

Fourth Quarter 2020 March 9, 2021 – 11:00 AM ET



LEGAL DISCUSSION

Continuing Operations

Financial results are on a continuing operations basis, which excludes the Performance Materials business from all quarterly and yearly results presented, unless otherwise indicated.

Forward-Looking Statements

Some of the information contained in this presentation, the conference call during which this presentation is reviewed and any discussions that follow constitutes "forward-looking statements". Forward-looking statements can be identified by words such as "anticipates," "intends," "plans," "seeks," "believes," "estimates," "expects," "projects" and similar references to future periods. Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Examples of forward looking statements include, but are not limited to, statements regarding the sale of the Performance Chemicals business segment, including the intended uses of proceeds therefrom, our future results of operations, financial condition, liquidity, prospects, growth, strategies, capital allocation programs, product and service offerings and end use demand trends, including the impact of the COVID-19 pandemic on such items, and financial 2021 outlook. Our actual results may differ materially from those contemplated by the forward-looking statements. We caution you, therefore, against relying on any of these forward-looking statements. They are neither statements of historical fact nor guarantees or assurances of future performance. Important factors that could cause actual results to differ materially from those in the forward-looking statements include, but are not limited to, our ability to close on the sale of the Performance Chemicals business segment on our anticipated timeline, or at all, our ability to successfully integrate Chemicals business segment on our anticipated timeline, or at all, our ability to successfully integrate Chemicals business segment on our anticipated timeline, or at all, our ability to successfully integrate Chemicals business segment on our anticipated timeline, or at all, our ability to successfully integrate Chemicals business segment on our anticipated timeline. political, economic, business, competitive, market and regulatory conditions, including the ongoing COVID-19 pandemic, tariffs, and trade disputes, currency exchange rates and other factors, including those described in the sections titled "Risk Factors" and "Management Discussion & Analysis of Financial Condition and Results of Operations" in our filings with the SEC, which are available on the SEC's website at www.sec.gov. Any forward-looking statement made by us in this presentation, the conference call during which this presentation is reviewed and any discussions that follow speaks only as of the date on which it is made. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to update any forwardlooking statement, whether as a result of new information, future developments or otherwise, except as may be required by applicable law.

Non-GAAP Financial Measures

This presentation includes certain non-GAAP financial measures, including adjusted EBITDA, adjusted EBITDA margin, adjusted free cash flow and net debt, which are provided to assist in an understanding of our business and its performance. These non-GAAP financial measures should be considered only as supplemental to, and not as superior to, financial measures prepared in accordance with GAAP. Non-GAAP financial measures should be read only in conjunction with consolidated financials prepared in accordance with GAAP. Reconciliations of non-GAAP measures to the relevant GAAP measures are provided in the appendix of this presentation.

The Company is not able to provide a reconciliation of the Company's non-GAAP financial guidance to the corresponding GAAP measures without unreasonable effort because of the inherent difficulty in forecasting and quantifying certain amounts necessary for such a reconciliation such as certain non-cash, nonrecurring or other items that are included in net income and EBITDA as well as the related tax impacts of these items and asset dispositions / acquisitions and changes in foreign currency exchange rates that are included in cash flow, due to the uncertainty and variability of the nature and amount of these future charges and costs.

Zeolyst Joint Venture

Zeolyst International and Zeolyst C.V. (our 50% owned joint ventures that we refer to collectively as the "Zeolyst Joint Venture"), are accounted for as an equity method investment in accordance with GAAP. The presentation of the Zeolyst Joint Venture's sales in this presentation represents 50% of the sales of the Zeolyst Joint Venture. We do not record sales by the Zeolyst Joint Venture as revenue and such sales are not consolidated within our results of operations. However, our adjusted EBITDA reflects our share of the earnings of the Zeolyst Joint Venture that have been recorded as equity in net income from affiliated companies in our consolidated statements of income for such periods and includes Zeolyst Joint Venture adjustments on a proportionate basis based on our 50% ownership interest. Accordingly, our adjusted EBITDA margins are calculated including 50% of the sales of the Zeolyst Joint Venture for the relevant periods in the denominator.



