



# 2017 3<sup>rd</sup> Quarter Results

## Non-GAAP Financial Measures

### Non-GAAP Financial Measures

This presentation includes certain non-GAAP financial measures, including constant currency sales, Adjusted EBITDA, constant currency Adjusted EBITDA, Adjusted EBITDA margin, adjusted net income, adjusted diluted EPS, free cash flow and adjusted free cash flow. 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.

We believe that the presentation of these financial measures enhances an investor's understanding of our financial performance. We further believe that these financial measures are useful financial metrics to assess our operating performance from period to period by excluding certain items that we believe are not representative of our core business. We also believe that these financial measures provide investors with a useful tool for assessing the comparability between periods of our ability to generate cash from operations sufficient to pay taxes, to service debt and to undertake capital expenditures. We also use these financial measures for business planning purposes and in measuring our performance relative to that of our competitors. We believe these financial measures are commonly used by investors to evaluate our performance and that of our competitors. However, our use of these financial measures may vary from that of others in our industry. These financial measures should not be considered as alternatives to operating income (loss), net income (loss), cash flow from operations or any other performance measures derived in accordance with GAAP as measures of operating performance or operating cash flows or as measures of liquidity.

### Non-GAAP Financial Measures – Business Combination

On May 4, 2016, we consummated a series of transactions (the "Business Combination") to reorganize and combine the businesses of PQ Holdings Inc. and Eco Services Operations LLC under a new holding company, PQ Group Holdings Inc. We refer to the business of PQ Holdings Inc. prior to the Business Combination as "legacy PQ" and the business of Eco Services Operations LLC prior to the Business Combination as "legacy Eco." In this presentation, we present unaudited pro forma information for the nine months ended September 30, 2016, which gives effect to the Business Combination and the related financing transactions as if they occurred on January 1, 2015. Such information is illustrative and not intended to represent what our results of operations would have been had the Business Combination and related financing transactions occurred at any time prior to May 4, 2016 or to project our results of operations for any future period. Such information may not be comparable to, or indicative of, future performance.

### Zeolyst Joint Venture

Our zeolite catalysts product group operates through Zeolyst International and Zeolyst C.V. (our 50% owned joint ventures that we refer to collectively as our "Zeolyst Joint Venture"), which we account for as an equity method investment in accordance with GAAP. The presentation of our Zeolyst Joint Venture's total net sales in this presentation represents 50% of the total net sales of our Zeolyst Joint Venture. We do not record sales by our 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 our Zeolyst Joint Venture that have been recorded as equity in net income from affiliated companies in our consolidated statements of operations 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 total net sales of our Zeolyst Joint Venture for the relevant periods in the denominator.

## Forward-Looking Statements

### 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. 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, regional, national or global political, economic, business, competitive, market and regulatory conditions, 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 the final prospectus for our initial public offering, dated September 28, 2017, which is available on the SEC’s website at [www.sec.gov](http://www.sec.gov). Additional information will be made available by our quarterly reports on Form 10-Q and other filings that we make from time to time with the SEC. 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 forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by applicable law.

## Third Quarter 2017 Highlights

- Sales grew nearly 6% in 3Q; Adjusted EBITDA grew 5.5%
- Net loss of (\$3.4) million improved \$6.6 million versus the prior year quarter
- First full quarter results of complementary acquisition in Performance Materials; integration well under way
- Commercial acceptance of new Thermodrop® product progressing well
- Strong customer relationships driving contract renewal benefits in Refining Services
- Continued strength in specialty and hydrocracking catalyst demand in Zeolite Catalysts

