

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended **March 31, 2021**

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: **000-21467**

ALTO INGREDIENTS, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

41-2170618

(I.R.S. Employer
Identification No.)

1300 South Second Street, Pekin, Illinois

(Address of principal executive offices)

61554

(zip code)

(916) 403-2123

(Registrant's telephone number, including area code)

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

Title of each Class	Trading Symbol	Name of Exchange on Which Registered
Common Stock, \$0.001 par value	ALTO	The Nasdaq Stock Market LLC (Nasdaq Capital Market)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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

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

As of May 14, 2021, there were 72,707,703 shares of Alto Ingredients, Inc. common stock, \$0.001 par value per share, and 896 shares of Alto Ingredients, Inc. non-voting common stock, \$0.001 par value per share, outstanding.

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PART I - FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS.

ALTO INGREDIENTS, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands)

ASSETS	March 31, 2021	December 31, 2020
	(unaudited)	*
Current Assets:		
Cash and cash equivalents	\$ 44,146	\$ 47,667
Accounts receivable (net of allowance for doubtful accounts of \$351 and \$260, respectively)	56,458	43,491
Inventories	55,216	37,925
Prepaid inventory	1,021	891
Derivative instruments	22,355	17,149
Assets held-for-sale	57,053	58,295
Other current assets	5,339	8,628
Total current assets	<u>241,588</u>	<u>214,046</u>
Property and equipment, net	<u>226,183</u>	<u>229,486</u>
Other Assets:		
Right of use operating lease assets, net	11,704	11,046
Notes receivable	13,556	14,337
Intangible asset	2,678	2,678
Other assets	5,407	5,225
Total other assets	<u>33,345</u>	<u>33,286</u>
Total Assets	<u>\$ 501,116</u>	<u>\$ 476,818</u>

* Amounts derived from the audited financial statements for the year ended December 31, 2020.

See accompanying notes to consolidated financial statements.

ALTO INGREDIENTS, INC.
CONSOLIDATED BALANCE SHEETS (CONTINUED)
(in thousands, except par value)

LIABILITIES AND STOCKHOLDERS' EQUITY	March 31, 2021	December 31, 2020
	(unaudited)	*
Current Liabilities:		
Accounts payable – trade	\$ 23,171	\$ 13,047
Accrued liabilities	13,623	11,101
Current portion – operating leases	2,581	2,180
Current portion – long-term debt	37,581	25,533
Derivative instruments	4,741	—
Liabilities held-for-sale	19,231	19,542
Other current liabilities	<u>11,822</u>	<u>15,524</u>

Total current liabilities	112,750	86,927
Long-term debt, net of current portion	64,396	71,807
Operating leases, net of current portion	8,956	8,715
Other liabilities	13,332	13,134
Total Liabilities	199,434	180,583
Commitments and Contingencies (Note 6)		
Stockholders' Equity:		
Alto Ingredients, Inc. Stockholders' Equity:		
Preferred stock, \$0.001 par value; 10,000 shares authorized; Series A: 1,684 shares authorized; no shares issued and outstanding as of March 31, 2021 and December 31, 2020; Series B: 1,581 shares authorized; 927 shares issued and outstanding as of March 31, 2021 and December 31, 2020; liquidation preference of \$19,975 as of March 31, 2021	1	1
Common stock, \$0.001 par value; 300,000 shares authorized; 73,161 and 72,487 shares issued and outstanding as of March 31, 2021 and December 31, 2020, respectively	73	72
Non-voting common stock, \$0.001 par value; 3,553 shares authorized; 1 share issued and outstanding as of March 31, 2021 and December 31, 2020	—	—
Additional paid-in capital	1,037,718	1,036,638
Accumulated other comprehensive loss	(3,878)	(3,878)
Accumulated deficit	(732,232)	(736,598)
Total Stockholders' Equity	301,682	296,235
Total Liabilities and Stockholders' Equity	\$ 501,116	\$ 476,818

Amounts derived from the audited financial statements for the year ended December 31, 2020.

See accompanying notes to consolidated financial statements.

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ALTO INGREDIENTS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited, in thousands, except per share data)

	Three Months Ended March 31,	
	2021	2020
Net sales	\$ 218,734	\$ 311,404
Cost of goods sold	204,897	324,294
Gross profit (loss)	13,837	(12,890)
Selling, general and administrative expenses	7,014	10,212
Asset impairment	1,200	—
Income (loss) from operations	5,623	(23,102)
Fair value adjustments	—	673
Interest expense, net	(1,885)	(5,307)
Other income, net	940	580
Income (loss) before benefit for income taxes	4,678	(27,156)
Benefit for income taxes	—	—
Consolidated net income (loss)	4,678	(27,156)
Net loss attributed to noncontrolling interests	—	2,056
Net income (loss) attributed to Alto Ingredients, Inc.	\$ 4,678	\$ (25,100)
Preferred stock dividends	\$ (312)	\$ (315)
Net income (loss) available to common stockholders	\$ 4,366	\$ (25,415)
Net income (loss) per share, basic	\$ 0.06	\$ (0.47)
Net income (loss) per share, diluted	\$ 0.06	\$ (0.47)
Weighted-average shares outstanding, basic	70,351	53,828
Weighted-average shares outstanding, diluted	72,464	53,828

See accompanying notes to consolidated financial statements.

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ALTO INGREDIENTS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited, in thousands)

Three Months Ended
March 31,

	2021	2020
Operating Activities:		
Consolidated net income (loss)	\$ 4,678	\$ (27,156)
Adjustments to reconcile consolidated net income (loss) to net cash provided by (used in) operating activities:		
Depreciation	5,860	9,759
Asset impairment	1,200	—
Gains (losses) on derivative instruments	(10,543)	—
Non-cash compensation	804	865
Amortization of deferred financing fees	190	305
Fair value adjustments	—	(673)
Inventory valuation	—	4,223
Interest added to debt	—	133
Bad debt expense	91	19
Changes in operating assets and liabilities:		
Accounts receivable	(13,057)	22,024
Inventories	(17,291)	10,845
Prepaid expenses and other assets	3,832	(396)
Prepaid inventory	(129)	(181)
Operating leases	(1,037)	(2,348)
Assets held-for-sale	1,241	1,624
Liabilities held-for-sale	(312)	9,370
Accounts payable and accrued liabilities	20,391	(1,512)
Net cash provided by (used in) operating activities	<u>(4,082)</u>	<u>26,901</u>
Investing Activities:		
Additions to property and equipment	(4,411)	(1,245)
Net cash used in investing activities	<u>(4,411)</u>	<u>(1,245)</u>
Financing Activities:		
Net proceeds (payments) from Kinerky's line of credit	13,042	(18,156)
Proceeds from stock option exercises	462	—
Proceeds from issuance of common stock	—	282
Principal payments on borrowings	(8,532)	—
Net cash provided by (used in) financing activities	<u>4,972</u>	<u>(17,874)</u>
Net increase (decrease) in cash and cash equivalents	(3,521)	7,782
Cash and cash equivalents at beginning of period	47,667	18,997
Cash and cash equivalents at end of period	<u>\$ 44,146</u>	<u>\$ 26,779</u>
Supplemental Information:		
Interest paid	\$ 1,825	\$ 1,968
Accrued preferred stock dividends	\$ 312	\$ 315

See accompanying notes to consolidated financial statements.

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ALTO INGREDIENTS, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(unaudited, in thousands)

	Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accum. Other Comprehensive Income (Loss)	Non-Controlling Interests	Total
	Shares	Amount	Shares	Amount					
Balances, January 1, 2021	927	\$ 1	72,487	\$ 72	\$ 1,036,638	\$ (736,598)	\$ (3,878)	\$ —	\$ 296,235
Stock-based compensation expense – restricted stock issued to employees and directors, net of cancellations and tax	—	—	550	1	618	—	—	—	619
Stock option exercises	—	—	124	—	462	—	—	—	462
Preferred stock dividends	—	—	—	—	—	(312)	—	—	(312)
Net loss	—	—	—	—	—	4,678	—	—	4,678
Balances, March 31, 2021	927	\$ 1	73,161	\$ 73	\$ 1,037,718	\$ (732,232)	\$ (3,878)	\$ —	\$ 301,682
Balances, January 1, 2020	927	\$ 1	55,508	\$ 56	\$ 942,307	\$ (720,214)	\$ (2,370)	\$ 7,265	\$ 227,045
Stock-based compensation expense – restricted stock issued to employees and directors, net of cancellations and tax	—	—	(38)	(4)	868	—	—	—	864

Issuances of common stock	—	—	421	4	278	—	—	—	282
Preferred stock dividends	—	—	—	—	—	(315)	—	—	(315)
Net loss	—	—	—	—	—	(25,100)	—	(2,056)	(27,156)
Balances, March 31, 2020	<u>927</u>	<u>\$ 1</u>	<u>55,891</u>	<u>\$ 56</u>	<u>\$ 943,453</u>	<u>\$ (745,629)</u>	<u>\$ (2,370)</u>	<u>\$ 5,209</u>	<u>\$ 200,720</u>

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ALTO INGREDIENTS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)

1. ORGANIZATION AND BASIS OF PRESENTATION.

Organization and Business – The consolidated financial statements include, for all periods presented, the accounts of Alto Ingredients, Inc., a Delaware corporation (“Alto Ingredients”), and its direct and indirect subsidiaries (collectively, the “Company”), including its wholly-owned subsidiaries, Kinergy Marketing LLC, an Oregon limited liability company (“Kinergy”), Alto Nutrients LLC, a California limited liability company (“Alto Nutrients”), Alto Op Co., a Delaware corporation (“Alto Op Co.”) and all seven of the Company’s production facilities as of March 31, 2021.

The Company is a leading producer and marketer of specialty alcohols and essential ingredients. The Company also produces and markets fuel-grade ethanol. The Company’s production facilities in Pekin, Illinois are located in the heart of the Corn Belt, benefit from low-cost and abundant feedstock and allow for access to many additional domestic markets. In addition, the Company’s ability to load unit trains and barges from these facilities allows for greater access to international markets. The Company’s four production facilities in California, Oregon and Idaho, located in close proximity to both feed and fuel-grade ethanol customers, enjoy unique advantages in efficiency, logistics and product pricing.

The Company had a combined production capacity of 450 million gallons per year, as of March 31, 2021, markets, on an annualized basis, over 500 million gallons of alcohols, and produces, on an annualized basis, nearly 1.5 million tons of essential ingredients on a dry matter basis, such as dried yeast, corn gluten meal, corn gluten feed, and distillers grains and liquid feed used in commercial animal feed and pet foods.

The Company focuses on four key markets: *Health, Home & Beauty; Food & Beverage; Essential Ingredients;* and *Renewable Fuels*. Products for the Health, Home & Beauty market include specialty alcohols used in mouthwash, cosmetics, pharmaceuticals, hand sanitizers, disinfectants and cleaners. Products for the Food & Beverage markets include grain neutral spirits used in alcoholic beverages and vinegar as well as corn germ used for corn oils. Products for Essential Ingredients markets include yeast, corn gluten and distillers grains used in commercial animal feed and pet foods. Renewable Fuels includes fuel-grade ethanol and distillers corn oil used as a feedstock for renewable diesel fuel.

As of March 31, 2021, the Company was operating at approximately 64% of its then-450 million gallon annual production capacity. As market conditions change, the Company may increase, decrease or idle production at one or more operating facilities or resume operations at any idled facility.

Basis of Presentation—Interim Financial Statements – The accompanying unaudited consolidated financial statements and related notes have been prepared in accordance with accounting principles generally accepted in the United States for interim financial information and the instructions to Form 10-Q and Rule 10-01 of Regulation S-X. Results for interim periods should not be considered indicative of results for a full year. These interim consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes contained in the Company’s Annual Report on Form 10-K for the year ended December 31, 2020. The accounting policies used in preparing these consolidated financial statements are the same as those described in Note 1 to the consolidated financial statements in the Company’s Annual Report on Form 10-K for the year ended December 31, 2020. In the opinion of management, all adjustments (consisting of normal recurring adjustments) considered necessary for a fair statement of the results for interim periods have been included. All significant intercompany accounts and transactions have been eliminated in consolidation.

Accounts Receivable and Allowance for Doubtful Accounts – Trade accounts receivable are presented at face value, net of the allowance for doubtful accounts. The Company sells specialty alcohols to large consumer products companies, sells fuel-grade ethanol to gasoline refining and distribution companies, sells essential ingredients to animal feed customers, including distillers grains and other feed co-products to dairy operators and animal feedlots and corn oil to poultry and biodiesel customers generally without requiring collateral.

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The Company maintains an allowance for doubtful accounts for balances that appear to have specific collection issues. The collection process is based on the age of the invoice and requires attempted contacts with the customer at specified intervals. If, after a specified number of days, the Company has been unsuccessful in its collection efforts, a bad debt allowance is recorded for the balance in question. Delinquent accounts receivable are charged against the allowance for doubtful accounts once uncollectibility has been determined. The factors considered in reaching this determination are the apparent financial condition of the customer and the Company’s success in contacting and negotiating with the customer. If the financial condition of the Company’s customers were to deteriorate, resulting in an impairment of ability to make payments, additional allowances may be required.

Of the accounts receivable balance, approximately \$51,301,000 and \$35,839,000 at March 31, 2021 and December 31, 2020, respectively, were used as collateral under Kinergy’s operating line of credit. The allowance for doubtful accounts was \$351,000 and \$260,000 as of March 31, 2021 and December 31, 2020, respectively. The Company recorded a bad debt expense of \$91,000 and \$19,000 for the three months ended March 31, 2021 and 2020, respectively. The Company does not have any off-balance sheet credit exposure related to its customers.

Financial Instruments – The carrying values of cash and cash equivalents, accounts receivable, derivative assets, accounts payable, accrued liabilities and derivative liabilities are reasonable estimates of their fair values because of the short maturity of these items. The carrying value of the Company’s senior secured notes are recorded at fair value and are considered Level 2 fair value measurements. The Company believes the carrying value of its notes receivable are not considered materially different than fair value due to their recent issuances, and other long-term debt instruments’ carrying values are not considered materially different than fair value because the interest rates on these instruments are variable, and are considered Level 2 fair value measurements.

Estimates and Assumptions – The preparation of the consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates are required as part of determining the allowance for doubtful accounts, net realizable value of inventory, estimated lives of property and equipment, long-lived asset impairments, fair value of warrants, valuation allowances on deferred income taxes and the potential outcome of

future tax consequences of events recognized in the Company's financial statements or tax returns, and the valuation of assets acquired and liabilities assumed as a result of business combinations. Actual results and outcomes may materially differ from management's estimates and assumptions.

2. ASSETS AND LIABILITIES HELD-FOR-SALE.

In October 2020, the Company's Board of Directors approved a plan to sell the Company's fuel-grade ethanol production facilities located in Madera and Stockton, California. As a result, the Company determined the related long-lived asset groups should be classified as held-for-sale at December 31, 2020. During the three months ended March 31, 2021, the Company provided for an additional impairment charge of \$1.2 million based on revised fair value estimates. On April 23, 2021, the Company entered into an asset purchase agreement to sell its Madera facility for total consideration of \$28.3 million, comprised of \$19.5 million in cash and \$8.8 million in assumption of liabilities. On May 14, 2021, the Company closed the sale.

