (A) to the extent of amounts that do not constitute a deferral of compensation within the meaning of Section 1.409A-1(b) of the Treasury Regulations, as determined by Ashland in its reasonable good-faith discretion or (B) other amounts or benefits that are not subject to the requirements of Section 409A. With regard to any provision herein that provides for reimbursement of costs and expenses or in-kind benefits, except as permitted by Section 409A: (1) the right to reimbursement or in-kind benefits shall not be subject to liquidation or exchange for another benefit; (2) the amount of expenses eligible for reimbursement, or in-kind benefits, provided during any taxable year shall not affect the expenses eligible for reimbursement, or in-kind benefits to be provided, in any other taxable year; and (3) such payments shall be made on or before the last day of the taxable year following the taxable year in which the expense occurred, or such earlier date as required hereunder.

FUTURE CORRESPONDENCE

Any future information from the Company will be sent to the address you currently have on file (i.e. employee benefit information, W-2's, etc.). Should your address change in the near future you should contact Ashland's Benefits Department at: benefits@ashland.com or (844) 592-5322. If you have an account established with one of the Company's benefits vendors, you should also contact that vendor to advise of any changes to your physical or e-mail addresses.

IMPORTANT NOTE ABOUT THIS SUMMARY

Details on the benefits from the employee benefit plans discussed above are provided in the summary plan description booklet for each plan. In all events, the rights and obligations of Ashland, and all covered employees, beneficiaries or other claimants are governed solely by the terms of the official documents under which each particular plan, policy or program is operated.

R E M I N D E R

Once You Have Signed Both Originals of This Document, Please Return Both Original Signed Agreements to:

Anne Schumann
Human Resources
Ashland LLC
500 Hercules Road
Building 8134
Wilmington, Delaware 19808

A Fully Executed Original Agreement will be returned to your home address.

Exhibit 10.4

Ashland Global Holdings Inc.
50 E. RiverCenter Blvd.
Covington, Kentucky 41011

January ___, 2020

Employee Name
Employee Address

Dear _________:

RE: Change in Control Agreement

Ashland Global Holdings Inc. (“Ashland” or the “Company”) considers the establishment and maintenance of a sound and vital management to be essential to protecting and enhancing the best interest of the Company and its shareholders. In this regard, the Company recognizes that, as is the case with many publicly-held corporations, the possibility of a Change in Control of the Company does exist and that such possibility, and the uncertainty and questions which a Change in Control of the Company may raise among management, may result in the departure or distraction of management personnel to the detriment of the Company and its shareholders. In addition, difficulties in attracting and retaining new senior management personnel may be experienced. Accordingly, on the basis of the recommendation of the Compensation Committee of the Board, the Board has determined that appropriate steps should be taken to reinforce and encourage the continued attention and dedication of certain members of the Company's management, including you, to their assigned duties without distraction in the face of the potentially disruptive circumstances arising from the possibility of a Change in Control of the Company.

In order to encourage you to remain in the employ of the Company or a Subsidiary thereof, as applicable, this Agreement sets forth those benefits which the Company will provide to you in the event your employment terminates after or as a result of a Change in Control of the Company under the circumstances specified in this Agreement.

SECTION A. DEFINITIONS

1. "Agreement" shall mean this letter agreement, which is a complete, entire and immediate substitute for any prior agreement you may have had with the Company addressing the benefits you would receive in the event of your termination from employment as a result of a Change in Control of the Company.

2. "Board" shall mean the Company's Board of Directors.

3. "Cause" shall occur hereunder only upon:

(a) the willful and continued failure by you to substantially perform your duties with the Company (other than any such failure resulting from your incapacity due to physical or mental illness or injury) after a written demand for substantial performance is delivered to you by the Board which specifically identifies the manner in which the Board believes that you have not substantially performed your duties;

(b) the willful engaging by you in gross misconduct materially and demonstrably injurious to the Company after a written demand to cease such misconduct is delivered to you by the Board; or

(c) your conviction of or the entering of a plea of nolo contendre to the commission of a felony involving moral turpitude.