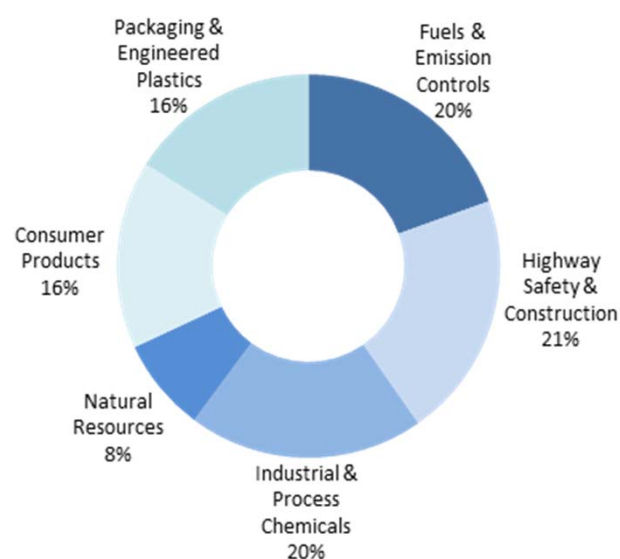
***Strong Q3 results give us confidence to increase full year Adjusted EBITDA target to \$447-\$453 million***

## Third Quarter Net Sales and Zeolyst Joint Venture Net Sales

### Commentary

- **Fuels & Emission Controls** – Higher regeneration services pricing and continued emission control volume growth
- **Highway Safety & Construction** – Sovitec acquisition and Thermodrop® launch
- **Industrial & Process Chemicals** – Strong general industrial chemical and metal finishing volumes

### End Uses<sup>1</sup>



### Quarter over Quarter % Change

Fuels & Emission Controls	+ 16%
Highway Safety & Construction	+ 12%
Industrial & Process Chemicals	+ 7%
Natural Resources	+ 3%
Consumer Products	+ 2%
Packaging & Engineered Plastics	+ 3%

(1) Includes PQ's proportional share of sales from the Zeolyst JV.

## Financial Highlights

### Commentary

- Third quarter sales of \$391.8MM increased \$21.8MM, or 5.9% driven by the June'17 Sovitec acquisition and higher pricing from regeneration services contract renewals
- Net loss attributable to PQ Group Holdings Inc. of (\$3.4MM) improved by \$6.6MM; EPS was (\$0.03) compared to (\$0.10) in the prior year period.
- Adjusted EBITDA for the quarter increased \$6.3MM, or 5.5% on favorable pricing, the Sovitec acquisition and continued strong earnings in Zeolite Catalysts, which more than offset Hurricane Harvey costs and Thermodrop® start-up costs
- Year-to-date sales and Adjusted EBITDA increased 3.1% and 7.0%; Adjusted EBITDA margin up 70 bps
- Adjusted EPS in line with the prior year; YTD Adjusted EPS of \$0.31 per share

### 3<sup>rd</sup> Quarter and Year-to-Date

(\$ in millions)	3Q		(\$)		Year-to-date		(\$)	
	2017	2016	Change	Change	2017	Pro Forma 2016 <sup>2</sup>	Change	Change
<b>Net Sales:</b>								
<b>PQ</b>	391.8	370.0	21.8	5.9%	1,114.0	1,080.3	33.7	3.1%
<i>PQ (excl. FX)</i>	387.4	370.0	17.4	4.7%	1,117.5	1,080.3	37.2	3.4%
<b>Zeolyst JV</b>	37.6	28.2	9.4	33.3%	101.0	85.2	15.8	18.5%
<b>Adjusted EBITDA</b>	119.9	113.6	6.3	5.5%	343.9	321.5	22.4	7.0%
<i>Adjusted EBITDA (excl. FX)</i>	118.7	113.6	5.1	4.5%	345.2	321.5	23.7	7.4%
<b>Adjusted EBITDA Margin</b>	27.9%	28.5%		-0.6%	28.3%	27.6%		0.7%
<b>Adjusted Net Income</b>	11.2	12.3	(1.1)	-8.9%	32.5	(16.9)	49.4	N.M.
<b>Adjusted EPS<sup>1</sup></b>	\$0.11	\$0.12	(\$0.01)	-9.2%	\$0.31	(\$0.21)	\$0.52	N.M.