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The Company classified the following assets and liabilities as held-for-sale as of March 31, 2021 (in thousands):

	<u>Stockton</u>	<u>Madera</u>
Property and equipment, net	\$ 19,535	\$ 27,813
Right of use operating lease assets, net	9,705	-
Assets held-for-sale	<u>\$ 29,240</u>	<u>\$ 27,813</u>
	<u>Stockton</u>	<u>Madera</u>
Operating lease obligations	\$ 10,456	\$ —
Assessment financing	—	8,775
Liabilities held-for-sale	<u>\$ 10,456</u>	<u>\$ 8,775</u>

The Company classified the following assets and liabilities as held-for-sale as of December 31, 2020 (in thousands):

	<u>Stockton</u>	<u>Madera</u>
Property and equipment, net	\$ 19,535	\$ 29,013
Right of use operating lease assets, net	9,747	-
Assets held-for-sale	<u>\$ 29,282</u>	<u>\$ 29,013</u>
	<u>Stockton</u>	<u>Madera</u>
Operating lease obligations	\$ 10,435	\$ —
Assessment financing	—	9,107
Liabilities held-for-sale	<u>\$ 10,435</u>	<u>\$ 9,107</u>

For the three months ended March 31, 2021, net sales attributed to the results of operations for Stockton and Madera were \$0.2 million and less than \$0.1 million, respectively. For the three months ended March 31, 2020, net sales attributed to the results of operations for Stockton and Madera were \$21.9 million and \$21.5 million, respectively. For the three months ended March 31, 2021, pre-tax loss attributed to the results of operations for Stockton and Madera was \$0.8 million and \$1.6 million, respectively. For the three months ended March 31, 2020, pre-tax loss attributed to the results of operations for Stockton and Madera was \$2.3 million and \$1.8 million, respectively.

3. SEGMENTS.

The Company reports its financial and operating performance in three segments: (1) marketing and distribution, which includes marketing and merchant trading for Company-produced alcohols and essential ingredients on an aggregated basis, and third-party fuel-grade ethanol (2) Pekin production, which includes the production and sale of alcohols and essential ingredients produced at the Company's Pekin, Illinois campus ("Pekin Campus"), and (3) Other production, which includes the production and sale of fuel-grade ethanol and essential ingredients produced at all of the Company's other production facilities on an aggregated basis ("Other production"), none of which are individually so significant as to be considered a reportable segment.

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The following tables set forth certain financial data for the Company's operating segments (in thousands):

<i>Net Sales</i>	Three Months Ended	
	March 31,	
	<u>2021</u>	<u>2020</u>
Marketing and distribution:		
Alcohol sales, gross	\$ 57,010	\$ 57,506
Alcohol sales, net	452	429
Intersegment sales	2,244	4,315
Total marketing and distribution sales	<u>59,706</u>	<u>62,250</u>
Pekin Campus production, recorded as gross:		
Alcohol sales	\$ 95,083	\$ 84,132
Essential ingredient sales	45,077	39,870
Intersegment sales	9,985	2,332
Total Pekin Campus sales	<u>150,145</u>	<u>126,334</u>
Other production, recorded as gross:		
Alcohol sales	\$ 15,969	\$ 99,230
Essential ingredient sales	5,143	30,237
Intersegment sales	305	291
Total Other production sales	<u>21,417</u>	<u>129,758</u>

Intersegment eliminations	(12,534)	(6,938)
Net sales as reported	<u>\$ 218,734</u>	<u>\$ 311,404</u>

Cost of goods sold:

Marketing and distribution	\$ 53,957	\$ 57,139
Pekin Campus production	137,376	128,683
Other production	24,118	142,310
Intersegment eliminations	(10,554)	(3,838)
Cost of goods sold as reported	<u>\$ 204,897</u>	<u>\$ 324,294</u>

Income (loss) before benefit for income taxes:

Marketing and distribution	\$ 3,973	\$ 2,930
Pekin Campus production	9,691	(6,849)
Other production	(5,137)	(16,621)
Corporate activities	(2,904)	(2,562)
	<u>\$ 5,623</u>	<u>\$ (23,102)</u>

Depreciation:

Pekin Campus production	\$ 4,345	\$ 5,130
Other production	1,498	4,530
Corporate activities	17	99
	<u>\$ 5,860</u>	<u>\$ 9,759</u>

Interest expense:

Marketing and distribution	\$ 202	\$ 627
Pekin Campus production	519	2,084
Other production	136	32
Corporate activities	1,028	2,564
	<u>\$ 1,885</u>	<u>\$ 5,307</u>

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The following table sets forth the Company's total assets by operating segment (in thousands):

Total assets:	March 31, 2021	December 31, 2020
Marketing and distribution	\$ 119,546	\$ 89,337
Pekin Campus production	238,370	234,439
Other production	120,351	102,409
Corporate assets	22,849	50,633
	<u>\$ 501,116</u>	<u>\$ 476,818</u>

4. INVENTORIES.

Inventories consisted primarily of bulk ethanol, specialty alcohols, corn, essential ingredients and unleaded fuel, and are valued at the lower of cost or net realizable value, with cost determined on a first-in, first-out basis. Inventory is net of a \$1,033,000 valuation adjustment as of December 31, 2020. Inventory balances consisted of the following (in thousands):

	March 31, 2021	December 31, 2020
Finished goods	\$ 39,654	\$ 25,154
Work in progress	4,965	4,333
Raw materials	9,233	7,074
Other	1,364	1,364
Total	<u>\$ 55,216</u>	<u>\$ 37,925</u>

5. DERIVATIVES.

The business and activities of the Company expose it to a variety of market risks, including risks related to changes in commodity prices. The Company monitors and manages these financial exposures as an integral part of its risk management program. This program recognizes the unpredictability of financial markets and seeks to reduce the potentially adverse effects that market volatility could have on operating results.

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Commodity Risk – Cash Flow Hedges – The Company uses derivative instruments to protect cash flows from fluctuations caused by volatility in commodity prices for periods of up to twelve months in order to protect gross profit margins from potentially adverse effects of market and price volatility on alcohol sales and purchase commitments where the prices are set at a future date and/or if the contracts specify a floating or index-based price. In addition, the Company hedges anticipated sales of alcohol to minimize its exposure to the potentially adverse effects of price volatility. These derivatives may be designated and documented as cash flow hedges and effectiveness is evaluated by assessing the probability of the anticipated transactions and regressing commodity futures prices against the Company's purchase and sales prices. Ineffectiveness, which is defined as the degree to which the derivative does not offset the underlying exposure, is recognized immediately in cost of goods sold. For the three months ended March 31, 2021 and 2020, the Company did not designate any of its derivatives as cash flow hedges.

Commodity Risk – Non-Designated Hedges – The Company uses derivative instruments to lock in prices for certain amounts of corn and alcohols by entering into exchange-traded forward contracts or options for those commodities. These derivatives are not designated for hedge accounting treatment. The changes in fair value of these contracts are recorded on the balance sheet and recognized immediately in cost of goods sold. The Company recognized net gains of \$10,543,000 and \$0 as the change in the fair value of these contracts for the three months ended March 31, 2021 and 2020, respectively.

Non Designated Derivative Instruments – The classification and amounts of the Company’s derivatives not designated as hedging instruments, and related cash collateral balances, are as follows (in thousands):

Type of Instrument	As of March 31, 2021			
	Assets		Liabilities	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Commodity contracts	Derivative assets	\$ 22,355	Derivative liabilities	\$ 4,741

Type of Instrument	As of December 31, 2020			
	Assets		Liabilities	
	Balance Sheet Location	Fair Value	Balance Sheet Location	Fair Value
Cash collateral balance	Other current assets	\$ 520		
Commodity contracts	Derivative assets	\$ 17,149	Derivative liabilities	\$ —

The classification and amounts of the Company’s recognized gains for its derivatives not designated as hedging instruments are as follows (in thousands):

Type of Instrument	Statements of Operations Location	Realized Gains	
		For the three months Ended March 31,	
		2021	2020
Commodity contracts	Cost of goods sold	\$ 6,185	\$ —
		\$ 6,185	\$ —

Type of Instrument	Statements of Operations Location	Unrealized Gains	
		For the three months Ended March 31,	
		2021	2020
Commodity contracts	Cost of goods sold	\$ 4,358	\$ —
		\$ 4,358	\$ —

6. DEBT.

Long-term borrowings are summarized as follows (in thousands):

	March 31, 2021	December 31, 2020
Kinergy line of credit	\$ 45,554	\$ 32,512
Pekin revolving loan	17,580	20,580
ICP revolving loan	9,384	9,384
Parent notes payable	20,001	25,533
CARES Act loans	9,860	9,860
	102,379	97,869
Less unamortized debt premium	174	230
Less unamortized debt financing costs	(576)	(759)
Less short-term portion	(37,581)	(25,533)
Long-term debt	\$ 64,396	\$ 71,807

Parent Notes Payable – On May 14, 2021, with proceeds from the Company’s sale of its Madera, California facility, it repaid \$19.3 million of principal on its notes payable, with \$0.7 million remaining.

Maturities of Long-term Debt – The Company’s long-term debt matures as follows (in thousands):

December 31:	
2021	\$ 20,001
2022	82,378
	\$ 102,379

Restrictions – At March 31, 2021, there were approximately \$231.9 million of net assets at the Company’s subsidiaries that were not available to be transferred to Alto Ingredients, Inc. in the form of dividends, loans or advances due to restrictions contained in the credit facilities of the Company’s subsidiaries.

7. COMMITMENTS AND CONTINGENCIES.

Sales Commitments – At March 31, 2021, the Company had entered into sales contracts with its major customers to sell certain quantities of alcohol and essential ingredients. The Company had open alcohol indexed-price contracts for 102,526,000 gallons as of March 31, 2021 and open fixed-price alcohol sales contracts totaling \$207,687,000 as of

March 31, 2021. The Company had open fixed-price sales contracts for essential ingredients totaling \$18,170,000 and open indexed-price sales contracts of essential ingredients for 146,000 tons as of March 31, 2021. These sales contracts are scheduled to be completed throughout 2021.

Purchase Commitments – At March 31, 2021, the Company had indexed-price purchase contracts to purchase 15,626,000 gallons of alcohol and fixed-price purchase contracts to purchase \$1,238,000 of alcohol from its suppliers. The Company had fixed-price purchase contracts to purchase \$33,883,000 of corn from its suppliers as of March 31, 2021. These purchase commitments are scheduled to be satisfied throughout 2021.

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Litigation – General – The Company is subject to various claims and contingencies in the ordinary course of its business, including those related to litigation, business transactions, employee-related matters, environmental regulations, and others. When the Company is aware of a claim or potential claim, it assesses the likelihood of any loss or exposure. If it is probable that a loss will result and the amount of the loss can be reasonably estimated, the Company will record a liability for the loss. If the loss is not probable or the amount of the loss cannot be reasonably estimated, the Company discloses the claim if the likelihood of a potential loss is reasonably possible and the amount involved could be material. While there can be no assurances, the Company does not expect that any of its pending legal proceedings will have a material impact on the Company’s financial condition or results of operations.

8. PENSION PLANS.

The Company sponsors a defined benefit pension plan (the “Retirement Plan”) and a health care and life insurance plan (the “Postretirement Plan”). The Company assumed the Retirement Plan and the Postretirement Plan as part of its acquisition of PE Central on July 1, 2015.

The Retirement Plan is noncontributory, and covers only “grandfathered” unionized employees at the Company’s Pekin, Illinois facility who fulfill minimum age and service requirements. Benefits are based on a prescribed formula based upon the employee’s years of service. The Retirement Plan, which is part of a collective bargaining agreement, covers only union employees hired prior to November 1, 2010.

The Company uses a December 31 measurement date for its Retirement Plan. The Company’s funding policy is to make the minimum annual contribution required by applicable regulations. As of December 31, 2020, the Retirement Plan’s accumulated projected benefit obligation was \$24.6 million, with a fair value of plan assets of \$17.6 million. The underfunded amount of \$7.0 million is recorded on the Company’s consolidated balance sheet in other liabilities. For the three months ended March 31, 2021, the Retirement Plan’s net periodic expense was \$22,000, comprised of \$151,000 in interest cost and \$109,000 in service cost, partially offset by \$238,000 of expected return on plan assets. For the three months ended March 31, 2020, the Retirement Plan’s net periodic expense was \$48,000, comprised of \$173,000 in interest cost and \$101,000 in service cost, partially offset by \$226,000 of expected return on plan assets.

The Postretirement Plan provides postretirement medical benefits and life insurance to certain “grandfathered” unionized employees. Employees hired after December 31, 2000 are not eligible to participate in the Postretirement Plan. The Postretirement Plan is contributory, with contributions required at the same rate as active employees. Benefit eligibility under the plan reduces at age 65 from a defined benefit to a defined dollar cap based upon years of service. As of December 31, 2020, the Postretirement Plan’s accumulated projected benefit obligation was \$5.3 million and is recorded on the Company’s consolidated balance sheet in other liabilities. The Company’s funding policy is to make the minimum annual contribution required by applicable regulations. For the three months ended March 31, 2021, the Postretirement Plan’s net periodic expense was \$42,000, comprised of \$10,000 of interest cost, \$26,000 of service cost and \$6,000 of amortization expense. For the three months ended March 31, 2020, the Postretirement Plan’s net periodic expense was \$59,000, comprised of \$38,000 of interest cost, \$14,000 of service cost and \$7,000 of amortization expense.

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9. FAIR VALUE MEASUREMENTS.

The fair value hierarchy prioritizes the inputs used in valuation techniques into three levels, as follows:

- Level 1 – Observable inputs – unadjusted quoted prices in active markets for identical assets and liabilities;
- Level 2 – Observable inputs other than quoted prices included in Level 1 that are observable for the asset or liability through corroboration with market data; and
- Level 3 – Unobservable inputs – includes amounts derived from valuation models where one or more significant inputs are unobservable. For fair value measurements using significant unobservable inputs, a description of the inputs and the information used to develop the inputs is required along with a reconciliation of Level 3 values from the prior reporting period.

Pooled separate accounts – Pooled separate accounts invest primarily in domestic and international stocks, commercial paper or single mutual funds. The net asset value is used as a practical expedient to determine fair value for these accounts. Each pooled separate account provides for redemptions by the Retirement Plan at reported net asset values per share, with little to no advance notice requirement, therefore these funds are classified within Level 2 of the valuation hierarchy.

Long-Lived Assets Held-for-Sale – The Company recorded its long-lived assets associated with its property and equipment held-for-sale at fair value at March 31, 2021 and December 31, 2020 of \$47,348,000 and \$48,548,000, respectively. The fair values of these assets are based on observable values for the assets through corroboration with market data and are designated as Level 3 inputs.

Other Derivative Instruments – The Company’s other derivative instruments consist of commodity positions. The fair values of the commodity positions are based on quoted prices on the commodity exchanges and are designated as Level 1 inputs.

The following table summarizes recurring and nonrecurring fair value measurements by level at March 31, 2021 (in thousands):

	<u>Fair Value</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
Assets:				
Derivative financial instruments	\$ 22,355	\$ 22,355	\$ —	\$ —
Long-lived assets held-for-sale	57,053	—	—	57,053
	<u>\$ 79,408</u>	<u>\$ 22,355</u>	<u>\$ —</u>	<u>\$ 57,053</u>
Liabilities:				
Derivative financial instruments	\$ (4,741)	\$ (4,741)	\$ —	\$ —

The following table summarizes recurring and nonrecurring fair value measurements by level at December 31, 2020 (in thousands):

	Fair Value	Level 1	Level 2	Level 3	Benefit Plan Percentage Allocation
Assets:					
Derivative financial instruments	\$ 17,149	\$ 17,149	\$ —	\$ —	
Long-lived assets held-for-sale	58,295	—	—	58,295	
Defined benefit plan assets(1) (pooled separate accounts):					
Large U.S. Equity(2)	5,470	—	5,470	—	31%
Small/Mid U.S. Equity(3)	2,605	—	2,605	—	15%
International Equity(4)	2,921	—	2,921	—	17%
Fixed Income(5)	6,592	—	6,592	—	37%
	<u>\$ 93,032</u>	<u>\$ 17,149</u>	<u>\$ 17,588</u>	<u>\$ 58,295</u>	
Liabilities:					
	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	

(1) Included in other assets in the consolidated balance sheets.

(2) This category includes investments in funds comprised of equity securities of large U.S. companies. The funds are valued using the net asset value method in which an average of the market prices for the underlying investments is used to value the fund.

(3) This category includes investments in funds comprised of equity securities of small- and medium-sized U.S. companies. The funds are valued using the net asset value method in which an average of the market prices for the underlying investments is used to value the fund.

(4) This category includes investments in funds comprised of equity securities of foreign companies including emerging markets. The funds are valued using the net asset value method in which an average of the market prices for the underlying investments is used to value the fund.