For purposes of this paragraph 3, no act, or failure to act, on your part shall be considered "willful" unless done, or omitted to be done, by you not in good faith and without reasonable belief that your action or omission was in the best interest of the Company. Notwithstanding the foregoing, you shall not be deemed to have been terminated for Cause unless and until there shall have been delivered to you a copy of a resolution duly adopted by the affirmative vote of not less than three-quarters of the entire membership of the Board at a meeting of the Board called and held for such purpose, alone or in conjunction with any other purpose, (after at least 20 days prior notice to you and an opportunity for you, together with your counsel, to be heard before the Board), finding that in the good faith opinion of the Board you failed to perform your duties or engaged in misconduct as set forth above in subparagraph (a) or (b) of this paragraph, and that you did not correct such failure or cease such misconduct after being requested to do so by the Board, or as set forth in subparagraph (c) of this paragraph, finding that you have been convicted of or have entered a plea of nolo contendre to the commission of a felony involving moral turpitude.

4. "Change in Control of the Company" shall be deemed to have occurred if:

(a) there shall be consummated:

(i) any consolidation or merger of the Company (a "Business Combination"), other than a consolidation or merger of the Company into or with a direct or indirect wholly-owned subsidiary, in which the shareholders of the Company own, directly or indirectly, less than 50% of the then outstanding shares of common stock of the Business Combination that are entitled to vote generally for the election of directors of the Business Combination or pursuant to which shares of the Company's Common Stock would be converted into cash, securities or other property, other than a merger of the Company in which the holders of the Company's Common Stock immediately prior to the merger have substantially the same proportionate ownership of common stock of the surviving corporation immediately after the merger; or

(ii) any sale, lease, exchange or transfer (in one transaction or a series of related transactions) of all or substantially all the assets of the Company, provided, however, that no sale, lease, exchange or other transfer of all or substantially all the assets of the Company shall be deemed to occur unless assets constituting 80% of the total assets of the Company are transferred pursuant to such sale, lease, exchange or other transfer;

(b) the shareholders of the Company shall approve any plan or proposal for the liquidation or dissolution of the Company;

(c) any Person, other than the Company or a Subsidiary thereof or any employee benefit plan sponsored by the Company or a Subsidiary thereof, shall become the beneficial owner (within the meaning of Rule 13d-3 under the Exchange Act) of securities of the Company representing 20% or more of the combined voting power of the Company's then outstanding securities ordinarily (and apart from rights accruing in special circumstances) having the right to vote in the election of directors, as a result of a tender or exchange offer, open market purchases, privately-negotiated purchases or otherwise, without the approval of the Board; or

(d) at any time during a period of two (2) consecutive years, individuals who at the beginning of such period constituted the Board shall cease for any reason to constitute at least a majority thereof, unless the election or the nomination for election by the Company's shareholders of each new director during such two-year period was approved by a vote of at least two-thirds of the directors then still in office who were directors at the beginning of such two-year period.

(e) Notwithstanding the foregoing, a “Change in Control of the Company” shall not be deemed to have occurred by virtue of:

(i) the consummation of any transaction or series of integrated transactions immediately following which the record holders of the Common Stock of the Company immediately prior to such transaction or series of transactions continue to have substantially the same proportionate ownership in an entity which owns all or substantially all of the assets of the Company immediately following such transaction or series of transactions; or

(ii) the repurchase by the Company of outstanding shares of Common Stock or other securities pursuant to a tender or exchange offer.

5. "COBRA" shall mean the Consolidated Omnibus Budget Reconciliation Act, as amended.

6. "Common Stock" shall mean the common stock, par value $.01 per share, of the Company.

7. "Company" shall mean Ashland Global Holdings Inc. and any successor to its business and/or assets which executes and delivers the agreement provided for in Section D, paragraph 1 hereof or which otherwise becomes bound by all the terms and provisions of this Agreement by operation of law.

8. "Competitive Activity" shall have the meaning as set forth in Section C, paragraph 4.

9. "Competitive Operation" shall have the meaning as set forth in Section C, paragraph 4.

10. "Confidential Information" shall mean information relating to the Company's, its divisions' and Subsidiaries' and their successors' business practices and business interests, including, but not limited to, customer and supplier lists, business forecasts, business and strategic plans, financial and sales information, information relating to products, process, equipment, operations, marketing programs, research, or product development, engineering records, computer systems and software, personnel records or legal records.

11. "Cutback" shall have the meaning as set forth in Section D, paragraph 18.

12. "Date of Termination" shall mean:

(a) if this Agreement is terminated for Disability, thirty (30) days after the Notice of Termination is given by the Company to you (provided that you shall not have returned to the performance of your duties on a full-time basis during such thirty (30) day period);

(b) if your employment is terminated for Good Reason by you, the date specified in the Notice of Termination you provide to the Company, which must be no more than 90 days after the date on which notice of your intent to terminate your employment for Good Reason is provided to the Company, as provided in Section A paragraph 15, and Section C, paragraph 2(b) herein; or

(c) if your employment is terminated for any other reason, the date on which a Notice of Termination is received by you unless a later date is specified.