(1) Balances presented in whole \$'s per share

(2) Pro Forma results for 2016 reflect pro forma adjustments to give effect to the Business Combination

## Environmental Catalyst & Services

### Commentary

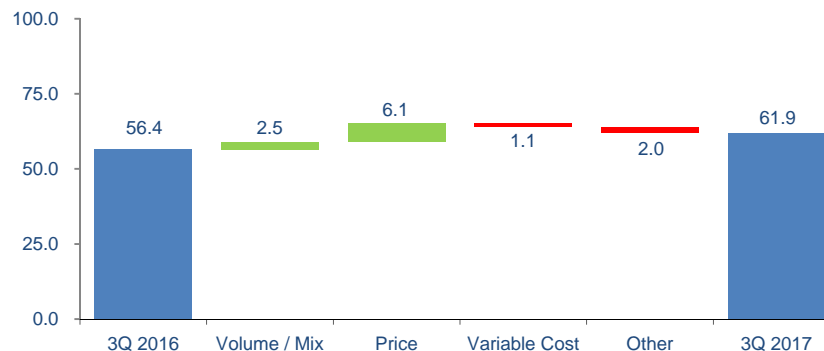
- Regeneration services contract renewals produced a 1.1% growth in top line sales, partially offset by lower methyl methacrylate sales and the impact of Hurricane Harvey of \$5.6MM
- Zeolyst JV sales grew over 30% on continued high demand for hydrocracking catalyst and increased volume of specialty catalyst
- Quarterly Adjusted EBITDA increased nearly 10% driven by higher pricing and catalyst demand in Zeolite Catalysts, tempered by higher costs and lost sales associated with Hurricane Harvey of \$4.7MM
- Year-to-date sales increased 2.1% from higher regeneration services pricing offset by lower methyl methacrylate sales, while Zeolyst JV sales increased 18.5% on continued strong demand; Adjusted EBITDA increased 14%
- YTD Adjusted EBITDA margins of 40.4% increased 310 bps from the prior year on favorable product mix in Zeolite Catalysts

### 3<sup>rd</sup> Quarter and Year-to-Date

(\$ in millions)	3Q (%)			YTD (%)		
	2017	2016	Change	2017	Pro Forma 2016 <sup>1</sup>	Change
<b>Net Sales</b>						
<b>PQ</b>	115.5	114.3	1.1%	350.8	343.6	2.1%
<i>PQ(excl. FX)</i>	115.5	114.3	1.1%	351.8	343.6	2.4%
<b>Zeolyst JV</b>	37.6	28.2	33.3%	101.0	85.2	18.5%
<b>Adj. EBITDA</b>	61.9	56.4	9.8%	182.6	160.0	14.1%
<i>Adj. EBITDA (excl. FX)</i>	61.8	56.4	9.6%	183.2	160.0	14.5%
<b>Adj. EBITDA Margin</b>	40.4%	39.6%	0.9%	40.4%	37.3%	3.1%

### Adjusted EBITDA Bridge

(\$ in millions)



(1) Pro Forma results for 2016 reflect pro forma adjustments to give effect to the Business Combination

## Performance Materials & Chemicals

### Commentary

- Sovitec acquisition complementary to our existing Performance Materials product group end uses; allowing for future growth and margin expansion
- Favorable commercial acceptance of the new Thermodrop® product launched in 2Q 2017
- Quarterly sales grew 8.2% driven by the Sovitec acquisition and higher industrial chemicals demand
- Adjusted EBITDA for the quarter was up 2% primarily due the Sovitec acquisition, partially offset by Thermodrop® start-up costs
- Adjusted EBITDA Margins declined 140 bps primarily due to the Thermodrop® start-up costs and the pre-synergy margin impact of the Sovitec acquisition
- Year-to-date sales and Adjusted EBITDA are up 4.1% and nearly 1% (FX adjusted), respectively, largely stronger demand in North America and the Sovitec acquisition