(5) This category includes investments in funds comprised of U.S. and foreign investment-grade fixed income securities, high-yield fixed income securities that are rated below investment-grade, U.S. treasury securities, mortgage-backed securities, and other asset-backed securities. The funds are valued using the net asset value method in which an average of the market prices for the underlying investments is used to value the fund.

10. EARNINGS PER SHARE.

The following tables compute basic and diluted earnings per share (in thousands, except per share data):

	Three Months Ended March 31, 2021		
	Income Numerator	Shares Denominator	Per-Share Amount
Net income attributed to Alto Ingredients, Inc.	\$ 4,678		
Less: Preferred stock dividends	(312)		
Basic income per share:			
Income available to common stockholders	\$ 4,366	70,351	\$ 0.06
Add: Dilutive securities	—	2,113	
Diluted income per share:			
Income available to common stockholders	\$ 4,366	72,464	\$ 0.06

	Three Months Ended March 31, 2020		
	Loss Numerator	Shares Denominator	Per-Share Amount
Net loss attributed to Alto Ingredients, Inc.	\$ (25,100)		
Less: Preferred stock dividends	(315)		
Basic and diluted loss per share:			
Net loss available to common stockholders	\$ (25,415)	53,828	\$ (0.47)

There were an additional aggregate potentially dilutive weighted-average shares of 3,265,000 and 964,000 from convertible securities outstanding for the three months ended March 31, 2021 and 2020. These securities were not considered in calculating diluted net income (loss) per share for the three months ended March 31, 2021 and 2020, as their effect would have been anti-dilutive.

11. PARENT COMPANY FINANCIALS.

Restricted Net Assets – At March 31, 2021, the Company had approximately \$231.9 million of net assets at its subsidiaries that were not available to be transferred to Alto Ingredients in the form of dividends, distributions, loans or advances due to restrictions contained in the credit facilities of these subsidiaries.

Parent company financial statements for the periods covered in this report are set forth below (in thousands):

ASSETS	March 31, 2021	December 31, 2020
Current Assets:		
Cash and cash equivalents	\$ 16,534	\$ 25,632
Receivables from subsidiaries	16,412	15,548
Other current assets	2,188	1,836
Total current assets	<u>35,134</u>	<u>43,016</u>
Property and equipment, net	<u>125</u>	<u>142</u>
Other Assets:		
Investments in subsidiaries	257,547	246,518
Alto West, LLC receivable	42,649	42,649
Right of use operating lease assets, net	2,915	2,985
Other assets	1,087	1,088
Total other assets	<u>304,198</u>	<u>293,240</u>
Total Assets	<u>\$ 339,457</u>	<u>\$ 336,398</u>
Current Liabilities:		
Accounts payable and accrued liabilities	\$ 4,961	\$ 2,001
Accrued Alto Op Co. purchase	3,829	3,829
Current portion of long-term debt	20,001	25,533
Other current liabilities	394	473
Total current liabilities	<u>29,185</u>	<u>31,836</u>
Long-term debt, net of current portion	5,665	5,564
Other liabilities	2,925	2,763
Total Liabilities	<u>37,775</u>	<u>40,163</u>
Stockholders' Equity:		
Preferred stock	1	1
Common and non-voting common stock	73	72
Additional paid-in capital	1,037,718	1,036,638
Accumulated other comprehensive loss	(3,878)	(3,878)
Accumulated deficit	(732,232)	(736,598)
Total Alto Ingredients, Inc. stockholders' equity	<u>301,682</u>	<u>296,235</u>
Total Liabilities and Stockholders' Equity	<u>\$ 339,457</u>	<u>\$ 336,398</u>

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	Three Months Ended	
	March 31,	
	2021	2020
Management fees from subsidiaries	\$ 2,526	\$ 3,253
Selling, general and administrative expenses	4,651	5,377
Loss from operations	(2,125)	(2,124)
Fair value adjustments	—	673
Interest expense, net	(1,028)	(1,598)
Other income	807	—
Loss before benefit for income taxes	(2,346)	(3,049)
Benefit for income taxes	—	—
Loss before equity in losses of subsidiaries	(2,346)	(3,049)
Equity in income (losses) of subsidiaries	7,024	(24,107)
Consolidated net income (loss)	<u>\$ 4,678</u>	<u>\$ (27,156)</u>

	For the Three Months Ended	
	March 31,	
	2021	2020
Operating Activities:		
Consolidated net income (loss)	\$ 4,678	\$ (27,156)
Adjustments to reconcile net income (loss) to cash used in operating activities:		
Equity in (income) losses of subsidiaries	(7,024)	24,107
Fair value adjustments	—	(673)
Depreciation	17	33
Amortization (accretion) of debt discount (premium)	101	(57)
Changes in operating assets and liabilities:		
Receivables from subsidiaries	(864)	123
Other assets	(281)	29
Accounts payable and accrued expenses	(765)	—
Accounts payable with subsidiaries	110	2,235
Net cash used in operating activities	<u>\$ (4,028)</u>	<u>\$ (1,359)</u>
Investing Activities:		
Additions to property and equipment	\$ —	\$ —

Net cash used in investing activities	\$ —	\$ —
Financing Activities:		
Proceeds from issuances of common stock	\$ 462	\$ 282
Proceeds from plant receivable	—	5,813
Payments on senior notes	(5,532)	—
Preferred stock dividend payments	—	—
Net cash provided by (used in) financing activities	\$ (5,070)	\$ 6,095
Net increase (decrease) in cash and cash equivalents	(9,098)	4,736
Cash and cash equivalents at beginning of period	25,632	4,985
Cash and cash equivalents at end of period	\$ 16,534	\$ 9,721

12. SUBSEQUENT EVENT.

Agreement to sell Madera facility— On April 23, 2021, the Company entered into an asset purchase agreement with Seaboard Energy California, LLC, for the purchase and sale of the Company's Madera, California production facility for total consideration of \$28.3 million, comprised of \$19.5 million in cash and \$8.8 million in assumption of liabilities. The Company closed the sale on May 14, 2021, and using net cash proceeds, repaid \$19.3 million on its parent notes payable.

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ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

The following discussion and analysis should be read in conjunction with our consolidated financial statements and notes to consolidated financial statements included elsewhere in this report. This report and our consolidated financial statements and notes to consolidated financial statements contain forward-looking statements, which generally include the plans and objectives of management for future operations, including plans and objectives relating to our future economic performance and our current beliefs regarding revenues we might generate and profits we might earn if we are successful in implementing our business and growth strategies. The forward-looking statements and associated risks may include, relate to or be qualified by other important factors, including:

- fluctuations in the market prices of alcohols and essential ingredients;
- fluctuations in the costs of key production input commodities such as corn and natural gas;
- the projected growth or contraction in the alcohol and essential ingredients markets in which we operate;
- our strategies for expanding, maintaining or contracting our presence in these markets;
- anticipated trends in our financial condition and results of operations; and
- our ability to distinguish ourselves from our current and future competitors.

You are cautioned not to place undue reliance on any forward-looking statements, which speak only as of the date of this report, or in the case of a document incorporated by reference, as of the date of that document. We do not undertake to update, revise or correct any forward-looking statements, except as required by law.

Any of the factors described immediately above, or referenced from time to time in our filings with the Securities and Exchange Commission or in the "Risk Factors" section below could cause our financial results, including our net income or loss or growth in net income or loss to differ materially from prior results, which in turn could, among other things, cause the price of our common stock to fluctuate substantially.

Recent Developments

On April 23, 2021, we entered into an asset purchase agreement with Seaboard Energy California, LLC, for the purchase and sale of our Madera, California production facility for total consideration of \$28.3 million, comprised of \$19.5 million in cash and \$8.8 million in assumption of liabilities. We closed the transaction on May 14, 2021, and with the net proceeds, repaid \$19.3 million in principal on our senior notes.

Overview

We are a leading producer and marketer of specialty alcohols and essential ingredients, and the largest producer of specialty alcohols in the United States based on annualized volumes.

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We operate six alcohol production facilities. Three of our production facilities are located in the Midwestern state of Illinois and three of our facilities are located in the Western states of California, Oregon and Idaho. Our facility in California is held-for-sale as we are in the process of marketing the Stockton facility for sale. We have an annual alcohol production capacity of 410 million gallons. We market all of the alcohols produced at our facilities as well as fuel-grade ethanol produced by third parties. In 2020, we marketed over 500 million gallons combined of our own alcohols as well as fuel-grade ethanol produced by third parties, and nearly 1.5 million tons of essential ingredients on a dry matter basis. Our business consists of three reportable segments: two production segments and a marketing segment.

We report our financial and operating performance in three segments: (1) marketing and distribution, which includes marketing and merchant trading for Company-produced alcohols and essential ingredients on an aggregated basis, and third party fuel-grade ethanol (2) Pekin production, which includes the production and sale of alcohols and essential ingredients produced at our Pekin, Illinois campus, and (3) Other production, which includes the production and sale of fuel-grade ethanol and essential ingredients produced at all of our other production facilities on an aggregate basis, none of which are individually so significant as to be considered a reportable segment.

Our mission is to expand our business as a leading producer and marketer of specialty alcohols and essential ingredients. We intend to accomplish this goal in part by investing in our specialized and higher value specialty alcohol production and distribution infrastructure, expanding production in high-demand essential ingredients, expanding and extending the sale of our products into new regional and international markets, building efficiencies and economies of scale and by capturing a greater portion of the value stream.

We produce specialty alcohols, fuel-grade ethanol and essential ingredients, focusing on four key markets: *Health, Home & Beauty*; *Food & Beverage*; *Essential Ingredients*; and *Renewable Fuels*. Products for the Health, Home & Beauty market include specialty alcohols used in mouthwash, cosmetics, pharmaceuticals, hand sanitizers, disinfectants and cleaners. Products for the Food & Beverage markets include grain neutral spirits used in alcoholic beverages and vinegar as well as corn germ used for corn oils. Products for Essential Ingredients markets include yeast, corn gluten and distillers grains used in commercial animal feed and pet foods. Our Renewable Fuels products include fuel-grade ethanol and distillers corn oil used as a feedstock for renewable diesel fuel.

We produce our alcohols and essential ingredients at our production facilities described below. Our production facilities located in the Midwest are in the heart of the Corn Belt, benefit from low-cost and abundant feedstock and enjoy logistical advantages that enable us to provide our products to both domestic and international markets via truck, rail or barge. Our production facilities located on the West Coast are near their respective fuel and feed customers, offering significant timing, transportation cost and logistical advantages.

We are currently operating at approximately 64% of our estimated maximum annual production capacity. Our Magic Valley and Stockton facilities are currently idled. As market conditions change, we may increase, decrease or idle production at one or more operating facilities or resume operations at any idled facility.

Production Facility	Location	Annual Production Capacity (estimated, in gallons)	
		Fuel-Grade Ethanol	Specialty Alcohol
Pekin Campus	Pekin, IL	110,000,000	140,000,000
Magic Valley	Burley, ID	60,000,000	—
Columbia	Boardman, OR	40,000,000	—
Stockton	Stockton, CA	60,000,000	—

Marketing Segment

We market all of the alcohols and essential ingredients we produce at our facilities. We also market fuel-grade ethanol produced by third parties.

We have extensive and long-standing customer relationships, both domestic and international, for our specialty alcohols and essential ingredients. These customers include producers and distributors of ingredients for cosmetics, sanitizers and related products, distilled spirits producers, food products manufacturers, producers of personal health/consumer health and personal care hygiene products, and global trading firms.

Our fuel-grade ethanol customers are located throughout the Western and Midwestern United States and consist of integrated oil companies and gasoline marketers who blend fuel-grade ethanol into gasoline. Our customers depend on us to provide a reliable supply of fuel-grade ethanol and manage the logistics and timing of delivery with very little effort on their part. Our customers collectively require fuel-grade ethanol volumes in excess of the supplies we produce at our facilities. We secure additional fuel-grade ethanol supplies from third-party fuel-grade ethanol plants in California and other third-party suppliers in the Midwest where a majority of fuel-grade ethanol producers are located. We arrange for transportation, storage and delivery of fuel-grade ethanol purchased by our customers through our agreements with third-party service providers in the Western United States as well as in the Midwest from a variety of sources.

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We market our essential ingredient feed products to dairies and feedlots, in many cases located near our production facilities. These customers use our feed products for livestock as a substitute for corn and other sources of starch and protein. We sell our corn oil to poultry and biodiesel customers. We do not market essential ingredients from other producers.

See “Note 3 – Segments” to our Notes to Consolidated Financial Statements included elsewhere in this report for financial information about our business segments.

Current Initiatives and Outlook

We had a solid first quarter, selling 19 million gallons of specialty alcohols through a combination of contracted volumes, spot sales and exports. The first quarter also represented our fourth consecutive quarter of gross profit, reflecting the benefits of our new business focus on specialty alcohols and essential ingredients. Our new business focus is more sustainable and profitable than our prior focus on fuel-grade ethanol.

We are now the largest producer of specialty alcohols in the United States based on annualized volumes. We have 410 million gallons of annual production capacity, of which approximately 140 million gallons, or 34%, is specialty alcohols and the balance is fuel-grade ethanol. We are currently operating production facilities with 290 million gallons of annual capacity, of which nearly 50% is specialty alcohols. All of our operating facilities are running at break-even or better on an earnings before interest, taxes, depreciation and amortization basis.

We remain on track for sales of our specialty alcohols to contribute a minimum of \$60 million in gross profit for the full year based on 70 million gallons of specialty alcohols contracted in the fall of 2020 at fixed volumes and prices. Many variables could materially impact our results, including export conditions, the ability of our customers to take all of their contracted volumes for 2021, market demand for sanitizers and disinfectants, our ability to timely sell our Stockton, California production facility, and fuel-grade ethanol crush margins. We are optimistic that we can add additional contracted specialty alcohol volumes in 2022 and future years, improving utilization over time from our expanded specialty alcohol production capacity and our ISO 9001, ICH Q7 and EXCiPACT certifications.

As noted above, we have completed the sale of our idled fuel-grade ethanol production facility in Madera, California for total consideration of \$28.3 million. We expect to save approximately \$0.7 million per quarter in interest expense and approximately \$0.4 million per quarter in carrying costs associated with the idled facility.

We have capital improvement projects totaling \$18.0 million in process or scheduled for 2021. We expect these projects to expand revenue and increase efficiencies and plant reliability. For example, we are increasing our yeast facility’s annual production capacity by approximately 15%. We will also have the ability to further expand production of even higher value yeast derivatives with similar payback profiles. In addition, we are upgrading our feed dryers at our Pekin Campus that will produce even higher value feed and improve overall plant efficiency and reliability. These two projects are scheduled for completion by the third quarter with an expected payback in less than two years, or approximately \$5.0 million in additional annual earnings before interest, taxes, depreciation and amortization.

Our Pekin Campus sits on the Mt. Simon sandstone formation, considered one of the most significant potential carbon storage resources in the United States. As a member of the Carbon Capture Coalition, we are actively engaged in discussions to develop a carbon capture and sequestration program at our Pekin site, which generates over 600,000 tons of CO₂ annually, and expect to be an active player in the carbon capture space.

Finally, among many other projects under development is our plan to expand protein production at our dry-mill production facilities, which collectively represent 250 million gallons of annual production capacity. We believe the economics of expanded protein production are compelling and would expect to achieve protein concentrations in excess of 50% and an improvement in corn oil production by 50%.

Over the past twelve months, we have improved operations and our production footprint, and reduced controllable expenses and our overall cost of capital, to build a strong foundation for the future which will enable us to aggressively pursue organic opportunities to reinvest in quality, proven high-value projects, as well as pursue accretive strategic acquisitions.

Critical Accounting Policies

The preparation of our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America, requires us to make judgments and estimates that may have a significant impact upon the portrayal of our financial condition and results of operations. We believe that of our significant accounting policies, the following require estimates and assumptions that require complex, subjective judgments by management that can materially impact the portrayal of our financial condition and results of operations: revenue recognition; impairment of long-lived assets and held-for-sale classification; valuation of allowance for deferred taxes and derivative instruments. These significant accounting principles are more fully described in “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies” in our Annual Report on Form 10-K for the year ended December 31, 2020.