For purposes of applying the provisions of this paragraph 12, except in the case of Disability, your employment is terminated when you stop performing active service for the Company, which shall be deemed to occur when it is reasonably anticipated that your services to the Company will permanently decrease to 20% or less of the average amount of services you performed for the Company during the immediately preceding 36 month period (or your total employment if less than 36 months).

13. "Disability" shall occur when: if, as a result of your incapacity due to physical or mental illness or injury, you shall have been absent from your duties with the Company for six (6) consecutive months and shall not have returned to full-time performance of your duties within thirty (30) days after written notice is given to you by the Company.

14. "Exchange Act" shall mean the Securities Exchange Act of 1934, as amended.

15. "Good Reason" shall mean the occurrence of any of the following without your express written consent:

(a) a significant diminution of your positions, duties, responsibilities or status with the Company as in effect immediately prior to a Change in Control of the Company, or a diminution in your titles or offices as in effect immediately prior to a Change in Control of the Company or any removal of you from, or any failure to reelect you to, any of such positions following a Change in Control of the Company;

(b) a reduction of fifteen (15) percent or more to your base salary in effect immediately prior to a Change in Control of the Company;

(c) the failure by the Company or a Subsidiary thereof, as applicable, to continue in effect any incentive plan or arrangement (including without limitation, the Company's Incentive Compensation plan, annual bonus and contingent bonus arrangements and credits and the right to receive performance awards and similar incentive compensation benefits) in which you are participating at the time of a Change in Control of the Company (or to substitute and continue other plans or arrangements providing you with substantially similar benefits), except as otherwise required by the terms of such

plans as in effect at the time of any Change in Control of the Company, or the taking of any action by the Company which would adversely affect your participation in or materially reduce your benefits under any such plan;

(d) the failure by the Company to continue in effect any plan or arrangement to receive securities of the Company (including, without limitation, any plan or arrangement to receive and exercise stock options, stock appreciation rights, restricted stock or grants thereof or to acquire stock or other securities of the Company) in which you are participating at the time of a Change in Control of the Company (or to substitute and continue plans or arrangements providing you with substantially similar benefits), except as otherwise required by the terms of such plans as in effect at the time of any Change in Control of the Company; or the taking of any action by the Company which would adversely affect your participation in or materially reduce your benefits under any such plan;

(e) the relocation after a Change in Control of the Company of your principal place of business to a location that exceeds a 50 mile radius from your principal place of business before the Change in Control of the Company, except for required travel on the Company's business to an extent substantially consistent with your business travel obligations as of immediately prior to such Change in Control of the Company;

(f) any breach by the Company of any material provision of this Agreement; or

(g) any failure by the Company to obtain the assumption of this Agreement by any successor or assign of the Company as described in Section D, paragraph 1.

Provided that you and the Company agree that Good Reason shall not exist unless and until you provide the Company with written notice of the act(s) alleged to constitute Good Reason within ninety (90) days of your knowledge of the occurrence of such act(s), as provided under Section C, paragraph 2(a) herein, and the Company fails to cure such acts within thirty (30) days of receipt of such notice. Further, if the Company fails to cure such act(s) within this thirty (30) day period, then you must exercise the right to terminate your employment for Good Reason within sixty (60) days thereafter, in order for the termination to be for Good Reason.

16. "Notice of Good Reason" shall mean a written notice which shall indicate the specific provision(s) in this Agreement relied upon and shall set forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of your employment for “Good Reason” under the provision(s) so indicated.

17. "Notice of Termination" shall mean a written notice which shall indicate the specific termination provision in this Agreement relied upon and shall set forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of your employment under the provision so indicated. For purposes of applying the provisions of this paragraph 17, the determination of when your employment is terminated shall be made consistent with the Section 409A Provisions and the provisions of Section A, paragraph 12.

18. "Person" shall have the meaning as set forth in the Sections 13(d) and 14(d)(2) of the Exchange Act.

19. "Qualifying Termination" shall mean the termination of your employment after a Change in Control of the Company while this Agreement is in effect, unless such termination is (a) by reason of your death or Disability, (b) by the Company for Cause, or (c) by you other than for Good Reason.

20. "Section 409A Provisions" shall mean those statutory provisions of the Internal Revenue Code of 1986 (as amended) contained in §409A thereof and the guidance promulgated by the U.S. Department of Treasury or any subdivision thereof interpreting §409A.