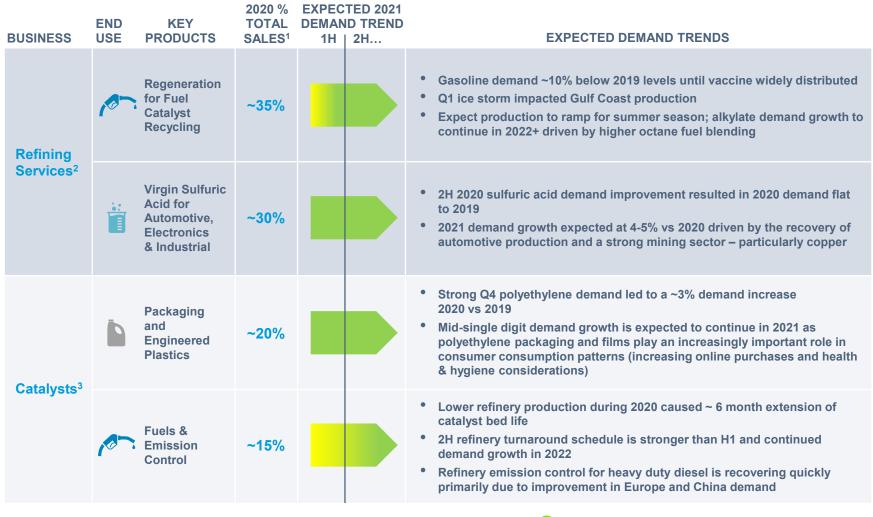
ACHIEVEMENTS OVER THE PAST YEAR

FOCUS AREA	HIGHLIGHTS
OPERATIONAL	 > 45% safety improvement versus 2019; top quartile industry performance ~ 27% Adjusted EBITDA margins demonstrate strength and stability of platform
COMMERCIAL	 Completed meaningful new long term supply agreement in Refining Services Executed new supply agreement and extended contract within Silica Catalysts Commercialized two new customer products for diesel emission control
STRATEGIC	 Significant actions toward higher-growth, expanded margin potential for "Target PQ" portfolio: ✓ Signed definitive agreement to sell Performance Chemicals business and closed on sale of Performance Materials business at attractive valuations ✓ Acquired Chem32, a niche catalysts service company to complement Refining Services
FINANCIAL	 Delivered on key targets including adjusted FCF of \$153 million Continued to reduce debt and reinvest in business while also returning \$245 million of cash to shareholders

PQ Marked by Sound Operations, Differentiating Technologies, New Capital Allocation Strategy and Sustainable Businesses with Valuation Uplift Potential



END USE DEMAND RECOVERY IS BENEFITING BOTH TARGET PQ BUSINESSES; FUEL PRODUCTION EXPECTED TO LAG 3 TO 6 MONTHS













⁽¹⁾ Sales percentage includes proportionate 50% share of sales from Zeolyst JV. Sales percentages are % of total 2020 sales by Refining Services and Catalysts business segments.

⁽²⁾ Refining Services reflects its two largest end uses with an aggregation of smaller end uses of natural resources and packaging & engineered plastics into industrial & process chemicals. Major product lines, regeneration services and virgin sulfuric acid are aligned to these summarized end uses

⁽³⁾ Catalysts sales includes proportionate 50% share of sales from Zeolyst JV, which serves packaging & engineered plastics and fuels & emission controls end uses Source: U.S. Energy Information Administration: Rhein Associates: PQ Estimates

FOURTH QUARTER AND FULL YEAR 2020 FINANCIAL RESULTS

(\$ in millions)	Fourth Quarter 2020	Fourth Quarter 2019	\$ Change	% Change
Sales	281.5	283.5	(2.0)	(0.7)
Adjusted EBITDA	81.8	91.1	(9.3)	(10.2)
Adjusted EBITDA Margin¹ (%)	26.4	27.5		(110 bps)

(\$ in millions)	Full Year 2020	Full Year 2019	\$ Change	% Change
Sales	1,107.4	1,199.9	(92.5)	(7.7)
Adjusted EBITDA	338.0	393.9	(55.9)	(14.2)
Adjusted EBITDA Margin¹ (%)	27.3	28.7		(140 bps)

- 2020 sales and Adjusted EBITDA were down on lower volume demand due to global pandemic; Catalysts was hardest hit as refineries deferred change-outs beyond 2020 while demand recovered during the year in Refining Services and Performance Chemicals
- Adjusted EBITDA margin of more than 27% reflects aggressive actions to match production with demand to reduce costs



REFINING SERVICES

(\$ in millions)	Fourth Quarter 2020	Fourth Quarter 2019	\$ Change	% Change
Sales	103.2	105.6	(2.4)	(2.3)
Adjusted EBITDA	40.7	41.9	(1.2)	(2.9)
Adjusted EBITDA Margin (%)	39.4	39.7		(30 bps)