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Results of Operations

The following selected financial information should be read in conjunction with our consolidated financial statements and notes to our consolidated financial statements included elsewhere in this report, and the other sections of “Management’s Discussion and Analysis of Financial Condition and Results of Operations” contained in this report.

Certain performance metrics that we believe are important indicators of our results of operations include:

	Three Months Ended March 31,		Percentage Change
	2021	2020	
Fuel-grade ethanol production gallons sold (in millions)	39.0	100.2	(61.1)%
Specialty alcohol production gallons sold (in millions)	19.0	22.3	(14.8)%
Third party fuel-grade ethanol gallons sold (in millions)	54.0	62.4	(13.5)%
Total gallons sold (in millions)	112.0	184.9	(39.4)%
Total gallons produced (in millions)	58.0	116.2	(50.1)%
Production capacity utilization	52%	77%	(32.5)%
Average sales price per gallon	\$ 1.94	\$ 1.51	28.5%
Corn cost per bushel—CBOT equivalent	\$ 4.98	\$ 3.79	31.4%
Average basis ⁽¹⁾	0.29	0.44	(34.1)%
Delivered cost of corn	\$ 5.27	\$ 4.23	24.6%
Total essential ingredients tons sold (in thousands)	276.9	671.9	(58.8)%
Essential ingredients revenues as % of delivered cost of corn ⁽²⁾	40.0%	37.0%	8.1%
Average CBOT ethanol price per gallon	\$ 1.60	\$ 1.24	29.0%
Average CBOT corn price per bushel	\$ 5.40	\$ 3.74	44.4%

(1) Corn basis represents the difference between the immediate cash price of delivered corn and the future price of corn for Chicago delivery.

(2) Essential ingredients revenues as a percentage of delivered cost of corn shows our yield based on sales of essential ingredients, including wet distillers grains and corn oil, generated from alcohol we produced.

Net Sales, Cost of Goods Sold and Gross Profit (Loss)

The following table presents our net sales, cost of goods sold and gross profit (loss) in dollars and gross profit (loss) as a percentage of net sales (in thousands, except percentages):

	Three Months Ended March 31,		Change in	
	2021	2020	Dollars	Percent
Net sales	\$ 218,734	\$ 311,404	\$ (92,670)	(29.8)%
Cost of goods sold	204,897	324,294	(119,397)	(36.8)%
Gross profit (loss)	\$ 13,837	\$ (12,890)	\$ 26,727	NM*
Percentage of net sales	6.3%	(4.1)%		

* Not meaningful

Net Sales

The decrease in our consolidated net sales for the three months ended March 31, 2021 as compared to the same period in 2020 was primarily due to a decrease in our total gallons sold, partially offset by an increase in our average sales price per gallon.

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Our production gallons sold and our volume of essential ingredients sold declined for the three months ended March 31, 2021 as compared to the same period in 2020.

Our third-party gallons sold also declined. Our production gallons and essential ingredients sold declined primarily due to an intentional reduction in our production of fuel-grade ethanol due to adverse market conditions as well as the sale of our Nebraska facilities in April 2020. Our third-party gallons sold declined as we focused our efforts on selling our own fuel-grade ethanol production.

On a consolidated basis, our average sales price per gallon increased 28.5% to \$1.94 for the three months ended March 31, 2021 as compared to \$1.51 for the same period in 2020. The average Chicago Board of Trade, or CBOT, fuel-grade ethanol price per gallon, increased 29.0% to \$1.60 for the three months ended March 31, 2021 as compared to \$1.24 for the same period in 2020.

Marketing Segment

Net sales of fuel-grade ethanol from our marketing segment, excluding intersegment sales, decreased by \$0.5 million, or 1%, to \$57.4 million for the three months ended March 31, 2021 as compared to \$57.9 million for the same period in 2020.

Our volume of third party fuel-grade ethanol gallons sold reported gross by our marketing segment decreased by 7.2 million gallons, or 21%, to 26.7 million gallons for the three months ended March 31, 2021 as compared to 33.9 million gallons for the same period in 2020. At our marketing segment's average sales price per gallon of \$2.14 for the three months ended March 31, 2021, we generated \$15.3 million less in net sales from our marketing segment from the 7.2 million fewer gallons of third-party fuel-grade ethanol sold gross in the three months ended March 31, 2021 as compared to the same period in 2020.

Our volume of third party fuel-grade ethanol gallons sold reported net by our marketing segment decreased by 1.2 million gallons, or 4%, to 27.3 million gallons for the three months ended March 31, 2021 as compared to 28.5 million gallons for the same period in 2020. The decrease in third-party fuel-grade ethanol gallons sold reported net reduced net sales by less than \$0.1 million.

The \$0.44 per gallon, or 26%, increase in our marketing segment's average sales price per gallon for the three months ended March 31, 2021 as compared to the same period in 2020 resulted in a \$14.8 million increase in our net sales from third-party fuel-grade ethanol sold by our marketing segment.

Pekin Campus Production Segment

Net sales of alcohol from our Pekin Campus production segment increased by \$11.0 million, or 13%, to \$95.1 million for the three months ended March 31, 2021 as compared to \$84.1 million for the same period in 2020. Our total volume of production gallons sold decreased by 7.4 million gallons, or 13%, to 50.6 million gallons for the three months ended March 31, 2021 as compared to 58.0 million gallons for the same period in 2020. At our Pekin Campus production segment's average sales price per gallon of \$1.88 for the three months ended March 31, 2021, we generated \$13.9 million less in net sales from our Pekin Campus production segment from the 7.4 million fewer gallons of alcohol sold in the three months ended March 31, 2021 as compared to the same period in 2020. The increase of \$0.43, or 30%, in our Pekin Campus production segment's average sales price per gallon in the three months ended March 31, 2021 as compared to the same period in 2020 improved our net sales from our Pekin Campus production segment by \$24.9 million.

Net sales of essential ingredients increased \$5.2 million, or 13%, to \$45.1 million for the three months ended March 31, 2021 as compared to \$39.9 million for the same period in 2020. Our total volume of essential ingredients sold decreased by 27,000 tons, or 11%, to 211,000 tons for the three months ended March 31, 2021 from 238,000 tons for the same period in 2020. At our average sales price per ton of \$213.18 for the three months ended March 31, 2021, we generated \$5.6 million less in net sales from the 27,000 fewer tons of essential ingredients sold in the three months ended March 31, 2021 as compared to the same period in 2020. The increase of \$45.59, or 27%, in our average sales price per ton for the three months ended March 31, 2021 as compared to the same period in 2020 increased our net sales from our Pekin Campus production segment by \$10.8 million.

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Other Production Segment

Net sales of alcohol from our other production segment decreased by \$83.3 million, or 84%, to \$16.0 million for the three months ended March 31, 2021 as compared to \$99.3 million for the same period in 2020. Our total volume of gallons sold decreased by 57.1 million gallons, or 89%, to 7.4 million gallons for the three months ended March 31, 2021 as compared to 64.5 million gallons for the same period in 2020. At our other production segment's average sales price per gallon of \$2.16 for the three months ended March 31, 2021, we generated \$123.2 million less in net sales from our other production segment from the 57.1 million fewer gallons of alcohol sold in the three months ended March 31, 2021 as compared to the same period in 2020. The increase of \$0.62, or 40%, in our other production segment's average sales price per gallon for the three months ended March 31, 2021 as compared to the same period in 2020 improved our net sales from our other production segment by \$39.9 million.

Net sales of essential ingredients decreased \$25.1 million, or 83%, to \$5.1 million for the three months ended March 31, 2021 as compared to \$30.2 million for the same period in 2020. Our total volume of essential ingredients sold decreased by 369,000 tons, or 85%, to 65,000 tons for the three months ended March 31, 2021 from 434,000 tons for the same period in 2020. At our average sales price per ton of \$78.64 for the three months ended March 31, 2021, we generated \$29.0 million less in net sales from the 369,000 fewer tons of essential ingredients sold in the three months ended March 31, 2021 as compared to the same period in 2020. The increase of \$8.97, or 12.9%, in our average sales price per ton for the three months ended March 31, 2021 as compared to the same period in 2020 increased our net sales from our other production segment by \$3.9 million.

Cost of Goods Sold and Gross Profit (Loss)

Our consolidated gross profit (loss) improved to a gross profit of \$13.8 million for the three months ended March 31, 2021 from a gross loss of \$12.9 million for the same period in 2020, representing a gross profit margin of 6.3% for the three months ended March 31, 2021 compared to negative 4.1% for the same period in 2020. Our consolidated gross profit (loss) improved due to significantly higher margin sales of our specialty alcohols and a substantial reduction in negative margin sales of fuel-grade ethanol as we have idled a significant amount of our fuel-grade ethanol production.

Marketing Segment

Our marketing segment's gross profit improved by \$2.0 million to \$3.5 million for the three months ended March 31, 2021 as compared to \$1.5 million for the same period in 2020. Of this improvement, \$3.0 million is attributable to higher margins from sales of third-party fuel-grade ethanol, partially offset by a reduction of \$1.0 million attributable to lower marketing volumes of third-party fuel-grade ethanol for the three months ended March 31, 2021 as compared to the same period in 2020.

Pekin Campus Production Segment

Our Pekin Campus production segment's gross profit improved by \$15.2 million to a gross profit of \$13.2 million for the three months ended March 31, 2021 as compared to a gross loss of \$2.0 million for the same period in 2020. Of this improvement, \$17.1 million is attributable to increased margins from our specialty alcohols, partially offset by \$1.9 million less in gross profit attributable to decreased sales volumes in the three months ended March 31, 2021 as compared to the same period in 2020.

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Other Production Segment

Our other production segment's gross profit improved by \$9.5 million to a gross loss of \$2.9 million for the three months ended March 31, 2021 as compared to a gross loss of \$12.4 million for the same period in 2020. Of this improvement, \$22.6 million is attributable to lower sales volumes at negative margins, partially offset by \$13.1 million in lower gross profit attributable to a negative margin environment for fuel-grade ethanol for the three months ended March 31, 2021 as compared to the same period in 2020.

Selling, General and Administrative Expenses

The following table presents our selling, general and administrative, or SG&A, expenses in dollars and as a percentage of net sales (in thousands, except percentages):

	Three Months Ended March 31,		Change in	
	2021	2020	Dollars	Percent
	Selling, general and administrative expenses	\$ 7,014	\$ 10,212	\$ (3,198)
Percentage of net sales	3.2%	3.3%		

Our SG&A expenses decreased for the three months ended March 31, 2021 as compared to the same period in 2021. The \$3.2 million period over period decrease in SG&A expenses is primarily due to higher professional fees incurred in the three months ended March 31, 2021 in connection with our debt restructuring and asset sale efforts. We anticipate SG&A expenses of \$20.0 million to \$25.0 million for all of 2021.

Interest Expense, net

The following table presents our interest expense, net in dollars and as a percentage of net sales (in thousands, except percentages):

	Three Months Ended March 31,		Change in	
	2021	2020	Dollars	Percent
	Interest expense, net	\$ 1,885	\$ 5,307	\$ (3,422)
Percentage of net sales	0.9%	1.7%		

Our interest expense, net decreased for the three months ended March 31, 2021 as compared to the same period in 2021. The \$3.4 million period over period decrease in interest expense, net is primarily due to lower average borrowings outstanding as a result of our significant principal payments on outstanding debt over the past year.

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Net Income (Loss) Available to Common Stockholders

The following table presents our net income (loss) available to common stockholders in dollars and as a percentage of net sales (in thousands, except percentages):

	Three Months Ended March 31,		Change in	
	2021	2020	Dollars	Percent
	Net income (loss) available to Common Stockholders	\$ 4,366	\$ (25,415)	\$ 29,781
Percentage of net sales	2.0%	(8.2)%		

The increase in net income available to common stockholders is primarily due to our higher gross profit and lower SG&A expenses and interest expense, for the three months ended March 31, 2021 as compared to the same period in 2020.

Liquidity and Capital Resources

During the three months ended March 31, 2021, we funded our operations primarily from cash generated by our operations, proceeds from lines of credit and cash on hand. These funds were also used to make payments on our term debt and our other credit facilities and for capital expenditures. As of March 31, 2021, we had \$44.1 million in cash and cash equivalents and \$4.7 million available for borrowing under Kinergy's operating line of credit. We believe we have sufficient liquidity to meet our anticipated working capital, debt service and other liquidity needs for the next twelve months from the date of this report.

Quantitative Year-End Liquidity Status

We believe that the following amounts provide insight into our liquidity and capital resources. The following selected financial information should be read in conjunction with our consolidated financial statements and notes to consolidated financial statements included elsewhere in this report, and the other sections of "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in this report (dollars in thousands).

	March 31, 2021	December 31, 2020	Change
	Cash and cash equivalents	\$ 44,146	\$ 47,667
Current assets	\$ 241,588	\$ 214,046	12.9%
Property and equipment, net	\$ 226,183	\$ 229,486	(1.4)%
Current liabilities	\$ 112,750	\$ 86,927	29.7%
Long-term debt, noncurrent portion	\$ 64,396	\$ 71,807	(10.3)%
Working capital	\$ 128,838	\$ 127,119	1.4%
Working capital ratio	2.14	2.46	(13.0)%

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Restricted Net Assets

At March 31, 2021, we had approximately \$231.9 million of net assets at our subsidiaries that were not available to be transferred to Alto Ingredients, Inc. in the form of dividends, distributions, loans or advances due to restrictions contained in the credit facilities of the subsidiaries.

Changes in Working Capital and Cash Flows

Working capital improved to \$128.8 million at March 31, 2021 from \$127.1 million at December 31, 2020 as a result of an increase of \$27.5 million in current assets, partially offset by an increase of \$25.8 million in current liabilities.

Current assets increased primarily due to an increase in accounts receivable and higher inventory values due to increased commodity prices for both alcohol and corn from the prior period.

Our current liabilities increased primarily due to an increase in accounts payable due to timing of payments and an increase in current portion of long-term debt as amounts due within one year increased.

Our cash and cash equivalents declined by \$3.5 million primarily due to \$4.1 million in cash used in our operating activities and \$4.4 million in cash used in our investing activities, partially offset by \$5.0 million in cash provided by our financing activities.

Cash used in our Operating Activities

We used \$4.1 million in cash in our operating activities during the three months ended March 31, 2021, as compared to \$26.9 million in cash provided by our operations for the same period in 2020. Specific factors that contributed to the change in cash from our operating activities include:

- a decrease of \$35.1 million related to higher accounts receivable balances due to the timing of payments
- a decrease of \$28.1 million related to higher inventories due to increased commodity prices; and
- a decrease of \$10.5 million from losses on derivative instruments due to the recent rise in corn prices.

These amounts were partially offset by:

- an increase of \$31.8 million in our consolidated net income due to higher margins from our sales of specialty alcohols; and
- an increase of \$21.9 million related to accounts payable due to timing of payments.

Cash used in our Investing Activities

We used \$4.4 million of cash in our investing activities for the three months ended March 31, 2021 for additions to property and equipment resulting from our capital expenditure projects.

Cash provided by our Financing Activities

Cash provided by our financing activities was \$5.0 million for the three months ended March 31, 2021, which reflected net proceeds of \$13.0 million from Kinergy's operating line of credit and \$0.5 million in stock option exercises, partially offset by \$8.5 million in principal payments on our other indebtedness.