21. "Subsidiary" shall mean any corporation of which more than 20% of the outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether or not at the time capital stock of any other class or classes of such corporation shall or might have voting power upon the occurrence of any contingency) is at the time directly or indirectly owned by the Company, by the Company and one or more other Subsidiaries, or by one or more other Subsidiaries.

SECTION B. TERM AND BENEFITS

This Agreement shall be in effect for two (2) years from the date you accept this Agreement and shall automatically renew for successive one (1) year periods on the first day of each month. This Agreement may be terminated by either party provided that at least fifteen (15) days advance written notice is given by either party to the other party hereto prior to the commencement of the next succeeding one (1) year period, in which case the Agreement shall terminate at the end of such next succeeding one (1) year period. During the term of employment hereunder, you agree to devote your full business time and attention to the business and affairs of the Company and to use your best efforts, skills and abilities to promote its interests.

This Agreement shall automatically terminate, without additional notice, in the event of your death, Disability, or upon the effective date of your retirement in the event you retire at your election or in accordance with the Company's generally applicable retirement policies, as in effect from time to time. Notwithstanding the first sentence of this paragraph and the first and second sentences of this Section B, if a Change in Control of the Company should occur while you are still an employee of the Company or a Subsidiary thereof, and while this Agreement is in effect, then this Agreement shall continue in effect from the date of such Change in Control of the Company for a period of two years. No benefits shall be payable hereunder unless there shall have been a Change in Control of the Company and your employment by the Company or a Subsidiary thereof, as applicable, shall thereafter terminate in accordance with Section C hereof.

SECTION C. TERMINATION FOLLOWING CHANGE IN CONTROL

1. Qualifying Termination. If your termination is a Qualifying Termination, you shall be entitled to receive the payments and benefits provided in this Section.

2. Required Notices.

(a) Notice of Good Reason. Notice of Good Reason following a Change in Control of the Company, as provided for in Section A, paragraphs 15 and 16, shall be communicated by written Notice of Good Reason to the Company within the time limits provided in Section A, paragraph 15, and shall not be effective without such timely Notice of Good Reason.

(b) Notice of Termination. Any termination of your employment following a Change in Control of the Company shall be communicated by written Notice of Termination to the other party hereto. No termination shall be effective without such Notice of Termination.

3. Compensation Upon Termination After a Change in Control.

(a) If your termination is a Qualifying Termination, then as consideration for and subject to your obligation to abide by the provisions contained in Section C, paragraph 4 (a) and (b) of this Agreement following a Qualifying Termination, the Company or the Subsidiary by which you were employed, as applicable, shall pay to you as severance pay (and without regard to the provisions of any benefit or incentive plan), in a lump sum cash payment within five (5) business days following the first day of the seventh calendar month following the month in which your Date of Termination occurs, an amount equal to three (3) times the sum of (i) your highest annual base compensation plus (ii) the highest target annual incentive compensation (expressed as a percentage of base compensation for all applicable incentive compensation plans) in respect of the three (3) fiscal years preceding the fiscal year in which your Date of Termination occurs.

(b) If your termination is a Qualifying Termination, the Company shall, in addition to the payments required by the preceding paragraph:

(i) provide for continuation of your and your eligible dependents' participation at regular employee rates, in effect from time to time, in all of the Company's medical, dental and group life plans or programs in which you were participating immediately prior to your Date of Termination for a period ending on the December 31 of the second calendar year following the calendar year in which your Date of Termination occurred and any entitlement to COBRA continuation coverage under the medical and dental plans shall run concurrently with said period; provided, however, that said continuation of coverage in the medical and dental plans during all or part of such period shall be charged at the full cost for such coverage (meaning the active employee contribution and the Company's contribution) if the charging of active employee rates for such coverage during all or part of such period would result in a violation of the Section 409A Provisions. In the event that your continued participation in any such plan or program is for whatever reason impossible, the Company shall at that time, or at the earliest time permitted that will not trigger a tax or penalty under the Section 409A Provisions, arrange upon comparable terms to provide you with benefits substantially equivalent on an after-tax basis to those which you and your eligible dependents are, or become, entitled to receive under such plans and programs;

(ii) provide for payment in cash of any performance unit/share awards in existence on your Date of Termination, calculated at target performance, less any amounts paid to you under the applicable performance unit/share plan upon a Change in Control of the Company pursuant to the provisions of such plan; provided, however, if the Company should determine that the said payment would constitute deferred compensation under the Section 409A Provisions, then said payment shall be made no earlier than the first day of the seventh calendar month after the calendar month in which the Date of Termination occurs, or the earliest time permitted that will not trigger a tax or penalty under the Section 409A Provisions;