### 3<sup>rd</sup> Quarter and Year-to-Date

(\$ in millions)	3Q			YTD		
	2017	2016	(%)	2017	Pro Forma 2016 <sup>1</sup>	(%)
<b>Net Sales</b>	<b>277.1</b>	<b>256.1</b>	<b>8.2%</b>	<b>765.9</b>	<b>738.1</b>	<b>3.8%</b>
<i>Net Sales (excl. FX)</i>	<i>272.7</i>	<i>256.1</i>	<i>6.5%</i>	<i>768.3</i>	<i>738.1</i>	<i>4.1%</i>
<b>Adj. EBITDA</b>	<b>65.9</b>	<b>64.6</b>	<b>2.0%</b>	<b>184.8</b>	<b>184.3</b>	<b>0.3%</b>
<i>Adj. EBITDA (excl. FX)</i>	<i>64.7</i>	<i>64.6</i>	<i>0.2%</i>	<i>185.4</i>	<i>184.3</i>	<i>0.6%</i>
<b>Adj. EBITDA Margin</b>	<b>23.8%</b>	<b>25.2%</b>	<b>-1.4%</b>	<b>24.1%</b>	<b>25.0%</b>	<b>-0.8%</b>

### Adjusted EBITDA Bridge



(1) Pro Forma results for 2016 reflect pro forma adjustments to give effect to the Business Combination



## Cash Flow – Year-to-date

(\$ in millions)	2017 Actual	2016 Pro Forma <sup>2</sup>	Variance
Cash Flow from Operations before Interest and Tax	249.6	199.0	50.6
Less:			
Cash paid for taxes	(21.0)	(14.8)	(6.2)
Cash paid for interest	(118.8)	(105.5)	(13.3)
Cash Flow from Operations	109.8	78.7	31.1
Less:			
Purchases of property, plant and equipment	(90.2)	(106.4)	16.2
Free Cash Flow <sup>1</sup>	19.6	(27.7)	47.3
Cash (at period end)	68.8	71.9	(3.1)

- Annual cash interest expected to decline by \$67MM<sup>3</sup> post IPO

- \$380MM NOL carry-forward limits cash taxes to 2021

(1) YTD'17 as presented excludes the Sovitec acquisition of \$42MM

(2) Pro Forma results for 2016 reflect pro forma adjustments to give effect to the Business Combination

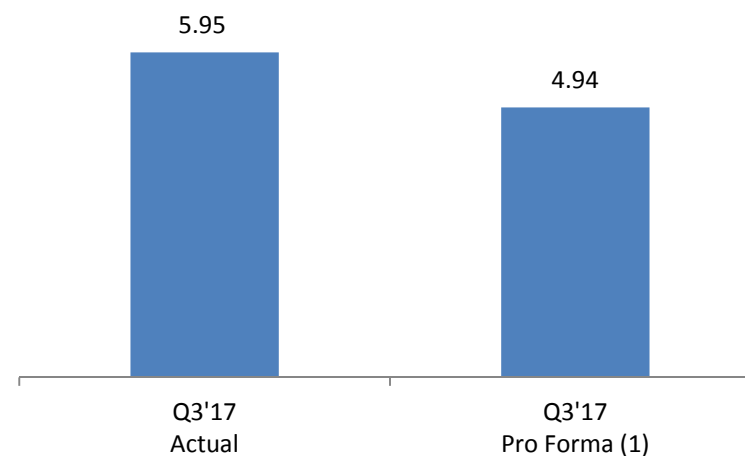
(3) After the August 2017 term loan repricing and redemption of \$446MM of Senior Unsecured Notes (due 2022) with net proceeds from IPO