Kinergy's Operating Line of Credit

Kinergy maintains an operating line of credit for an aggregate amount of up to \$100.0 million. The credit facility matures on August 2, 2022. Interest accrues under the credit facility at a rate equal to (i) the three-month London Interbank Offered Rate ("LIBOR"), plus (ii) a specified applicable margin ranging from 1.50% to 2.00%. The credit facility's monthly unused line fee is 0.25% to 0.375% of the amount by which the maximum credit under the facility exceeds the average daily principal balance during the immediately preceding month. Payments that may be made by Kinergy to Alto Ingredients, Inc. as reimbursement for management and other services provided by Alto Ingredients, Inc. to Kinergy are limited under the terms of the credit facility to \$1.5 million per fiscal quarter. The credit facility also includes the accounts receivable of our wholly-owned subsidiary, Alto Nutrients, LLC, or Alto Nutrients, as additional collateral. Payments that may be made by Alto Nutrients to Alto Ingredients, Inc. as reimbursement for management and other services provided by Alto Ingredients, Inc. to Alto Nutrients are limited under the terms of the credit facility to \$0.5 million per fiscal quarter. Alto Nutrients, one of our indirect wholly-owned subsidiaries, markets our essential ingredients and also provides raw material procurement services to our subsidiaries.

For all monthly periods in which excess borrowing availability falls below a specified level, Kinergy and Alto Nutrients must collectively maintain a fixed-charge coverage ratio (calculated as a twelve-month rolling earnings before interest, taxes, depreciation and amortization divided by the sum of interest expense, capital expenditures, principal payments of indebtedness, indebtedness from capital leases and taxes paid during such twelve-month rolling period) of at least 2.0 and are prohibited from incurring certain additional indebtedness (other than specific intercompany indebtedness). The obligations of Kinergy and Alto Nutrients under the credit facility are secured by a first-priority security interest in all of their respective assets in favor of the lender.

We believe Kinergy and Alto Nutrients are in compliance with the fixed-charge coverage ratio covenant as of the filing of this report. The following table sets forth the fixed-charge coverage ratio financial covenant and the actual results for the periods presented:

	Three Months Ended		Years Ended	
	March 31,		December 31,	
	2021	2020	2020	2019
Fixed-Charge Coverage Ratio Requirement	2.00	2.00	2.00	2.00
Actual	7.71	4.05	5.35	5.71
Excess	5.71	2.05	3.35	3.71

Alto Ingredients, Inc. has guaranteed all of Kinergy's obligations under the credit facility. As of March 31, 2021, Kinergy had an outstanding balance of \$45.5 million and \$4.7 million of unused borrowing availability under the credit facility.

Alto Pekin Credit Facilities

On December 15, 2016, Alto Pekin, LLC, or Alto Pekin, one of our indirect wholly-owned subsidiaries and the entity that holds two of our production facilities in Pekin, Illinois, entered into a Credit Agreement, or the Pekin Credit Agreement, with 1st Farm Credit Services, PCA and CoBank, ACB, or CoBank. Under the terms of the Pekin Credit Agreement, Alto Pekin borrowed from 1st Farm Credit Services \$64.0 million under a term loan facility that matures on August 20, 2021, or the Pekin Term Loan, and up to \$32.0 million under a revolving term loan facility that matures on February 1, 2022, or the Pekin Revolving Loan, and together with the Pekin Term Loan, the Pekin Credit Facility. The Pekin Credit Facility is secured by a first-priority security interest in all of Alto Pekin's assets.

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The Pekin Credit Facility and related agreements contain a variety of representations, warranties, covenants and events of default. Following a series of amendments and waivers among Alto Pekin, its lenders and their agent, certain terms of the agreements are as follows:

- Interest accrues under the Pekin Credit Facility at an annual rate equal to the 30-day LIBOR plus 5.00%.
- Alto Pekin is required to pay a monthly fee on any unused portion of the Pekin Revolving Loan at a rate of 0.75% per annum.
- Alto Pekin and Alto ICP, LLC, or ICP, one of our indirect wholly-owned subsidiaries and the entity that holds one of our production facilities in Pekin, Illinois, are collectively required to maintain working capital of not less than 50% of the combined outstanding revolving lines of credit, which was \$27.0 million at March 31, 2021; and an annual debt service coverage ratio of not less than 1.25 to 1.00, in addition to various other affirmative and negative covenants.

Net proceeds arising from a sale of any of our midwestern production facility assets will be allocated 33/34/33% among Alto Pekin's and ICP's lenders, collectively, our senior secured noteholders, and us, respectively. Net proceeds arising from the sale of any of our western production facility assets will be allocated first to the senior secured noteholders up to \$20.0 million and then allocated 33/34/33% among Alto Pekin's and ICP's lenders, collectively, our senior secured noteholders, and us, respectively.

As of the filing of this report, we believe we are in compliance with the terms and conditions of the Notes.

ICP Credit Facilities

On September 15, 2017, ICP, Compeer Financial, PCA, or Compeer, and CoBank as agent, entered into a Credit Agreement, or the ICP Credit Agreement. Under the terms of the ICP Credit Agreement, ICP borrowed from Compeer \$24.0 million under a term loan facility that matures on September 20, 2021, or the ICP Term Loan, and up to \$18.0 million under a revolving term loan facility that matures on September 1, 2022, or the ICP Revolving Loan, and together with the ICP Term Loan, the ICP Credit Facility. The ICP Credit Facility is secured by a first-priority security interest in all of ICP's assets.

The ICP Credit Facility and related agreements contain a variety of representations, warranties, covenants and events of default. Following a series of amendments and waivers among ICP, its lenders and their agent, certain terms of the agreements are as follows:

- Interest accrues under the ICP Credit Facility at an annual rate equal to the 30-day LIBOR plus 3.75%.
- ICP is required to pay an annual nonrefundable commitment fee, calculated as 0.75% multiplied by the average daily positive difference between (i) the ICP Revolving Loan commitment (which may be reduced by ICP from time to time in increments of \$0.5 million), minus (ii) the aggregate principal amounts outstanding under the ICP Revolving Loan.
- ICP and Alto Pekin are collectively required to maintain working capital of not less than 50% of the combined outstanding revolving lines of credit, which was \$27.0 million at March 31, 2021; and an annual debt service coverage ratio of not less than 1.50 to 1.00, in addition to various other affirmative and negative covenants.

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Net proceeds arising from the sale of any of our midwestern production facility assets will be allocated 33/34/33% among Alto Pekin's and ICP's lenders, collectively, our senior secured noteholders, and us, respectively. Net proceeds arising from the sale of any of our western production facility assets will be allocated first to the senior secured noteholders up to \$20.0 million and then allocated 33/34/33% among Alto Pekin's and ICP's lenders, collectively, our senior secured noteholders, and us, respectively.

As of the filing of this report, we believe we are in compliance with the terms and conditions of our ICP Credit Facility.

Senior Secured Notes

On December 12, 2016, we entered into a Note Purchase Agreement with five accredited investors and sold \$55.0 million in aggregate principal amount of senior secured notes to the investors in a private offering for aggregate gross proceeds of 97% of the principal amount of the notes sold. On June 26, 2017, we entered into a second Note Purchase Agreement with five accredited investors and sold an additional \$13.9 million in aggregate principal amount of senior secured notes to the investors in a private offering for aggregate gross proceeds of 97% of the principal amount of the notes sold, and collectively with the notes previously sold, the Notes. The Notes are secured by a first-priority security interest in all of our equity interests in Alto Op Co.

The Notes and related agreements contain a variety of representations, warranties, covenants and events of default. Following a series of amendments and waivers with the holders of our Notes, or the senior secured noteholders, and their agent, certain terms of the agreements are as follows:

- The Notes mature on December 15, 2021.
- Payments due under the Notes rank senior to all other indebtedness of Alto Ingredients, Inc. other than permitted senior indebtedness.
- Interest on the Notes accrues at a rate of 15% per annum.
- Any voluntary prepayments must be made at 102% of the principal amount prepaid.

The Notes also contain a variety of limitations, including a prohibition on parent company indebtedness; restrictions on redemption, repurchase or payment of any dividend or distribution in respect of our or our subsidiaries' equity interests; restrictions on asset sales and other dispositions; and restrictions on our or our subsidiaries' ability to issue equity for purposes other than to pay down a portion of the outstanding balance of the Notes.

In March 2020, ICP granted to the senior secured noteholders a security interest in certain of its personal property. In addition, Alto Central granted to the senior secured noteholders a security interest in certain of its personal property. Alto Central also pledged its equity interests in Alto Pekin and ICP in favor of the senior secured noteholders as additional collateral securing our obligations to the senior secured noteholders. Alto Op. Co also granted to the senior secured noteholders a security interest in certain of its personal property. We and certain subsidiaries also entered into intercreditor agreements with the ICP's and Alto Pekin's lenders, and the agent for our senior secured noteholders, to address issues of priority and the allocation of proceeds from asset sales.

On May 14, 2021, in connection with the sale of our Madera, California fuel-grade ethanol production facility, we repaid \$19.3 million in principal on these Notes.

As of the filing of this report, we believe we are in compliance with the terms and conditions of the Notes.

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CARES Act Loans

On May 4, 2020, Alto Ingredients, Inc. and Alto Pekin received loan proceeds from Bank of America, NA under the Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act, through the Paycheck Protection Program administered by the U.S. Small Business Administration. Alto Ingredients, Inc. received \$6.0 million and Alto Pekin received \$3.9 million in loan proceeds. The loans mature in two years and bear interest at a rate of 1.00% per annum. Under the terms of the loans, certain amounts may be forgiven if they are used for qualifying expenses as described in the CARES Act, but we can provide no assurance that we will be able to obtain forgiveness of all or any portion of the loans. We have applied for loan forgiveness.

Effects of Inflation

The impact of inflation was not significant to our financial condition or results of operations for the three months ended March 31, 2021 and 2020.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Not applicable.

ITEM 4. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

We conducted an evaluation under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by the company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures also include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded as of March 31, 2021 that our disclosure controls and procedures were effective at a reasonable assurance level.

Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the most recently completed fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on the Effectiveness of Controls

Management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control systems are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in a cost-effective control system, no evaluation of internal control over financial reporting can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been or will be detected.

These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of a simple error or mistake. Controls can also be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of controls effectiveness to future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

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PART II - OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS.

We are subject to legal proceedings, claims and litigation arising in the ordinary course of business. While the amounts claimed may be substantial, the ultimate liability cannot presently be determined because of considerable uncertainties that exist. Therefore, it is possible that the outcome of those legal proceedings, claims and litigation could adversely affect our quarterly or annual operating results or cash flows when resolved in a future period. However, based on facts currently available, management believes such matters will not adversely affect in any material respect our financial position, results of operations or cash flows.

ITEM 1A. RISK FACTORS.

Before deciding to purchase, hold or sell our common stock, you should carefully consider the risks described below in addition to the other information contained in this Report and in our other filings with the Securities and Exchange Commission, including subsequent reports on Forms 10-Q and 8-K. The risks and uncertainties described

below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business. If any of these known or unknown risks or uncertainties actually occurs with material adverse effects on Alto Ingredients, our business, financial condition, results of operations and/or liquidity could be seriously harmed. In that event, the market price for our common stock will likely decline, and you may lose all or part of your investment.

Risks Related to our Business

The effects of the coronavirus pandemic, or its abatement, may materially and adversely affect our business, results of operations and liquidity.

The coronavirus pandemic has resulted in businesses suspending or substantially curtailing operations and travel, quarantines, and an overall substantial slowdown of economic activity. Federal, state and foreign governments have implemented measures to contain the virus, including social distancing requirements, travel restrictions, border closures, limitations on public gatherings, work-from-home orders, and closure of non-essential businesses. Many of these measures remain or have been curtailed only partially. Transportation fuels in particular, including fuel-grade ethanol, experienced significant price declines and reduced demand. A further or extended ongoing downturn in global economic activity, or recessionary conditions in general, would likely lead to poor demand for, and negatively affect the prices of, fuel-grade ethanol, materially and adversely affecting our business, results of operations and liquidity.

Furthermore, to protect the health and well-being of our employees and customers, we have implemented work-from-home requirements, made substantial modifications to employee travel policies, and cancelled or shifted marketing and other corporate events to virtual-only formats for the foreseeable future. While we continue to monitor our circumstances and may adjust our current policies as more information and public health guidance become available, these precautionary measures could negatively affect our sales and marketing efforts, delay and lengthen our sales cycles, or create operational or other challenges, any of which could harm our business and results of operations.

In addition, if one or more of our employees or customers becomes ill from coronavirus and attributes their infection to us, including through exposure at one of our offices or production facilities, we could be subject to allegations of failure to adequately mitigate the risk of exposure. Such allegations could harm our reputation and expose us to the risks of litigation and liability.

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Our specialty alcohols business has benefitted significantly from the coronavirus pandemic due to a substantial increase in demand for alcohol-based sanitizers and disinfectants. As the coronavirus pandemic abates, demand for alcohol-based sanitizers and disinfectants may decline, ultimately exerting downward pressure on prices for our specialty alcohols used in those products. In addition, higher industry production levels in response to the coronavirus pandemic and any resulting oversupply of specialty alcohols for sanitizers and disinfectants would also exert downward pressure on prices. Reduced demand and prices for our specialty alcohols used in sanitizers and disinfectants, or industry oversupply of those specialty alcohols, may materially and adversely affect our business, results of operations and liquidity.

Our results of operations and our ability to operate at a profit are largely dependent on our ability to manage the costs of corn, natural gas and other production inputs, with the prices of our alcohols and essential ingredients, all of which are subject to volatility and uncertainty.

Our results of operations are highly impacted by commodity prices, including the cost of corn, natural gas and other production inputs that we must purchase, and the prices of alcohols and essential ingredients that we sell. Prices and supplies are subject to and determined by market and other forces over which we have no control, such as weather, domestic and global demand, supply shortages, export prices and various governmental policies in the United States and throughout the world.

Price volatility of corn, natural gas and other production inputs, and alcohols and essential ingredients, may cause our results of operations to fluctuate substantially. We may fail to generate expected levels of net sales and profits even under fixed-price and other contracts for the sale of specialty alcohols used in consumer products. Our customers may not pay us timely or at all, even under longer-term, fixed-price contracts for our specialty alcohols, and may seek to renegotiate prices under those contracts during periods of falling prices or high price volatility.

Over the past several years, for example, the spread between corn and fuel-grade ethanol prices has fluctuated significantly. Fluctuations are likely to continue to occur. A sustained narrow spread, whether as a result of sustained high or increased corn prices or sustained low or decreased alcohol or essential ingredient prices, would adversely affect our results of operations and financial position. Revenues from sales of alcohols, particularly fuel-grade ethanol, and essential ingredients could decline below the marginal cost of production, which may force us to further suspend production, particularly fuel-grade ethanol production, at some or all of our facilities.

In addition, some of our fuel-grade ethanol marketing activities will likely be unprofitable in a market of generally declining prices due to the nature of our business. For example, to satisfy customer demands, we maintain certain quantities of fuel-grade ethanol inventory for subsequent resale. Moreover, we procure much of our fuel-grade ethanol inventory outside of third-party marketing arrangements and therefore must buy fuel-grade ethanol at a price established at the time of purchase and sell fuel-grade ethanol at an index price established later at the time of sale that is generally reflective of movements in the market price of fuel-grade ethanol. As a result, our margins for fuel-grade ethanol sold in these transactions generally decline and may turn negative as the market price of fuel-grade ethanol declines.

We can provide no assurance that corn, natural gas or other production inputs can be purchased at or near current or any particular prices, or that our alcohols or essential ingredients will sell at or near current or any particular prices. Consequently, our results of operations and financial position may be adversely affected by increases in the prices of corn, natural gas and other production inputs or decreases in the prices of our alcohols and essential ingredients.

Increased alcohol or essential ingredient production or higher inventory levels may cause a decline in prices for those products, and may have other negative effects, adversely impacting our results of operations, cash flows and financial condition.

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The prices of our alcohols and essential ingredients are impacted by competing third-party supplies of those products. For example, we believe that the most significant factor influencing the price of fuel-grade ethanol has been the substantial increase in production. According to the Renewable Fuels Association, domestic fuel-grade ethanol production capacity increased from an annualized rate of 1.5 billion gallons per year in January 1999 to a record 16.1 billion gallons in 2018. In addition, if fuel-grade ethanol production margins improve, we anticipate that owners of production facilities operating at below capacity, or owners of idled production facilities, will increase production levels, thereby resulting in more abundant fuel-grade ethanol supplies and inventories. Increases in the supply of alcohols and essential ingredients may not be commensurate with increases in demand for alcohols and essential ingredients, thus leading to lower prices. Moreover, higher industry production levels in response to the coronavirus pandemic and any resulting oversupply of alcohols for sanitizers and disinfectants, and corresponding oversupply of essential ingredient co-products, may also exert downward pressure on prices. Any of these outcomes could have a material adverse effect on our results of operations, cash flows and financial condition.