- Regeneration services sales declined on lower refinery utilization; Virgin acid sales increased on higher spot sales
- Adjusted EBITDA reflects lower sales volumes consistent with continued lockdowns
- Adjusted EBITDA margin in line, benefiting from product mix and solid cost containment efforts

Q4 Change Factors					
Sales:	%				
Volume	(2.5)				
Price/Mix	0.2				
Currency	-				
Sales Change	(2.3)				



CATALYSTS

(\$ in millions)	Fourth Quarter 2020	Fourth Quarter 2019	\$ Change	% Change
Sales				
Silica Catalysts	20.9	23.3	(2.4)	(10.3)
Zeolyst JV	28.9	47.3	(18.4)	(38.9)
Adjusted EBITDA	14.8	28.4	(13.6)	(47.9)
Adjusted EBITDA Margin¹ (%)	29.7	40.2		(1050 bps)

- Silica Catalysts down on lower MMA catalyst demand
- Zeolyst JV lower on deferred hydrocracking changeouts, and pace of recovery for custom and emission control catalysts in heavy-duty diesel production
- Adjusted EBITDA and margin reflect reduced volumes and unfavorable product mix

Q4 Change Factors						
Sales:	%					
Volume	(6.4)					
Price/Mix	(3.0)					
Currency	(0.9)					
Sales Change	(10.3)					



PERFORMANCE CHEMICALS

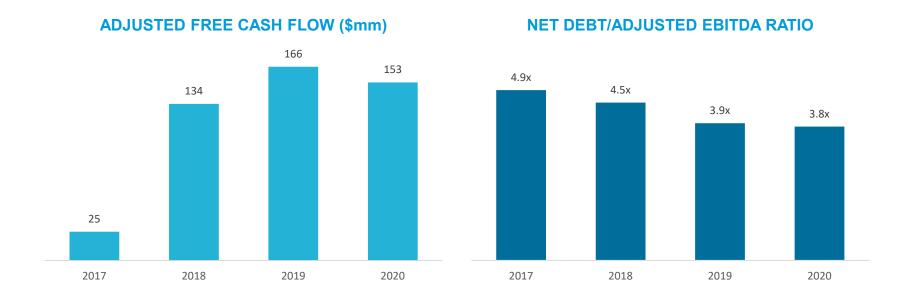
(\$ in millions)	Fourth Quarter 2020	Fourth Quarter 2019	\$ Change	% Change
Sales	158.2	155.4	2.8	1.8
Adjusted EBITDA	35.5	33.0	2.5	7.6
Adjusted EBITDA Margin (%)	22.4	21.2		120 bps

- Sales increased with recovery of sodium silicate for industrial applications and continued strong silicas demand in surface coatings
- Adjusted EBITDA and margins benefitted from favorable volumes in addition to transformation and cost reduction initiatives

Q4 Change Factors						
Sales:	%					
Volume	2.4					
Price/Mix	(0.4)					
Currency	(0.2)					
Sales Change	1.8					



ADJUSTED FREE CASH FLOW AND LEVERAGE



Achieved robust adjusted free cash flow and maintained stable leverage profile despite downturn impacts of COVID-19 pandemic



TARGET PQ OUTLOOK – CONTINUING OPERATIONS

TARGET PQ - CONTINUING OPERATIONS ¹							
(\$ in millions, except per share)	2020 Actual	2021 Outlook					
Sales ²	\$496	\$555 – 565					
Adjusted EBITDA	\$196	\$215 – 225					
Adjusted Free Cash Flow ^{3,4}	\$153	\$75 – 85					
Capital Expenditures ⁵	\$46	\$50 – 55					
Depreciation & Amortization							
PQ	\$77	\$80 - 85					
Zeolyst JV	\$15	\$14 - 16					