(iii) provide for payment in cash of any incentive compensation (a) earned for the fiscal year during which the Change in Control of the Company occurred and any prior fiscal years for which you have not yet received payment, and (b) payment of the pro-rata portion (through your Date of Termination) of any incentive compensation for the fiscal year in which your Date of Termination occurs calculated on the basis of the target bonus percentage of base compensation in the applicable incentive compensation plan (or plans); provided, however, if the Company should determine that the said payment would constitute deferred compensation under the Section 409A Provisions, then said payment shall be made no earlier than the first day of the seventh calendar month after the calendar month in which the Date of Termination occurs, or the earliest time permitted that will not trigger a tax or penalty under the Section 409A Provisions;

(iv) provide benefits or compensation under any compensation plan, arrangement or agreement not in existence as of the date hereof but which may be established by the Company prior to your Date of Termination at such time as payments are made thereunder to the same extent as if you had been a full-time employee on the date such payments would otherwise have been made or benefits vested; provided, however, if the Company should determine that the said payment would constitute deferred compensation under the Section 409A Provisions, then said payment shall be made no earlier than the first day of the seventh calendar month after the calendar month in which the Date of Termination occurs, or the earliest time permitted that will not trigger a tax or penalty under the Section 409A Provisions;

(v) for one (1) year after your Date of Termination, provide and pay for outplacement services, by a firm reasonably acceptable to you, consistent with those that have historically been offered to displaced employees generally by the Company under substantially the same terms and fee structure (but limited in an amount not to exceed fifteen (15) percent of your annual base compensation for the year in which your Date of Termination occurs or fifteen (15) percent of your annual base compensation as of immediately before the Change in Control of the Company, if greater) as is consistent with an employee in your then current position (or, if higher, your position immediately prior to the Change in Control of the Company);

(vi) for one (1) year after your Date of Termination, provide and pay for financial planning services, by a firm reasonably acceptable to you, that have historically been offered to you under substantially the same terms and fee structure as is consistent with an employee in your then current position (or, if higher, your position immediately prior to the Change in Control of the Company);

(vii) pay to you an amount equal to the value of all unused, earned and accrued vacation as of your Date of Termination pursuant to the company's policies in effect immediately prior to the Change in Control of the Company; provided, however, said payment shall be made no earlier than the first day of the seventh calendar month after the calendar month in which the Date of Termination occurs, or the earliest time permitted that will not trigger a tax or penalty under the Section 409A Provisions; and

(viii) provide for the immediate vesting of all stock options, restricted stock, restricted stock units and stock appreciation rights held by you, as of your Date of Termination, under any Company incentive compensation plan or other stock option plan and stock appreciation rights plan, and all such stock options and stock appreciation rights shall be exercisable for the remaining terms of the said options and rights. In the event such immediate vesting is not permitted under law or the applicable benefit plan or award agreement, the Company shall provide a payment to you in cash of an amount equal to the value of the equity-based compensation awards that would otherwise be forfeited as a result of your Qualifying Termination, based on the closing price of the Company’s stock on your Date of Termination; provided, however, if the Company should determine that the said payment would constitute deferred compensation under the Section 409A Provisions, then said payment shall be made no earlier than the first day of the seventh calendar month after the calendar month in which the Date of Termination occurs, or the earliest time permitted that will not trigger a tax or penalty under the Section 409A Provisions.

(c) Unless otherwise provided in this Agreement or in the applicable compensation or stock option plan or program, all payments shall be made to you within thirty (30) days after your Date of Termination. The benefits in this Agreement are in addition to all accrued and vested benefits to which you are entitled under any of the Company's plans and arrangements (to the extent accrued and vested benefits are relevant under the particular plan or arrangement), including but not limited to, the accrued vested benefits you are eligible and entitled to receive under any of the Company's qualified and non-qualified benefit or retirement plans, or any successor plans in effect on your Date of Termination hereunder. For these purposes, accrued and vested benefits shall include any extra, special or additional benefits under such qualified and nonqualified benefit or retirement plans that become due because of the Change in Control of the Company.

(d) You shall not be required to mitigate the amount of any payment provided for in this Section by seeking other employment or otherwise, nor shall the amount of any payment provided for in this Section be reduced by any compensation earned by you as the result of employment by another employer after your Date of Termination, or otherwise. Except as provided herein, the Company shall have no right to set off against any amount owing hereunder any claim which it may have against you.