## Debt and Liquidity

### Capitalization

(in millions)	Q3 2017	Pro forma <sup>1</sup>
<b>Cash</b>	<b>68.8</b>	<b>68.8</b>
Debt:		
ABL	35.0	35.0
Senior Secured Term Loan Facilities	1,249.9	1,249.9
Senior Secured Notes	625.0	625.0
Unsecured Floating Notes	525.0	78.8
Unsecured Notes	200.0	200.0
Other Debt	68.2	68.2
<b>Total Debt</b>	<b>2,703.1</b>	<b>2,256.9</b>
Stockholders Equity	1,076.0	1,076.0
Non-controlling Interest	4.9	4.9
<b>Total Capitalization</b>	<b>3,784.0</b>	<b>3,337.8</b>
<b>Available Liquidity</b>	<b>209.4</b>	<b>209.4</b>

### Net Debt to Adjusted EBITDA



(1) After giving effect to the closing of our initial public offering and redemption of \$446MM of Senior Unsecured Notes (due May 2022) with proceeds therefrom

## Full Year 2017 Guidance

*(\$ in millions)*

<b>Net Sales (including Zeolyst JV)</b>	<b>\$1,585 - \$1,605</b>
<b>Adjusted EBITDA</b>	<b>\$447 - \$453</b>
<b>Depreciation</b>	<b>\$120 - \$125</b>
<b>Amortization</b>	<b>\$53 - \$55</b>
<b>Interest Expense</b>	<b>\$176 - \$178</b>
<b>Capital Expenditures</b>	<b>\$140 - \$150</b>
<b>Weighted Average Diluted Shares<sup>1</sup></b>	<b>108.8 million</b>

(1) The weighted average diluted shares for Q4 2017 is estimated to be 133.8 million

# Appendix

## Reconciliation of Non-GAAP Financial Measures

(in millions)	Three months ended September 30,		Historical	Pro Forma
	2017	2016	Nine months ended September 30, 2017	2016
Reconciliation of net loss to Adjusted EBITDA				
Net loss attributable to PQ Group Holdings Inc. and Subsidiaries	\$ (3.4)	\$ (10.0)	\$ (7.4)	\$ (57.4)
Benefit for income taxes	5.2	(3.5)	5.3	42.3
Interest expense, net	49.1	48.6	144.0	142.6
Depreciation and amortization	45.9	43.6	129.1	123.2
EBITDA	96.8	78.7	271.0	250.7
Joint venture depreciation, amortization and interest (a)	2.6	2.7	8.1	7.9
Amortization of investment in affiliate step-up(b)	1.7	12.3	6.9	15.3
Amortization of inventory step-up(c)	-	5.8	0.9	5.8
Debt extinguishment costs	0.5	-	0.5	-
Net loss on asset disposals (d)	3.5	0.6	6.4	2.9
Foreign currency exchange gain (loss) (e)	5.3	3.2	21.6	1.0
Non-cash revaluation of inventory, including LIFO	0.8	0.3	3.2	0.8
Management advisory fees (f)	1.3	1.3	3.8	4.0
Transaction related costs (g)	1.0	1.7	5.3	5.3
Equity-based and other non-cash compensation	1.0	1.1	3.9	4.4
Restructuring, integration and business optimization expense (h)	5.0	2.8	8.0	16.2
Defined benefit plan pension cost(i)	0.8	1.2	2.2	4.0
Other (j)	(0.4)	1.9	2.1	3.2
Adjusted EBITDA <sup>1</sup>	\$ 119.9	\$ 113.6	\$ 343.9	\$ 321.5

(1) For purposes of calculations under the covenants included in our credit agreements, Adjusted EBITDA also includes adjustments for expected cost savings and synergies initiatives associated with acquisitions and restructurings, which for the nine months ended September 30, 2017 included (i) \$7.3 million related to the Sovitec acquisition, and (ii) \$13.5 million of cost savings associated with completed projects that are expected to be realized over the next 18 months.