The prices of our products are volatile and subject to large fluctuations, which may cause our results of operations to fluctuate significantly.

The prices of our products are volatile and subject to large fluctuations. For example, the market price of fuel-grade ethanol is dependent upon many factors, including

the supply of ethanol and the price of gasoline, which is in turn dependent upon the price of petroleum which itself is highly volatile and difficult to forecast. Our fuel-grade ethanol sales are tied to prevailing spot market prices rather than long-term, fixed-price contracts. Fuel-grade ethanol prices, as reported by the CBOT, ranged from \$0.81 to \$1.62 per gallon in 2020 and from \$1.25 to \$1.70 per gallon in 2019. In addition, even under longer-term, fixed-price contracts for our specialty alcohols, our customers may seek to renegotiate prices under those contracts during periods of falling prices or high price volatility. Fluctuations in the prices of our products may cause our results of operations to fluctuate significantly.

Disruptions in our production or distribution may adversely affect our business, results of operations and financial condition.

Our business depends on the continuing availability of rail, road, port, storage and distribution infrastructure. In particular, due to limited storage capacity at our production facilities and other considerations related to production efficiencies, our facilities depend on just-in-time delivery of corn. The production of alcohols also requires a significant and uninterrupted supply of other raw materials and energy, primarily water, electricity and natural gas. Local water, electricity and gas utilities may fail to reliably supply the water, electricity and natural gas that our production facilities need or may fail to supply those resources on acceptable terms. In the past, poor weather has caused disruptions in rail transportation, which slowed the delivery of fuel-grade ethanol by rail, the principle manner by which fuel-grade ethanol from our facilities located in the Midwest is transported to market. In addition, in 2020, we experienced closure of the Illinois River for lock repairs which required greater use of less cost-effective modes of product transport such as via rail and truck, which resulted in higher costs and negatively affected our results of operations.

Disruptions in production or distribution, whether caused by labor difficulties, unscheduled downtimes and other operational hazards inherent in the alcohol production industry, including equipment failures, fires, explosions, abnormal pressures, blowouts, pipeline ruptures, transportation accidents and natural disasters such as earthquakes, floods and storms, or human error or malfeasance or other reasons, could prevent timely deliveries of corn or other raw materials and energy, and could delay transport of our products to market, and may require us to halt production at one or more production facilities, any of which could have a material adverse effect on our business, results of operations and financial condition.

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Some of these operational hazards may also cause personal injury or loss of life, severe damage to or destruction of property and equipment or environmental damage, and may result in suspension of operations and the imposition of civil or criminal penalties. Our insurance may not fully cover the potential hazards described above or we may be unable to renew our insurance on commercially reasonable terms or at all.

We may engage in hedging transactions and other risk mitigation strategies that could harm our results of operations and financial condition.

In an attempt to partially offset the effects of volatility of our product prices, in particular fuel-grade ethanol, corn and natural gas costs, we may enter into contracts to fix the price of a portion of our production or purchase a portion of our corn or natural gas requirements on a forward basis. In addition, we may engage in other hedging transactions involving exchange-traded futures contracts for corn, natural gas and unleaded gasoline from time to time. The financial statement impact of these activities is dependent upon, among other things, the prices involved and our ability to sell sufficient products to use all of the corn and natural gas for which forward commitments have been made. Hedging arrangements also expose us to the risk of financial loss in situations where the other party to the hedging contract defaults on its contract or, in the case of exchange-traded contracts, where there is a change in the expected differential between the underlying price in the hedging agreement and the actual prices paid or received by us. In addition, our open contract positions may require cash deposits to cover margin calls, negatively impacting our liquidity. As a result, our hedging activities and fluctuations in the price of corn, natural gas, fuel-grade ethanol and unleaded gasoline may adversely affect our results of operations, financial condition and liquidity.

The industries in which we operate are extremely competitive. Many of our significant competitors have greater production and financial resources and could use their greater resources to gain market share at our expense.

The industries in which we operate are extremely competitive. Many of our significant competitors have substantially greater production and financial resources than we do. As a result, our competitors may be able to compete more aggressively and sustain that competition over a longer period of time. Successful competition will require a continued high level of investment in facility maintenance. We may fail to anticipate or respond adequately to new industry developments and other competitive pressures due to our limited resources relative to many significant competitors. This failure could reduce our competitiveness and cause a decline in market share, sales and profitability. Even if sufficient funds are available, we may not be able to make the modifications and improvements necessary to compete successfully.

We also face competition from international suppliers, particularly of fuel-grade ethanol, many of whom have cost structures substantially lower than ours. An increase in domestic or foreign competition could force us to reduce our prices and take other steps to compete effectively, which could adversely affect our business, financial condition and results of operations.

We incur significant expenses to maintain and upgrade our production facilities and operating equipment, and any interruption in our operations would harm our operating performance.

We regularly incur significant expenses to maintain and upgrade our production facilities and operating equipment. The machines and equipment we use to produce our alcohols and manufacture our essential ingredients are complex, have many parts, and some operate on a continuous basis. We must perform routine equipment maintenance and must periodically replace a variety of parts such as motors, pumps, pipes and electrical parts. In addition, our production facilities require periodic shutdowns to perform major maintenance and upgrades. These scheduled shutdowns result in lower sales and increased costs in the periods during which a shutdown occurs and could result in unexpected operational issues in future periods as a result of changes to equipment and operational and mechanical processes made during shutdown.

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Risks Related to our Finances

We have incurred significant losses and negative operating cash flow in the past and we may incur losses and negative operating cash flow in the future, which may hamper our operations and impede us from expanding our business.

We have incurred significant losses and negative operating cash flow in the past. For the years ended December 31, 2020 and 2019, we incurred consolidated net losses of approximately \$17.3 million and \$101.3 million, respectively. For the three months ended March 31, 2021 and for the year ended December 31, 2019, we incurred negative operating cash flow of approximately \$4.1 million and \$23.4 million, respectively. We may incur losses and negative operating cash flow in the future. We expect to rely on cash on hand, cash, if any, generated from our operations, borrowing availability under our lines of credit and proceeds from our future financing activities, if any, to fund all of the cash requirements of our business. Additional losses and negative operating cash flow may hamper our operations and impede us from expanding our business.

Our indebtedness exposes us to many risks that could negatively impact our business, our business prospects, our liquidity and our cash flows and results of operations.

Our production facilities located in the Midwest have significant indebtedness. In addition, we have significant indebtedness under our senior secured notes issued at

the parent-company level. The terms of our loans require amortizing payments of principal over the lives of the loans and our borrowing availability under our revolving credit facilities periodically and automatically declines through the maturity dates of those facilities. Our indebtedness could:

- make it more difficult to pay or refinance our debts as they become due during adverse economic and industry conditions because those conditions could result in insufficient cash flows from operations to make our scheduled debt payments;
- limit our flexibility to pursue strategic opportunities or react to changes in our business and the industry in which we operate and, consequently, place us at a competitive disadvantage to our competitors who have less debt;
- require a substantial portion of our cash flow from operations, if any, to be used for debt service payments, thereby reducing our ability to fund working capital, capital expenditures, new business ventures, dividend payments and other general corporate purposes; and/or
- limit our ability to procure additional financing for working capital or other purposes.

Our term loans and credit facilities also require compliance with numerous financial and other covenants, the violation of which could result in an acceleration of our indebtedness.

Much of our indebtedness bears interest at variable rates. An increase in prevailing interest rates would likewise increase our debt service obligations and could materially and adversely affect our cash flows and results of operations.

Our ability to generate sufficient cash to make all principal and interest payments when due depends on our business performance, which is subject to a variety of factors beyond our control, including the supply of and demand for our alcohols and other products, product prices, the cost of key production inputs, and many other factors incident to the alcohol production and marketing industry. We cannot provide any assurance that we will be able to timely satisfy such obligations.

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Our ability to utilize net operating loss carryforwards and certain other tax attributes may be limited.

Federal and state income tax laws impose restrictions on our use of net operating loss, or NOL, and tax credit carryforwards in the event that an “ownership change” occurs for tax purposes, as defined by Section 382 of the Internal Revenue Code, or Code. In general, an ownership change occurs when stockholders owning 5% or more of a corporation entitled to use NOL or other loss carryforwards have increased their ownership by more than 50 percentage points during any three-year period. The annual base limitation under Section 382 of the Code is calculated by multiplying the corporation’s value at the time of the ownership change by the greater of the long-term tax-exempt rate determined by the Internal Revenue Service in the month of the ownership change or the two preceding months. Our ability to utilize our NOL and other loss carryforwards may be substantially limited. These limitations could result in increased future tax obligations, which could have a material adverse effect on our financial condition and results of operations.

Risks Related to Legal and Regulatory Matters

Future demand for fuel-grade ethanol is uncertain and may be affected by changes to federal mandates, public perception, consumer acceptance and overall consumer demand for transportation fuel, any of which could negatively affect demand for fuel-grade ethanol and our results of operations.

Although many trade groups, academics and governmental agencies have supported fuel-grade ethanol as a fuel additive that promotes a cleaner environment, others have criticized fuel-grade ethanol production as consuming considerably more energy and emitting more greenhouse gases than other biofuels and potentially depleting water resources. Some studies have suggested that corn-based ethanol is less efficient than ethanol produced from other feedstock and that it negatively impacts consumers by causing increased prices for dairy, meat and other food generated from livestock that consume corn. Additionally, critics of fuel-grade ethanol contend that corn supplies are redirected from international food markets to domestic fuel markets. If negative views of corn-based ethanol production gain acceptance, support for existing measures promoting use and domestic production of corn-based ethanol as a fuel additive could decline, leading to reduction or repeal of federal ethanol usage mandates, which would materially and adversely affect the demand for fuel-grade ethanol. These views could also negatively impact public perception of the fuel-grade ethanol industry and acceptance of ethanol as an alternative fuel.

There are limited markets for fuel-grade ethanol beyond those established by federal mandates. Discretionary blending and E85 blending (i.e., gasoline blended with up to 85% fuel-grade ethanol by volume) are important secondary markets. Discretionary blending is often determined by the price of fuel-grade ethanol versus the price of gasoline. In periods when discretionary blending is financially unattractive, the demand for fuel-grade ethanol may decline. Also, the demand for fuel-grade ethanol is affected by the overall demand for transportation fuel. Demand for transportation fuel is affected by the number of miles traveled by consumers and vehicle fuel economy. Lower demand for fuel-grade ethanol and co-products would reduce the value of our ethanol and related products, erode our overall margins and diminish our ability to generate revenue or to operate profitably. In addition, we believe that consumer acceptance of E15 and E85 fuels is necessary before fuel-grade ethanol can achieve any significant growth in market share relative to other transportation fuels.

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The United States fuel-grade ethanol industry is highly dependent upon various federal and state laws and any changes in those laws could have a material adverse effect on our results of operations, cash flows and financial condition.

The Environmental Protection Agency, or EPA, has implemented the Renewable Fuel Standard, or RFS, under the Energy Policy Act of 2005 and the Energy Independence and Security Act of 2007. The RFS program sets annual quotas for the quantity of renewable fuels (such as fuel-grade ethanol) that must be blended into motor fuels consumed in the United States. The domestic market for fuel-grade ethanol is significantly impacted by federal mandates under the RFS program for volumes of renewable fuels (such as ethanol) required to be blended with gasoline. Future demand for fuel-grade ethanol will largely depend on incentives to blend ethanol into motor fuels, including the price of ethanol relative to the price of gasoline, the relative octane value of ethanol, constraints in the ability of vehicles to use higher ethanol blends, the RFS, and other applicable environmental requirements.

Under the provisions of the Clean Air Act, as amended by the Energy Independence and Security Act of 2007, the EPA has limited authority to waive or reduce the mandated RFS requirements, which authority is subject to consultation with the Secretaries of Agriculture and Energy, and based on a determination that there is inadequate domestic renewable fuel supply or implementation of the applicable requirements would severely harm the economy or environment of a state, region or the United States in general. Our results of operations, cash flows and financial condition could be adversely impacted if the EPA reduces the RFS requirements from the statutory levels specified in the RFS.

Various bills in Congress introduced from time to time are also directed at altering existing renewable fuels energy legislation, but none has passed in recent years.

Some legislative bills are directed at halting or reversing expansion of, or even eliminating, the renewable fuel program, while other bills are directed at bolstering the program or enacting further mandates or grants that would support the renewable fuels industry. Our results of operations, cash flows and financial condition could be adversely impacted if any legislation is enacted that reduces the RFS volume requirements.

We may be adversely affected by environmental, health and safety laws, regulations and liabilities

We are subject to various federal, state and local environmental laws and regulations, including those relating to the discharge of materials into the air, water and ground, the generation, storage, handling, use, transportation and disposal of hazardous materials and wastes, and the health and safety of our employees. In addition, some of these laws and regulations require us to operate under permits that are subject to renewal or modification. These laws, regulations and permits often require expensive pollution control equipment or operational changes to limit actual or potential impacts to the environment. A violation of these laws and regulations or permit conditions can result in substantial fines, natural resource damages, criminal sanctions, permit revocations and/or production facility shutdowns. In addition, we have made, and expect to make, significant capital expenditures on an ongoing basis to comply with increasingly stringent environmental laws, regulations and permits.

We may be liable for the investigation and cleanup of environmental contamination at each of our production facilities and at off-site locations where we arrange for the disposal of hazardous substances or wastes. If these substances or wastes have been or are disposed of or released at sites that undergo investigation and/or remediation by regulatory agencies, we may be responsible under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, or other environmental laws for all or part of the costs of investigation and/or remediation, and for damages to natural resources. We may also be subject to related claims by private parties alleging property damage and personal injury due to exposure to hazardous or other materials at or from those properties. Some of these matters may require us to expend significant amounts for investigation, cleanup or other costs.

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In addition, new laws, new interpretations of existing laws, increased governmental enforcement of environmental laws or other developments could require us to make significant additional expenditures. Continued government and public emphasis on environmental issues will likely result in increased future investments for environmental controls at our production facilities. Present and future environmental laws and regulations, and interpretations of those laws and regulations, applicable to our operations, more vigorous enforcement policies and discovery of currently unknown conditions may require substantial expenditures that could have a material adverse effect on our results of operations and financial condition.

The hazards and risks associated with producing and transporting our products (including fires, natural disasters, explosions and abnormal pressures and blowouts) may also result in personal injury claims or damage to property and third parties. As protection against operating hazards, we maintain insurance coverage against some, but not all, potential losses. However, we could sustain losses for uninsurable or uninsured risks, or in amounts in excess of existing insurance coverages. Events that result in significant personal injury or damage to our property or third parties or other losses that are not fully covered by insurance could have a material adverse effect on our results of operations and financial condition.

Risks Related to Ownership of our Common Stock

Future sales of substantial amounts of our common stock, or perceptions that those sales could occur, could adversely affect the market price of our common stock and our ability to raise capital.

Future sales of substantial amounts of our common stock into the public market, including up to 8.9 million shares of our common stock that may be issued upon the exercise of outstanding warrants, or perceptions that those sales could occur, could adversely affect the prevailing market price of our common stock and our ability to raise capital.

Our stock price is highly volatile, which could result in substantial losses for investors purchasing shares of our common stock and in litigation against us.

The market price of our common stock has fluctuated significantly in the past and may continue to fluctuate significantly in the future. The market price of our common stock may continue to fluctuate in response to one or more of the following factors, many of which are beyond our control:

- fluctuations in the market prices of our products;
- fluctuations in the costs of key production input commodities such as corn and natural gas;
- the volume and timing of the receipt of orders for our products from major customers;
- the coronavirus pandemic, including governmental and public response to the pandemic;
- competitive pricing pressures;
- anticipated trends in our financial condition and results of operations;
- changes in market valuations of companies similar to us;
- stock market price and volume fluctuations generally;
- regulatory developments or increased enforcement;

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- fluctuations in our quarterly or annual operating results;
- additions or departures of key personnel;
- our ability to obtain any necessary financing;
- our financing activities and future sales of our common stock or other securities; and
- our ability to maintain contracts that are critical to our operations.