+ 10 – 15% in 2021 from 2020 assuming midpoint of guidance

- Net proceeds from Performance Chemicals sale earmarked for:
 - Special dividend of \$2.50 to \$3.25 per share
 - Debt reduction in range of \$450 million to \$550 million
- Expect year-end pro forma leverage in the mid-to-high 3x range
- Performance Chemicals expected to be reported as a discontinued operation effective Q1 2021
 - (1) Represents Refining Services, Catalysts and unallocated Corporate only, except otherwise noted
 - (2) GAAP sales only; Excludes proportionate 50% share of Zeolyst Joint Venture sales target of \$140 million to \$150 million versus \$129 million in 2020
 - (3) Adjusted free cash flow defined as net cash provided by operating activities less purchases of property, plant and equipment, adjusted for proceeds from sale of assets, net interest proceeds on swaps designated as net investment hedges and cash paid for costs related to segment disposals
 - (4) Includes proportionate share of cash generation from discontinued operations for the period presented. 2020 includes Performance Materials until the transaction close on December 14, 2020. 2021 includes Performance Chemicals through an estimated September 30, 2021 transaction close
 - (5) Excludes Zeolyst Joint Venture Capital Expenditures



PQ PORTFOLIO TRANSFORMATION ACCELERATES

Simpler + STRONGER

2019

Evaluation & Positioning

- Delayered organization and separated into four distinct businesses
- Improved commercial/ operational performance and reduced capital intensity
- Sale of small non-core assets and product lines for ~\$60 million¹

2020 - 2021

Transformation

- Sale of non-core assets and product lines for ~\$30 million
- Sale of Performance Materials business for \$650 million
- Sale of Performance
 Chemicals for \$1.1 billion²
- Acquires niche catalyst activation business for \$44 million
- Expected total special dividends of \$4.30 to \$5.05 per share

FUTURE

Building "Target PQ"

Remaining core is an innovative catalyst and related services company positioned for high growth:

- Critical products and services; high growth, high Adjusted EBITDA margins in mid-to-high 30% range
- Leading product, process and application R&D capabilities
- Long-standing operating and technology relationships with customers that require expertise in transition to sustainable economy
- Attractive M&A platform



THE FUTURE IS BRIGHT

Innovative Pure-Play Catalyst And Services Company



ORGANIC
SALES High
GROWTH Single Digit

ADJUSTED
EBITDA High
GROWTH Single Digit

ADJUSTED EBITDA

EBITDA Mid to MARGIN High 30's%

CASH Higher CONVERSION than 75%



Growing + GREENING





Simpler + STRONG

APPENDIX



QUARTERLY SEGMENT SALES, ADJUSTED EBITDA AND MARGINS

(\$ in millions except %, unaudited)	Three months ended December 31, 2020	Year ended December 31, 2020	Three Months Ended December 31, 2019	Year ended December 31, 2019
Sales:				
Refining Services	103.2	401.9	105.6	447.1
Silica Catalysts	20.9	94.0	23.3	85.7
Performance Chemicals	158.2	614.7	155.4	670.5
Eliminations	(0.8)	(3.2)	(8.0)	(3.4)
Total sales	281.5	1,107.4	283.5	1,199.9
Zeolyst joint venture sales	28.9	128.6	47.3	170.3
Adjusted EBITDA:				
Refining Services	40.7	157.2	41.9	175.6
Catalysts	14.8	14.8 74.5 2		107.8
Performance Chemicals	35.5	142.4	33.0	151.5
Total Segment Adjusted EBITDA	91.0	374.1	103.3	434.9
Corporate	(9.2)	(36.1)	(12.2)	(41.0)
Total Adjusted EBITDA	81.8	338.0	91.1	393.9
Adjusted EBITDA Margin:				
Refining Services	39.4%	39.1%	39.7%	39.3%
Catalysts ¹	29.7%	33.5%	40.2%	42.1%
Performance Chemicals	22.4%	23.2%	21.2%	22.6%
Total Adjusted EBITDA Margin ¹	26.4%	27.3%	27.5%	28.7%



⁽¹⁾ Adjusted EBITDA margin calculation includes proportionate 50% share of net sales from Zeolyst Joint Venture

^{*} Rounding discrepancies may arise when rounding results from dollars (in thousands) to dollars (in millions)

SALES AND ADJUSTED EBITDA MAJOR CHANGE FACTORS

SALES

	Three months ended December 31, 2020							
Sales (in \$ millions and %)	PQ Group Holdings Inc		PQ Group Refining Holdings Inc Services		Catalysts		Performance Chemicals	
Sales:	\$	%	\$	%	\$	%	\$	%
Volume	(0.5)	(0.2)	(2.6)	(2.5)	(1.5)	(6.4)	3.7	2.4
Price/Mix	(1.1)	(0.4)	0.2	0.2	(0.7)	(3.0)	(0.6)	(0.4)
Currency	(0.4)	(0.1)	_	_	(0.2)	(0.9)	(0.3)	(0.2)
Sales Change	(2.0)	(0.7)	(2.4)	(2.3)	(2.4)	(10.3)	2.8	1.8