4. Certain Restrictions

(a) Competitive Activity. In consideration of the foregoing, you agree that if your termination from employment is a Qualifying Termination, then during a period ending 24 months following your Date of Termination (the “Non-Compete Period”) you shall not, directly or indirectly, engage in any Competitive Activity. If you engage in any Competitive Activity during the Non-Compete

Period, the Company shall be entitled to recover any benefits paid to you under paragraph 3(a) of this Section C. For purposes of this Agreement, "Competitive Activity" shall mean your participation, without the written consent of the General Counsel of the Company, in the management of any business operation of any enterprise if such business operation (a "Competitive Operation") engages in substantial and direct competition with any business operation actively conducted by the Company or its divisions and Subsidiaries on your Date of Termination. For purposes of this paragraph, a business operation shall be considered a Competitive Operation if such business sells a competitive product or service which constitutes (i) 15% of that business's total sales, or (ii) 15% of the total sales of any individual subsidiary or division of that business and, in either event, the Company's sales of a similar product or service constitutes either 15% of the total sales of the Company or 15% of the total sales of any individual Subsidiary or division of the Company. Notwithstanding the foregoing, a “Competitive Activity” shall not include the mere ownership of securities in any enterprise, or participation in the management of any enterprise or any business operation thereof, other than in connection with a Competitive Operation of such enterprise.

(b) Non-Solicitation and Non-Interference. In consideration of the foregoing, you agree that if your termination from employment is a Qualifying Termination, then during a period ending 24 months following your Date of Termination (the “Non-Solicitation and Non-Interference Period”) you shall not, without the prior written consent of the General Counsel of the Company, directly or indirectly:

(i) solicit for employment (which shall include services as an employee, independent contractor or in any other like capacity) any person employed by the Company or its affiliated companies as of the date of such solicitation; or

(ii) solicit any customer or other person with a business relationship with the Company or any of its affiliated companies to terminate, curtail or otherwise limit such business relationship; or

(iii) in any other manner interfere in the business relationship the Company or any of its affiliated companies have with any customer or any third party service provider or other vendor.

If you engage in any such solicitation or interference during the Non-Solicitation and Non-Interference Period, the Company shall be entitled to recover any and all amounts paid to you under paragraph 3(a) of this Section C.

(c) Injunctive Relief. In the event of a breach or threatened breach of this paragraph 4 of this Section C, each party agrees that the non-breaching party shall be entitled to injunctive relief in a court of appropriate jurisdiction to remedy any such breach or threatened breach, the parties acknowledging that damages would be inadequate and insufficient.

SECTION D. MISCELLANEOUS

1. Assumption of Agreement. The Company will require any successor in interest: (a) to all or substantially all of the business and/or assets of the Company (whether direct or indirect, by purchase, merger, consolidation, share exchange or otherwise); or (b) to any portion of the business or assets of the Company to which your services relate, as a result of the creation of an independent company through the sale or distribution of new shares of an existing business or other unit of the Company; in each case, by agreement in form and substance satisfactory to you, expressly to assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be

required to perform it if no such succession had taken place. Failure of the Company to obtain such agreement prior to the effectiveness of any such succession shall be a breach of a material provision of this Agreement.

2. Confidentiality. All Confidential Information which you acquire or have acquired in connection with or as a result of the performance of services for the Company, whether under this Agreement or prior to the effective date of this Agreement, shall be kept secret and confidential by you unless:

(a) the Company otherwise consents;

(b) the Company breaches any material provision of this Agreement, in which case you shall be entitled to make limited disclosure of Confidential Information only to the extent necessary to seek legal relief for such breach;

(c) you are legally required to disclose such Confidential Information by a court of competent jurisdiction;

(d) you disclose such Confidential Information to the Securities and Exchange Commission, to the extent necessary to report suspected or actual violations of U.S. securities laws; or

(e) your disclosure of Confidential Information is protected under the whistleblower provisions of any other state or federal laws or regulations.

You understand that if you make a disclosure of Confidential Information that is covered under subparagraph (d) or (e) above, you are not required to inform the Company, in advance or otherwise, that you have made such disclosure(s), and nothing in this Agreement shall prohibit you from maintaining the confidentiality of a claim with a governmental agency that is responsible for enforcing a law, or cooperating, participating or assisting in any governmental or regulatory entity investigation or proceeding. This covenant of confidentiality shall extend beyond the term of this Agreement and shall survive the termination of this Agreement for any reason and shall continue for so long as the information you have acquired remains Confidential Information. If you breach this covenant of confidentiality, the Company shall be entitled to recover from any benefits paid to you under this Agreement its damages resulting from such breach.