## Reconciliation of Non-GAAP Financial Measures

(in millions)	Three months ended September 30,		Historical Nine months ended September 30,	Pro Forma Nine months ended September 30,
	2017	2016	2017	2016
Reconciliation of net loss to adjusted net income				
Net loss attributable to PQ Group Holdings Inc. and Subsidiaries	\$ (3.4)	\$ (10.0)	\$ (7.4)	\$ (57.4)
Amortization of investment in affiliate step-up(b)	1.0	7.5	4.0	9.4
Amortization of inventory step-up(c)	-	3.6	0.5	3.6
Debt extinguishment costs	0.3	-	0.3	-
Net loss on asset disposals (d)	2.1	0.4	3.7	1.8
Foreign currency exchange gain (loss) (e)	5.2	4.3	14.9	2.5
Non-cash revaluation of inventory, including LIFO	0.5	0.2	1.9	0.5
Management advisory fees (f)	0.8	0.8	2.2	2.4
Transaction related costs (g)	0.6	1.0	3.1	3.2
Equity-based and other non-cash compensation	0.7	0.7	2.2	2.7
Restructuring, integration and business optimization expense (h)	2.9	1.8	4.6	9.9
Defined benefit plan pension cost(i)	0.5	0.8	1.3	2.5
Other (j)	-	1.2	1.2	2.0
Adjusted net income (loss)	<u>\$ 11.2</u>	<u>\$ 12.3</u>	<u>\$ 32.5</u>	<u>\$ (16.9)</u>
Adjusted net income (loss) per share:				
Basic loss per share	\$ 0.11	\$ 0.12	\$ 0.31	\$ (0.21)
Diluted loss per share	\$ 0.11	\$ 0.12	\$ 0.31	\$ (0.21)
Weighted average shares outstanding:				
Basic	104,096,837	103,783,719	104,020,180	81,986,221
Diluted	104,614,448	103,783,719	104,260,167	81,986,221

Note: The adjustments to net loss attributable to PQ Group Holdings Inc. are shown net of applicable tax rates

## Reconciliation of Non-GAAP Financial Measures

- a) We use Adjusted EBITDA, adjusted net income, and adjusted diluted EPS, as a performance measure to evaluate our financial results. Because our environmental catalysts and services segment includes our 50% interest in our Zeolyst Joint Venture, we include an adjustment for our 50% proportionate share of depreciation, amortization and interest expense of our Zeolyst Joint Venture.
- b) Represents the amortization of the fair value adjustments associated with the equity affiliate investment in our Zeolyst Joint Venture as a result of 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 our Zeolyst Joint Venture. Amortization is primarily related to the fair value adjustments associated with inventory, fixed assets and intangible assets, such as customer relationships, formulations and product technology.
- c) As a result of the Business Combination, there was a step-up in the fair value of inventory at PQ Holdings, which is amortized through cost of goods sold in the income statement.
- d) We do not have a history of significant asset disposals. However, 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.
- e) Reflects the exclusion of the negative or positive transaction gains and losses of foreign currency in the income statement primarily related to the Euro denominated term loan and the non-permanent intercompany debt denominated in local currency translated to U.S. dollars.
- f) Reflects consulting fees paid to CCMP and affiliates of INEOS for consulting services that include certain financial advisory and management services. These payments ceased as of the effective date of our initial public offering.
- g) Relates to certain transaction costs described in our condensed consolidated financial statements for the quarter and year to date period ended September 30, 2017 as well as other costs related to several transactions that are completed, pending or abandoned and that we believe are not representative of our ongoing business operations.
- h) Includes the impact of restructuring, integration and business optimization expenses that are related to specific, one-time items, including severance for a reduction in force and post-merger integration costs that are not expected to recur.
- i) Represents adjustments for defined benefit pension plan costs in our income statement. 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.
- j) Other costs consist of certain expenses that are not core to our ongoing business operations and are generally related to specific, one-time items, including environmental remediation-related costs associated with the legacy operations of our business prior to the Business Combination, capital and franchise taxes, non-cash asset retirement obligation accretion and the initial implementation of procedures to comply with Section 404 of the Sarbanes-Oxley Act.