Year Ended December 31, 2020							
PQ Group Holdings Inc		Refining Services		Catalysts		Performance Chemicals	
\$	%	\$	%	\$	%	\$	%
(64.6)	(5.4)	(26.7)	(6.0)	10.6	12.4	(48.6)	(7.2)
(11.9)	(1.0)	(18.5)	(4.1)	(1.2)	(1.4)	7.8	1.2
(16.0)	(1.3)	_	_	(1.1)	(1.3)	(15.0)	(2.3)
(92.5)	(7.7)	(45.2)	(10.1)	8.3	9.7	(55.8)	(8.3)

ADJUSTED EBITDA

	Three months ended Decem					ber 31, 2020			
Adj EBITDA (in \$ millions and %)	PQ Group Holdings Inc		Refining Services		Catalysts		Performance Chemicals		
Adj EBITDA:	\$	%	\$	%	\$	%	\$	%	
Volume/Mix	(14.2)	(15.6)	(2.8)	(6.8)	(12.3)	(43.3)	1.6	4.8	
Price	(0.4)	(0.4)	0.2	0.5	_	_	(0.6)	(1.8)	
Variable Cost	0.8	0.9	0.3	0.7	0.4	1.4	0.5	1.6	
Currency	(0.1)	(0.1)	(5.5)	(13.1)	_	_	_	_	
Other	4.6	5.0	6.6	15.8	(1.7)	(6.0)	1.0	3.0	
Adj EBITDA Change	(9.3)	(10.2)	(1.2)	(2.9)	(13.6)	(47.9)	2.5	7.6	

Year Ended December 31, 2020							
PQ Group Holdings Inc		Refining Services		Catalysts		Performance Chemicals	
\$	%	\$	%	\$	%	\$	%
(57.1)	(14.5)	(20.1)	(11.4)	(11.7)	(10.9)	(24.5)	(16.2)
(11.1)	(2.8)	(18.5)	(10.5)	(0.4)	(0.4)	7.8	5.1
15.9	4.0	13.6	7.7	(0.5)	(0.5)	3.1	2.1
(3.8)	(1.0)	_	_	(0.3)	(0.3)	(3.5)	(2.3)
0.2	0.1	6.6	3.7	(20.4)	(18.8)	8.0	5.3
(55.9)	(14.2)	(18.4)	(10.5)	(33.3)	(30.9)	(9.1)	(6.0)



ADJUSTED FREE CASH FLOW

(\$ in millions)	Full Year 2020	Full Year 2019	
Cash Flow from Operations before interest and tax	349.0	401.9	
Less: Cash paid for taxes	35.0	17.4	
Less: Cash paid for interest ¹	90.4	116.8	
Cash Flow from Operations	223.6	267.7	
Less: Purchases of property, plant and equipment ²	109.6	127.6	
Free Cash Flow	114.0	140.1	
Plus: Proceeds from sale of assets	11.1	17.6	
Plus: Net interest proceeds on currency swaps	5.0	8.5	
Plus: Cash paid for costs related to segment disposals	22.5	_	
Adjusted Free Cash Flow	152.5	166.2	



 ⁽¹⁾ Excludes net interest proceeds on swaps designated as net investment hedges
 (2) Excludes the Company's proportionate 50% share of capital expenditures from the Zeolyst Joint Venture

^{*} Rounding discrepancies may arise when rounding results from dollars (in thousands) to dollars (in millions)