3. Employment. You agree to be bound by the terms and conditions of this Agreement and to remain in the employ of the Company or a Subsidiary thereof, as applicable, during any period following any public announcement by any person of any proposed transaction or transactions which, if effected, would result in a Change in Control of the Company until a Change in Control of the Company has taken place. However, nothing contained in this Agreement shall impair or interfere in any way with the right of the Company or a Subsidiary thereof, as applicable, to terminate your employment prior to a Change in Control of the Company.

4. Arbitration. Any controversy or claim arising out of or relating to this Agreement, or the breach thereof, shall be settled exclusively by arbitration in accordance with the Center for Public Resources' Model ADR Procedures and Practices, and judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. Notwithstanding the foregoing, the Company shall not be restricted from seeking equitable relief, including injunctive relief as set forth in paragraph 5 of

this Section, in the appropriate forum. Any cost of arbitration will be paid by the Company. In the event of a dispute over the existence of Good Reason or Cause after a Change in Control of the Company, then the Company, or the Subsidiary by which you are employed, as applicable, shall continue to pay your salary, bonuses and plan benefits pending resolution of the dispute. If you prevail in the arbitration, the amounts due to you under this Agreement are to be immediately paid to you.

5. Injunctive Relief. You acknowledge and agree that the remedy of the Company at law for any breach of the covenants and agreements contained in paragraph 2 of this Section D and in Section C, paragraph 4 will be inadequate, and that the Company will be entitled to injunctive relief against any such breach or any threatened, imminent, probable or possible breach. You represent and agree that such injunctive relief shall not prohibit you from earning a livelihood acceptable to you.

6. Notice. For the purposes of this Agreement, notices and all other communications provided for in this Agreement shall be in writing and shall be deemed to have been duly given when delivered or mailed by United States registered mail, return receipt requested, postage prepaid, addressed to the respective addresses set forth on the first page of this Agreement, provided that all notices to the Company shall be directed to the attention of the General Counsel of the Company, or to such other address as either party may have furnished to the other in writing in accordance herewith, except that notices of change of address shall be effective only upon receipt.

7. Indemnification. The Company will indemnify you to the fullest extent permitted by the laws of the State of Delaware and the existing By-laws of the Company, in respect of all your services rendered to the Company and its divisions and Subsidiaries prior to your Date of Termination. You shall be entitled to the protection of any insurance policies the Company now or hereafter maintains generally for the benefit of its directors, officers and employees (but only to the extent of the coverage afforded by the existing provisions of such policies) to protect against all costs, charges and expenses whatsoever incurred or sustained by you in connection with any action, suit or proceeding to which you may be made a party by reason of your being or having been a director, officer or employee of the Company or any of its divisions or Subsidiaries during your employment therewith.

8. Further Assurances. Each party hereto agrees to furnish and execute such additional forms and documents, and to take such further action, as shall be reasonably and customarily required in connection with the performance of this Agreement or the payment of benefits hereunder.

9. Miscellaneous. No provision of this Agreement may be modified, waived or discharged unless such waiver, modification or discharge is agreed to in writing signed by you and such officer(s) as may be specifically designated by the Board. No waiver by either party hereto at any time of any breach by the other party hereto of, or compliance with, any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the same or at any prior or subsequent time. No agreements or representations, oral or otherwise, express or implied, with respect to the subject matter hereof have been made by either party, which are not set forth expressly in this Agreement.

10. Termination of other Agreements. Upon execution by both parties, this Agreement shall terminate all prior employment and severance agreements, between you and the Company and its divisions or Subsidiaries.

11. Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect.

12. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be an original but all of which together will constitute one and the same instrument.

13. Legal Fees And Expenses. Any other provision of this Agreement notwithstanding, the Company shall pay all legal fees and expenses which you may incur as a result of the Company's unsuccessful contesting of the validity, enforceability or your interpretation of, or determinations under, any part of this Agreement.