The price at which you purchase shares of our common stock may not be indicative of the price that will prevail in the trading market. You may be unable to sell your shares of common stock at or above your purchase price, which may result in substantial losses to you and which may include the complete loss of your investment. In the past, securities class action litigation has often been brought against a company following periods of high stock price volatility. We may be the target of similar litigation in the future. Securities litigation could result in substantial costs and divert management's attention and our resources away from our business.

Any of the risks described above could have a material adverse effect on our results of operations, the price of our common stock, or both.

Because we do not intend to pay any cash dividends on our shares of common stock in the near future, our stockholders will not be able to receive a return on their shares unless and until they sell them.

We intend to retain a significant portion of any future earnings to finance the development, operation and expansion of our business. We do not anticipate paying any cash dividends on our common stock in the near future. The declaration, payment, and amount of any future dividends will be made at the discretion of our board of directors, and will depend upon, among other things, our results of operations, cash flows, and financial condition, operating and capital requirements, and other factors as our board of directors considers relevant. There is no assurance that future dividends will be paid, and, if dividends are paid, there is no assurance with respect to the amount of any such dividend. Unless our board of directors determines to pay dividends, our stockholders will be required to look to appreciation of our common stock to realize a gain on their investment. There can be no assurance that this appreciation will occur.

Our bylaws contain an exclusive forum provision, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, employees or agents.

Our bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Delaware Court of Chancery shall be the sole and exclusive forum for (a) any derivative action or proceeding brought on behalf of us, (b) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of us to us or our stockholders, (c) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, or (d) any action asserting a claim governed by the internal affairs doctrine.

For the avoidance of doubt, the exclusive forum provision described above does not apply to any claims arising under the Securities Act of 1933, as amended, or the Securities Act, or the Securities Exchange Act of 1934, as amended, or the Exchange Act. Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder, and Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder.

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The choice of forum provision in our bylaws may limit our stockholders' ability to bring a claim in a judicial forum that they find favorable for disputes with us or our directors, officers, employees or agents, which may discourage such lawsuits against us and our directors, officers, employees and agents even though an action, if successful, might benefit our stockholders. The applicable courts may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments or results may be more favorable to us than to our stockholders. With respect to the provision making the Delaware Court of Chancery the sole and exclusive forum for certain types of actions, stockholders who do bring a claim in the Delaware Court of Chancery could face additional litigation costs in pursuing any such claim, particularly if they do not reside in or near Delaware. Finally, if a court were to find this provision of our bylaws inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could have a material adverse effect on us.

General Risk Factors

Cyberattacks through security vulnerabilities could lead to disruption of business, reduced revenue, increased costs, liability claims, or harm to our reputation or competitive position.

Security vulnerabilities may arise from our hardware, software, employees, contractors or policies we have deployed, which may result in external parties gaining access to our networks, data centers, cloud data centers, corporate computers, manufacturing systems, and/or access to accounts we have at our suppliers, vendors, and customers. External parties may gain access to our data or our customers' data, or attack the networks causing denial of service or attempt to hold our data or systems in ransom. The vulnerability could be caused by inadequate account security practices such as failure to timely remove employee access when terminated. To mitigate these security issues, we have implemented measures throughout our organization, including firewalls, backups, encryption, employee information technology policies and user account policies. However, there can be no assurance these measures will be sufficient to avoid cyberattacks. If any of these types of security breaches were to occur and we were unable to protect sensitive data, our relationships with our business partners and customers could be materially damaged, our reputation could be materially harmed, and we could be exposed to a risk of litigation and possible significant liability.

Further, if we fail to adequately maintain our information technology infrastructure, we may have outages and data loss. Excessive outages may affect our ability to timely and efficiently deliver products to customers or develop new products. Such disruptions and data loss may adversely impact our ability to fulfill orders and interrupt other processes. Delayed sales or lost customers resulting from these disruptions could adversely affect our financial results, stock price and reputation.

The State of California enacted the California Consumer Privacy Act of 2018, or CCPA, effective on January 1, 2020. Our and our business partners' or contractors' failure to fully comply with the CCPA and other laws could lead to significant fines and require onerous corrective action. In addition, data security breaches experienced by us or our business partners or contractors could result in the loss of trade secrets or other intellectual property, public disclosure of sensitive commercial data, and the exposure of personally identifiable information (including sensitive personal information) of our employees, customers, suppliers, contractors and others.

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Unauthorized use or disclosure of, or access to, any personal information maintained by us or on our behalf, whether through breach of our systems, breach of the systems of our suppliers or vendors by an unauthorized party, or through employee or contractor error, theft or misuse, or otherwise, could harm our business. If any such unauthorized use or disclosure of, or access to, such personal information was to occur, our operations could be seriously disrupted, and we could be subject to demands, claims and litigation by private parties, and investigations, related actions, and penalties by regulatory authorities. In addition, we could incur significant costs in notifying affected persons and entities and otherwise complying with the multitude of foreign, federal, state and local laws and regulations relating to the unauthorized access to, or use or disclosure of, personal information. Finally, any perceived or actual unauthorized access to, or use or disclosure of, such information could harm our reputation, substantially impair our ability to attract and retain customers and have an adverse impact on our business, financial condition and results of operations.

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

Unregistered Sales of Equity Securities

None.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

None.

Dividends

Our current and future debt financing arrangements may limit or prevent cash distributions from our subsidiaries to us, depending upon the achievement of specified financial and other operating conditions and our ability to properly service our debt, thereby limiting or preventing us from paying cash dividends.

For the three months ended March 31, 2021 and 2020, we accrued an aggregate of \$0.3 million in dividends on our Series B Cumulative Convertible Preferred Stock, or Series B Preferred Stock, but did not declare or pay cash dividends, as permitted under an agreement with the holders of our Series B Preferred Stock, in an effort to preserve liquidity.

We have never declared or paid cash dividends on our common stock and do not currently intend to pay cash dividends on our common stock in the foreseeable future. We currently anticipate that we will retain any earnings for use in the continued development of our business.

The holders of our outstanding Series B Preferred Stock are entitled to dividends of 7% per annum, payable quarterly. Accrued and unpaid dividends in respect of our Series B Preferred Stock must be paid prior to the payment of any dividends in respect of shares of our common stock.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES.

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

ITEM 5. OTHER INFORMATION.

Not applicable.

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ITEM 6. EXHIBITS.

Exhibit Number	Description
3.1	Certificate of Incorporation (*)
3.2	Certificate of Designations, Powers, Preferences and Rights of the Series A Cumulative Redeemable Convertible Preferred Stock (*)
3.3	Certificate of Designations, Powers, Preferences and Rights of the Series B Cumulative Convertible Preferred Stock (*)
3.4	Certificate of Amendment to Certificate of Incorporation dated June 3, 2010 (*)
3.5	Certificate of Amendment to Certificate of Incorporation effective June 8, 2011 (*)
3.6	Certificate of Amendment to Certificate of Incorporation effective May 14, 2013 (*)
3.7	Certificate of Amendment to Certificate of Incorporation effective July 1, 2015 (*)
3.8	Certificate of Amendment to Certificate of Incorporation effective January 12, 2021 (*)
3.9	Second Amended and Restated Bylaws (*)
31.1	Certifications Required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (*)
31.2	Certifications Required by Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (*)
32.1	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (*)
101.INS	XBRL Instance Document (*)
101.SCH	XBRL Taxonomy Extension Schema (*)
101.CAL	XBRL Taxonomy Extension Calculation Linkbase (*)
101.DEF	XBRL Taxonomy Extension Definition Linkbase (*)
101.LAB	XBRL Taxonomy Extension Label Linkbase (*)
101.PRE	XBRL Taxonomy Extension Presentation Linkbase (*)

(*) Filed herewith.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

ALTO INGREDIENTS, INC.

Dated: May 17, 2021

By: /S/ BRYON T. MCGREGOR

State of Delaware
 Secretary of State
 Division of Corporations
 Delivered 06:27 PM 02/28/2005
 Filed 06:27 PM 02/28/2005
 SRV 050169353 - 3877538 FILE

CERTIFICATE OF INCORPORATION
 OF
 PACIFIC ETHANOL, INC.,
 A DELAWARE CORPORATION

FIRST: The name of the corporation is:

PACIFIC ETHANOL, INC.

SECOND: The address of the corporation's registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, State of Delaware. The name of the registered agent of the corporation at such location is The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted by the corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

FOURTH: The corporation is authorized to issue one class of capital stock to be designated "Common Stock" and another class of capital stock to be designated "Preferred Stock." The total number of shares of Common Stock that the corporation is authorized to issue is one hundred million (100,000,000), with a par value of \$.001 per share. The total number of shares of Preferred Stock that the corporation is authorized to issue is ten million (10,000,000) with a par value of \$.001 per share.

Except as otherwise provided by law, the shares of stock of the corporation, regardless of class, may be issued by the corporation from time to time in such amounts, for such consideration and for such corporate purposes as the board of directors may from time to time determine. A description of the different classes and series of the corporation's capital stock and a statement of the designations and the relative rights, preferences and limitations of the shares of each class and series of capital stock are as follows:

COMMON STOCK. Except as otherwise provided by the General Corporation Law of the State of Delaware or in this Article FOURTH (or in any certificate of designation establishing a series of Preferred Stock), the holders of Common Stock shall exclusively possess all voting power of the corporation. Each share of Common Stock shall be equal in all respects to every other share of Common Stock. Each holder of record of issued and outstanding Common Stock shall be entitled to one (1) vote on all matters for each share so held. Subject to the rights and preferences, if any, of the holders of Preferred Stock, each issued and outstanding share of Common Stock shall entitle the record holder thereof to receive dividends and distributions out of funds legally available therefor, when, as and if declared by the board of directors, in such amounts and at such times, if any, as the board of directors shall determine, ratably in proportion to the number of shares of Common Stock held by each such record holder. Upon any voluntary or involuntary liquidation, dissolution or winding up of the corporation, after there shall have been paid to or set aside for the holders of any class of capital stock having preference over the Common Stock in such circumstances the full preferential amounts to which they are respectively entitled, the holders of the Common Stock, and of any class or series of capital stock entitled to participate in whole or in part therewith as to the distribution of assets, shall be entitled, after payment or provision for the payment of all debts and liabilities of the corporation, to receive the remaining assets of the corporation available for distribution, in cash or in kind, ratably in proportion to the number of shares of Common Stock held by each such holder.

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PREFERRED STOCK. The board of directors is authorized by resolution or resolutions, from time to time adopted, to provide for the issuance of Preferred Stock in one or more series and to fix and state the voting powers, designations, preferences and relative participating, optional or other special rights of the shares of each series and the qualifications, limitations and restrictions thereof, including, but not limited to, determination of one or more of the following:

- (i) the distinctive designations of each such series and the number of shares which shall constitute such series, which number may be increased (except where otherwise provided by the board of directors in creating such series) or decreased (but not below the number of shares thereof then outstanding) from time to time by the board of directors;
- (ii) the annual rate or amount of dividends payable on shares of such series, whether such dividends shall be cumulative or non-cumulative, the conditions upon which and the dates when such dividends shall be payable, the date from which dividends on cumulative series shall accrue and be cumulative on all shares of such series issued prior to the payment date for the first dividend of such series, the relative rights of priority, if any, of payment of dividends on the shares of that series, and the participating or other special rights, if any, with respect to such dividends;
- (iii) whether such series will have any voting rights in addition to those prescribed by law and, if so, the terms and conditions of the exercise of such voting rights;
- (iv) whether the shares of such series will be redeemable or callable and, if so, the prices at which, and the terms and conditions on which, such shares may be redeemed or called, which prices may vary under different conditions and at different redemption or call dates;
- (v) the amount or amounts payable upon the shares of such series in the event of voluntary or involuntary liquidation, dissolution or winding up of the corporation, and the relative rights of priority, if any, of payment of shares of such series;
- (vi) whether the shares of such series shall be entitled to the benefit of a sinking or retirement fund to be applied to the purchase or redemption of such shares, and if so entitled, the amount of such fund and the manner of its application, including the price or prices at which such shares may be redeemed or purchased through the application of such fund;
- (vii) whether the shares of such series shall be convertible into, or exchangeable for, shares of any other class or classes or of any other series of the same or any other class or classes of capital stock of the corporation, and if so convertible or exchangeable, the conversion price or prices, or the rate or rates of exchange, and the adjustments thereof, if any, at which such conversion or exchange may be made, and any other terms of such conversion or exchange;

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(viii) whether the shares of such series that are redeemed or converted shall have the status of authorized but unissued shares of Preferred Stock and whether such shares may be reissued as shares of the same or any other series of stock;

(ix) the conditions and restrictions, if any, on the payment of dividends or on the making of other distributions on, or the purchase, redemption or other acquisition by the corporation, or any subsidiary thereof, of, the Common Stock or any other class (or other series of the same class) ranking junior to the shares of such series as to dividends or upon liquidation, dissolution or winding up of the corporation; and

(x) the conditions and restrictions, if any, on the creation of indebtedness of the corporation, or any subsidiary thereof, or on the issue of any additional stock ranking on parity with or prior to the shares of such series as to dividends or upon liquidation, dissolution or winding up of the corporation.

All shares within each series of Preferred Stock shall be alike in every particular, except with respect to the dates from which dividends, if any, shall commence to accrue.

FIFTH: The number of directors which constitute the whole Board of Directors shall be fixed exclusively by one or more resolutions adopted from time to time by the Board of Directors in accordance with the Bylaws of the corporation. Except as otherwise required by the General Corporation Law of the State of Delaware, (i) newly created directorships resulting from any increase in the number of directors and any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other cause shall be filled by the affirmative vote of a majority of the remaining directors then in office, even though less than a quorum of the Board of Directors, or by a sole remaining director; (ii) any director elected in accordance with the preceding clause (i) shall hold office for the remainder of the full term of the class of directors in which the new directorship was created or the vacancy occurred and until such director's successor shall have been elected and qualified; and (iii) no decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director. The manner by which a director of the corporation may be removed from office shall be as provided in the Bylaws of the corporation. Advance notice of new business and stockholder nominations for the election of directors shall be given in the manner and to the extent provided in the Bylaws of the corporation. Elections of directors need not be by written ballot unless the Bylaws of the corporation shall so provide.

SIXTH: The corporation may, to the fullest extent to which it is empowered to do so and under the circumstances permitted by the General Corporation Law of the State of Delaware or any other applicable laws, as they may from time to time be in effect, indemnify any person who was made or is threatened to be made party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he is or was a director or officer of the corporation, or is or was serving at the specific request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise (including, without limitation, any employee benefit plan), against all expenses (including attorneys' fees), judgments, fines and amounts incurred by him or her in connection with such action, suit or proceeding, and may take such steps as may be deemed appropriate by the board of directors, including purchasing and maintaining insurance, entering into contracts (including, without limitation, contracts of indemnification between the corporation and its directors and officers), creating a trust fund, granting security interests or using other means (including, without limitation, a letter of credit) to ensure the payment of such amounts as may be necessary to effect such indemnification.

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SEVENTH: To the fullest extent permitted by the General Corporation Law of the State of Delaware as the same exists or as it may hereafter be amended, a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director; provided, that in no event will the liability of any director of this corporation be eliminated or otherwise limited (i) for any breach of the director's duty of loyalty to the corporation or its stockholders; (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law; (iii) under Section 174 of the General Corporation Law of the State of Delaware; or (iv) for any transaction from which the director derived any improper personal benefit. If the General Corporation Law of the State of Delaware is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law of the State of Delaware, as so amended.