RECONCILIATION OF NET INCOME TO SEGMENT ADJUSTED EBITDA

(\$ in millions)	Three months ended December 31, 2020	Year ended December 31, 2020	Three Months Ended December 31, 2019	Year ended December 31, 2019
Reconciliation of net income attributable to PQ Group Holdings Inc. to Segment Adjusted EBITDA				
Net income (loss) attributable to PQ Group Holdings Inc.	(182.8)	(176.3)	28.2	65.1
Provision for (benefit from) income taxes	(77.9)	(48.1)	(4.1)	39.7
Interest expense, net	14.4	67.0	20.9	87.1
Depreciation and amortization	39.5	151.8	39.1	151.8
EBITDA	(206.8)	(5.6)	84.1	343.7
Joint venture depreciation, amortization and interest(a)	3.6	14.7	3.5	14.7
Amortization of investment in affiliate step-up(b)	1.6	6.6	1.7	7.5
Goodwill impairment charge	260.0	260.0	_	_
Debt extinguishment costs	8.5	25.0	1.8	3.4
Net (gain) loss on asset disposals(c)	3.5	(0.1)	(5.3)	(13.2)
Foreign currency exchange (gain) loss(d)	(2.8)	(4.2)	(2.7)	2.4
LIFO (benefit) expense(e)	(0.6)	(5.2)	0.7	9.7
Transaction and other related costs(f)	5.2	8.6	1.6	0.4
Equity-based compensation	5.5	21.5	4.1	16.2
Restructuring, integration and business optimization expenses(g)	5.7	15.6	2.6	3.6
Defined benefit plan pension cost(h)	0.1	_	0.7	3.0
Other(i)	(1.7)	1.1	(1.7)	2.5
Adjusted EBITDA	81.8	338.0	91.1	393.9
Unallocated corporate costs	9.2	36.1	12.2	41.0
Total Segment Adjusted EBITDA ¹	91.0	374.1	103.3	434.9
EBITDA Adjustments by Line Item				
EBITDA	(206.8)	(5.6)	84.1	343.7
Cost of goods sold	1.2	(1.1)	1.3	11.6
Selling, general and administrative expenses	7.1	24.8	4.9	18.8
Other operating expense (income), net	270.1	280.2	(2.8)	(5.4)
Equity in net (income) from affiliated companies	1.7	6.6	1.7	7.5
Other expense (income), net ²	4.9	18.4	(1.6)	3.0
Joint venture depreciation, amortization and interest(a)	3.6	14.7	3.5	14.7
Adjusted EBITDA	81.8	338.0	91.1	393.9



⁽¹⁾ For additional information with respect to each adjustment, see "Reconciliation of Non-GAAP Financial Measures"

⁽²⁾ Other expense (income), net includes debt extinguishment costs

^{*} Rounding discrepancies may arise when rounding results from dollars (in thousands) to dollars (in millions)

DESCRIPTIONS FOR RECONCILIATION OF NON-GAAP FINANCIAL MEASURES

- a) We use Adjusted EBITDA as a performance measure to evaluate our financial results. Because our Catalysts segment includes our 50% interest in the Zeolyst Joint Venture, we include an adjustment for our 50% proportionate share of depreciation, amortization and interest expense of the Zeolyst Joint Venture.
- b) Represents the amortization of the fair value adjustments associated with the equity affiliate investment in the Zeolyst Joint Venture as a result of the combination of the businesses of PQ Holdings Inc. and Eco Services Operations LLC ("Eco") in May 2016 (the "Business Combination"). We determined the fair value of the equity affiliate investment and the fair value step-up was then attributed to the underlying assets of the Zeolyst Joint Venture. Amortization is primarily related to the fair value adjustments associated with fixed assets and intangible assets, including customer relationships and technical know-how.
- c) When asset disposals occur, we remove the impact of net gain/loss of the disposed asset because such impact primarily reflects the non-cash write-off of long-lived assets no longer in use. During the year ended December 31, 2019, the net gain on asset disposals includes the gains related to the sale of a non-core product line and sale of property.
- d) Reflects the exclusion of the foreign currency transaction gains and losses in the statements of income primarily related to the non-permanent intercompany debt denominated in local currency translated to U.S. dollars.
- e) Represents non-cash adjustments to the Company's LIFO reserves for certain inventories in the U.S. that are valued using the LIFO method, which we believe provides a means of comparison to other companies that may not use the same basis of accounting for inventories.
- f) Represents the costs related to several transactions that are completed, pending or abandoned and that we believe are not representative of our ongoing business operations.
- g) Includes the impact of restructuring, integration and business optimization expenses which are incremental costs that are not representative of our ongoing business operations.
- h) Represents adjustments for defined benefit pension plan costs in our statement of income. More than two-thirds of our defined benefit pension plan obligations are under defined benefit pension plans that are frozen, and the remaining obligations primarily relate to plans operated in certain of our non-U.S. locations that, pursuant to jurisdictional requirements, cannot be frozen. As such, we do not view such expenses as core to our ongoing business operations.
- i) Other costs consist of certain expenses that are not core to our ongoing business operations, including environmental remediation-related costs associated with the legacy operations of our business prior to the Business Combination, capital and franchise taxes, and non-cash asset retirement obligation accretion. Included in this line-item are rounding discrepancies that may arise from rounding from dollars (in thousands) to dollars (in millions).