14. Section 409A Provisions And Compliance. The intent of the parties is that this agreement comply with the Section 409A Provisions or is exempt therefrom, and accordingly, to the maximum extent permitted, this Agreement shall be interpreted to be in accordance therewith. Notwithstanding any other provision of this Agreement to the contrary, the parties shall in good faith amend this Agreement to the limited extent necessary to comply with the requirements of the Section 409A Provisions in order to ensure that any amounts paid or payable hereunder are not subject to the additional 20% income tax thereunder while maintaining to the maximum extent practicable the original intent of this Agreement. With regard to any provision herein that provides for reimbursement of costs and expenses or in-kind benefits, except as permitted by the Section 409A Provisions: (a) the right to reimbursement or in-kind benefits shall not be subject to liquidation or exchange for another benefit, (b) the amount of expenses eligible for reimbursement, or in-kind benefits, provided during any taxable year shall not affect the expenses eligible for reimbursement, or in-kind benefits to be provided, in any other taxable year, and (c) such payments shall be made on or before the last business day of your taxable year following the taxable year in which the expense occurred, or such earlier date as required hereunder.

15. Governing Law. This Agreement shall be governed in all respects by the laws of the State of Delaware.

16. Agreement Binding on Successors. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. This Agreement shall inure to the benefit of and be enforceable by your personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees. If you should die while any amounts would still be payable to you hereunder if you had continued to live, all such amounts, unless otherwise provided herein, shall be paid in accordance with the terms of this Agreement to your devisee, legatee, or other designee or, if there be no such designee, to your estate.

17. Headings. All Headings are inserted for convenience only and shall not affect any construction or interpretation of this Agreement.

18. Tax Cutback. In the event that you shall become entitled to payments and/or benefits provided by this Agreement or any other amounts in the “nature of compensation” (whether pursuant to the terms of this Agreement or any other plan, arrangement or agreement with the Company, any person whose actions result in a change of ownership or effective control covered by Section 280G(b)(2) of the

Internal Revenue Code (“Code”) or any person affiliated with the Company or such person) as a result of such change in ownership or effective control (collectively the “Company Payments”), and such Company Payments will be subject to the tax (“Excise Tax”) imposed by Section 4999 of the Code, the Company Payments shall be reduced (such reduction the “Cutback”) to one dollar less than the amount which would result in such Company Payments being subject to the Excise Tax if after taking into account the Excise Tax and all U.S. federal, state, and local income and payroll tax upon the Company Payments if the net amount retained by you would be greater in the event of such reduction in Company Payments then if such reduction in Company Payments did not occur. To the extent the Cutback applies, the Company Payments shall be reduced in the following order: (a) payments under Section C, paragraph 3(a); (b) payments under Section C, paragraph 3(b)(ii), and lastly (c) the remaining payments under Section C on a pro-rata basis. Notwithstanding anything in this provision or Agreement to the contrary, you shall be solely liable for the Excise Tax, and shall hold the Company harmless for any liability, not including penalties and interest on such liability, for the Excise Tax including, but not limited to, for failing to withhold or pay over any Excise Tax. If the Cutback applies but for any reason you pay the Excise Tax, including any applicable interest and penalties, then the Company shall pay you an amount equal to the Cutback, plus interest on the Cutback amount at a reasonable market rate, plus any interest and penalties relating to the Excise Tax paid by you (plus a tax gross-up only on the Excise Tax interest and penalties). If the Cutback applies but for any reason the Company pays the Excise Tax, including any applicable interest and penalties, then the Company shall offset any amounts due from you, under this provision or otherwise, by an amount equal to the Cutback, plus interest on the Cutback amount at a reasonable market rate.

If this Agreement correctly sets forth our agreement on the subject matter hereof, please sign and return to the Company the enclosed copy of this Agreement which will then constitute our agreement on this matter.

[Signature page to follow]

Sincerely,

ASHLAND GLOBAL HOLDINGS INC.

By: ______________________________________

ACCEPTED this ____ day of _____________, 2020.

____

Name

EXHIBIT 31.1

CERTIFICATIONS

I, Guillermo Novo, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Ashland Global 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: January 29, 2020

/s/ Guillermo Novo
Guillermo Novo
Chairman and Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

CERTIFICATIONS

I, J. Kevin Willis, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Ashland Global 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: January 29, 2020

/s/ J. Kevin Willis

J. Kevin Willis
Chief Financial Officer
(Principal Financial Officer)

EXHIBIT 32

ASHLAND GLOBAL HOLDINGS INC.

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

In connection with the Quarterly Report of Ashland Global Holdings Inc. (the “Company”) on Form 10-Q for the period ended December 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), each of the undersigned, Guillermo Novo, Chief Executive Officer of the Company, and J. Kevin Willis, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

/s/ Guillermo Novo
Guillermo Novo
Chief Executive Officer
January 29, 2020

/s/ J. Kevin Willis
J. Kevin Willis
Chief Financial Officer
January 29, 2020