Any repeal or modification of the foregoing paragraph, or the adoption of any provision of this certificate of incorporation inconsistent with the foregoing paragraph, shall not eliminate, reduce or otherwise adversely affect any right or protection of a director of the corporation existing at the time of such repeal or modification in respect of any matter occurring, or any cause of action, suit or proceeding that, but for the foregoing paragraph, would accrue or arise, prior to such repeal, modification or adoption of an inconsistent provision.

EIGHTH: The corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by law, and all rights conferred upon the stockholders herein are granted pursuant to this reservation.

NINTH: The corporation is to have perpetual existence.

TENTH: Meetings of the stockholders of the corporation may be held within or without the State of Delaware, as the Bylaws may provide. The books of the corporation may be kept (subject to any provision contained in the Bylaws) outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the corporation.

ELEVENTH: In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, alter, amend or repeal the Bylaws of the Corporation unless and to the extent the General Corporation Law of the State of Delaware shall provide otherwise.

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TWELFTH: The name and address of the sole incorporator of the corporation is:

Larry A. Cerutti
611 Anton Boulevard, 14th Floor
Costa Mesa, CA 92626

THIRTEENTH: The provisions of Section 203 of the General Corporation Law of the State of Delaware shall be applicable to this corporation.

I, THE UNDERSIGNED, being the sole incorporator hereinbefore named, for the purpose of forming a corporation pursuant to the General Corporation Law of the State of Delaware, do make this certificate, hereby declaring and certifying that this is my act and deed and the facts herein stated are true, and accordingly have hereunto set my hand this 28th day of February, 2005.

By: /S/ LARRY A. CERUTTI
Larry A. Cerutti, Sole Incorporator

CERTIFICATE OF DESIGNATIONS,
POWERS, PREFERENCES AND RIGHTS OF THE SERIES A
CUMULATIVE REDEEMABLE CONVERTIBLE PREFERRED STOCK

OF

PACIFIC ETHANOL, INC.

PURSUANT TO SECTION 151 OF THE
DELAWARE GENERAL CORPORATION LAW

Pacific Ethanol, Inc. (the "CORPORATION"), organized and existing under the laws of the State of Delaware, does, by its Chief Operating Officer and under its corporate seal, hereby certify that pursuant to the authority contained in Article Fourth of its Certificate of Incorporation and in accordance with the provisions of Section 151 of the Delaware General Corporation Law, its Board of Directors has adopted the following resolution creating the following classes and series of the Corporation's Preferred Stock and determining the voting powers, designations, powers, preferences and relative, participating, optional or other special rights, and the qualifications, limitations and restrictions thereof, of such classes and series:

RESOLVED, that, pursuant to authority conferred upon the Board of Directors by the Certificate of Incorporation of the Corporation (the "CERTIFICATE OF INCORPORATION"), there is hereby created the following series of Preferred Stock:

- 7,000,000 shares shall be designated Series A Cumulative Redeemable Convertible Preferred Stock, par value \$0.001 per share (the "SERIES A PREFERRED STOCK").

The designations, powers, preferences, and rights and the qualifications, limitations and restrictions of the Series A Preferred Stock in addition to those set forth in the Certificate of Incorporation shall be as follows:

Section 1. DESIGNATION AND AMOUNT. 7,000,000 shares of the unissued preferred stock of the Corporation shall be designated as Series A Cumulative Redeemable Convertible Preferred Stock, par value \$.001 per share. The Series A Preferred Stock shall be issued in accordance with the Purchase Agreement at a purchase price of \$16.00 per share (the "SERIES A ISSUE PRICE").

Section 2. RANK. The Series A Preferred Stock shall rank: (i) subject to the requirements of Section 7, junior to any other class or series of capital stock of the Corporation hereafter created specifically ranking as to dividend rights, redemption rights, liquidation preference and other rights senior to the Series A Preferred Stock (the "SENIOR SECURITIES"); (ii) senior to all of the Corporation's common stock, par value \$0.001 per share (the "COMMON STOCK"); (iii) senior to any class or series of capital stock of the Corporation hereafter created not specifically ranking as to dividend rights, redemption rights, liquidation preference and other rights senior to or on parity with any Series A Preferred Stock of whatever subdivision (collectively, with the Common Stock, the "JUNIOR SECURITIES"); and (iv) subject to the requirements of Section 7, on a parity with any class or series of capital stock of the Corporation hereafter created specifically ranking as to dividend rights, redemption rights, liquidation preference and other rights on a parity with the Series A Preferred Stock (the "PARITY SECURITIES").

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Section 3. DIVIDENDS. (a) So long as shares of Series A Preferred Stock remain outstanding, the holders of each share of the Series A Preferred Stock shall be entitled, from and after the date of issuance of such share, to receive, and shall be paid quarterly in arrears (beginning on the last day of the calendar quarter following the date of the initial issuance of Series A Preferred Stock) in cash out of funds legally available therefor, cumulative dividends, of an amount equal to 5.00% of the Series A Issue Price per share (as adjusted for any stock dividends, stock splits, combinations, recapitalizations involving equity securities of the Corporation, reclassifications or other similar events involving a change with respect to the Series A Preferred Stock) per annum with respect to each share of the Series A Preferred Stock; PROVIDED, HOWEVER, that such dividend may, at the option of the Corporation, be paid to the holders of Series A Preferred Stock in shares of the Series A Preferred Stock valued at the Series A Issue Price (as adjusted for any stock dividends, stock splits, combinations, recapitalizations involving equity securities of the Corporation, reclassifications or other similar events involving a change with respect to the Series A Preferred Stock). The holders of shares of Series A Preferred Stock shall be entitled to receive such dividends immediately after the payment of any dividends to Senior Securities required by the Corporation's Certificate of Incorporation, as amended or amended and restated and in effect, including for this purpose any certificate(s) of designation (the "CHARTER"), prior and in preference to any dividends paid to Junior Securities but in parity with any distribution to the holders of Parity Securities.

(b) In case the Corporation shall at any time or from time to time declare, order, pay or make a dividend or other distribution (including, without limitation, any distribution of stock or other securities or property or rights or warrants to subscribe for securities of the Corporation or any of its subsidiaries by way of a dividend, distribution or spin-off) on its Common Stock, other than (i) a distribution made in compliance with the provisions of Section 4 or (ii) a dividend or distribution made in Common Stock, the holders of the Series A Preferred Stock shall be entitled to receive from the Corporation with respect to each share of Series A Preferred Stock held, any dividend or distribution that would be received by a holder of the number of shares (including fractional shares) of Common Stock into which such Series A Preferred Stock is convertible on the record date for such dividend or distribution, with fractional shares of Common Stock deemed to be entitled to the corresponding fraction of any dividend or distribution that would be received by a whole share. Any such dividend or distribution shall be declared, ordered, paid and made at the same time such dividend or distribution is declared, ordered, paid and made on the Common Stock. No dividend or distribution shall be declared, ordered, paid or made on the Common Stock unless the dividend or distribution on the Series A Preferred Stock provided for by this paragraph shall be declared, ordered, paid or made at the same time.

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Section 4. LIQUIDATION PREFERENCE.

(a) In the event of any liquidation, dissolution or winding up of the Corporation, either voluntary or involuntary, the holders of Series A Preferred Stock shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders, whether from capital, surplus or earnings, immediately after any distributions to Senior Securities required by the Charter, and prior and in preference to any distribution to Junior Securities but in parity with any distribution to the holders of Parity Securities, an amount per share equal to the sum of the Series A Issue Price (as adjusted for any stock splits, combinations, recapitalizations involving equity securities of the Corporation, reclassifications or other similar events involving a change with respect to the Series A Preferred Stock) and any accrued but unpaid dividends on the Series A Preferred Stock. If upon the occurrence of such event, and after the payment in full of the preferential amounts with respect to the Senior Securities, the assets and funds available to be distributed among the holders of the Series A Preferred Stock and the holders of any Parity Securities shall be insufficient to permit the payment to such holders of the full preferential amounts due to the holders of the Series A Preferred Stock and holders of the Parity Securities, respectively, then the entire assets and funds of the Corporation legally available for distribution shall be distributed among the holders of the Series A Preferred Stock and the Parity Securities, pro rata, based on the amount each

such holder would receive if such full preferential amounts were paid unless otherwise provided in the Charter.

(b) Upon the completion of the distributions required by Section 4(a), if assets remain in the Corporation, they shall be distributed to the holders of Junior Securities other than Common Stock with respect to any liquidation preference payable to such holders.

(c) Upon the completion of the distributions required by Section 4(a) and Section 4(b), if assets remain in the Corporation, they shall be distributed pro rata, on an as-converted to Common Stock basis, to the holders of Common Stock and Series A Preferred Stock.

(d) A sale, lease, conveyance or disposition of all or substantially all of the capital stock or assets of the Corporation or a merger, consolidation, share exchange, reorganization or other transaction or series of related transactions (whether involving the Corporation or a subsidiary thereof) in which the Corporation's stockholders immediately prior to such transaction do not retain a majority of the voting power in the surviving entity (a "TRANSACTION"), shall be deemed to be a liquidation, dissolution or winding up within the meaning of this Section 4, unless (i) the holders of 66 2/3% of the then outstanding shares of the Series A Preferred Stock, vote affirmatively or consent in writing that such transaction shall not be treated as a liquidation, dissolution or winding up within the meaning of this Section 4 or (ii) such Transaction shall have resulted in the conversion of the Series A Preferred Stock in accordance with Section 5(b); PROVIDED, HOWEVER, that each holder of Series A Preferred Stock shall have the right to elect the conversion benefits of the provisions of Section 5(a) or other applicable conversion provisions in lieu of receiving payment in liquidation, dissolution or winding up of the Corporation pursuant to this Section; and PROVIDED, FURTHER, that shares of the surviving entity held by holders of the capital stock of the Corporation acquired by means of other than the Transaction shall not be used in determining if the shareholders of the Corporation own a majority of the voting power of the surviving entity, but shall be used for determining the total outstanding voting power of such entity.

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(e) Prior to the closing of a Transaction described in Section 4(d) which would constitute a liquidation, dissolution or winding up within the meaning of this Section 4, the Corporation shall, at its sole option, either (i) make all distributions of cash or other property that it is required to make to the holders of Series A Preferred Stock pursuant to the first sentence of Section 4(a), (ii) set aside sufficient funds or other property from which the distributions required to be made to such holders can be made, or (iii) establish an escrow or other similar arrangement with a third party pursuant to which the proceeds payable to the Corporation from the Transaction will be used to make the liquidating payments to such holders immediately after the consummation of the Transaction. In the event that the Corporation is unable to fully comply with any of the foregoing alternatives, the Corporation shall either: (x) cause such closing to be postponed until the Corporation complies with one of the foregoing alternatives, or (y) cancel such Transaction, in which event the rights of the holders of Series A Preferred Stock shall be the same as existing immediately prior to such proposed Transaction.

Section 5. CONVERSION OF SERIES A PREFERRED STOCK. The Corporation and the record holders of the Series A Preferred Stock shall have conversion rights as follows:

(a) RIGHT TO CONVERT. Each record holder of Series A Preferred Stock shall be entitled to convert whole shares of Series A Preferred Stock for the Common Stock issuable upon conversion of the Series A Preferred Stock, at any time at the option of the holder thereof, subject to adjustment as provided in Section 5(d) hereof, as follows: Each share of Series A Preferred Stock shall be convertible into such number of fully paid and nonassessable shares of Common Stock as is obtained by (I) multiplying the number of shares of Series A Preferred Stock so to be converted by the Series A Issue Price and (II) dividing the result thereof by the Conversion Price. The Conversion Price shall initially be \$8.00 per share of Series A Preferred Stock, subject to adjustment as provided in Section 5(d). Accrued but unpaid dividends will be paid in cash upon any such conversion.

(b) FORCED CONVERSION. (i) In the event of a Transaction which will result in an Internal Rate of Return to holders of Series A Preferred Stock of 25.00% or more, each share of outstanding Series A Preferred Stock shall, concurrently with the closing of such Transaction, be converted into fully-paid and non-assessable shares of Common Stock. Any such conversion shall be made into the number of shares of Common Stock determined pursuant to Section 5(a) using the Conversion Price, as last adjusted. Accrued but unpaid dividends will be paid in cash on any such conversion.

(ii) Notwithstanding anything to the contrary herein, no shares of outstanding Series A Preferred Stock shall be converted into Common Stock pursuant to this Section 5(b) unless at the time of such proposed conversion the Corporation shall have on file with the Securities and Exchange Commission an effective registration statement with respect to the shares of Common Stock issued or issuable to the holders on conversion of the Series A Preferred Stock then issued or issuable to such holders and such shares of Common Stock are eligible for trading on NASDAQ (or approved by and listed on a stock exchange approved by the holders of 66 2/3% of the then outstanding shares of Series A Preferred Stock).

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(c) MECHANICS OF CONVERSION. In order to convert Series A Preferred Stock into full shares of Common Stock if (i) such conversion is pursuant to Section 5(a), the holder shall (A) fax a copy of a fully executed notice of conversion ("NOTICE OF CONVERSION") to the Corporation at the office of the Corporation or to the Corporation's designated transfer agent (the "TRANSFER AGENT") for the Series A Preferred Stock stating that the holder elects to convert, which notice shall specify the date of conversion, the number of shares of Series A Preferred Stock to be converted, the Conversion Price (together with a copy of the front page of each certificate to be converted) and (B) surrender to a common courier for either overnight or two (2) day delivery to the office of the Corporation or its transfer agent, the original certificates representing the Series A Preferred Stock (the "PREFERRED STOCK CERTIFICATES") being converted, duly endorsed for transfer, and (ii) such conversion is pursuant to Section 5(b), the Corporation shall fax a copy of a Notice of Conversion to the holders of Series A Preferred Stock stating that the shares of Series A Preferred Stock shall be converted into Common Stock, which notice shall describe the Transaction and the calculation of the Internal Rate of Return and specify the date of such conversion, the number of shares of Series A Preferred Stock that are being converted, the Conversion Price and a calculation of the number of shares of Common Stock issuable upon such conversion (together with a copy of the front page of each certificate to be converted); PROVIDED, HOWEVER, that the Corporation's failure to deliver a Notice of Conversion to each holder shall not affect the conversion of such shares of Series A Preferred Stock on the date of the closing of the Transaction and the cancellation of the certificates representing such shares of Series A Preferred Stock. In the event of a conversion pursuant to Section 5(b), the outstanding shares of Series A Preferred Stock shall be converted automatically without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent and the Corporation shall not be obligated to issue certificates evidencing the shares of Common Stock issuable upon such conversion unless either the Preferred Stock Certificates are delivered to the Corporation or the Transfer Agent as provided above, or the holder notifies the Corporation or its Transfer Agent that such certificates have been lost, stolen or destroyed (subject to the requirements of Section 5(c)(i) below).

(i) LOST OR STOLEN CERTIFICATES. Upon receipt by the Corporation of evidence of the loss, theft, destruction or mutilation of any Preferred Stock Certificates representing shares of Series A Preferred Stock, and (in the case of loss, theft or destruction) of indemnity or security reasonably satisfactory to the Corporation, and upon surrender and cancellation of the Preferred Stock Certificates, if mutilated, the Corporation shall execute and deliver new Preferred Stock Certificates of like tenor and date; provided that the Corporation shall pay all costs of delivery (including insurance against loss and theft until delivered in an amount satisfactory to the holders of Series A Preferred Stock). However, the Corporation shall not be obligated to reissue such lost or stolen Preferred Stock Certificates if the holder contemporaneously requests the Corporation to convert such Series A Preferred Stock into Common Stock or if such shares of Series A Preferred Stock have been otherwise converted into Common Stock.

(ii) DELIVERY OF COMMON STOCK UPON CONVERSION. The Corporation no later than 6:00 p.m. (Pacific time) on the third (3rd) business day after receipt by

the Corporation or its transfer agent of all necessary documentation duly executed and in proper form required for conversion, including the original Preferred Stock Certificates to be converted (or after provision for security or indemnification in the case of lost, stolen or destroyed certificates, if required), shall issue and surrender to a common courier for either overnight or (if delivery is outside the United States) two (2) day delivery to the holder as shown on the stock records of the Corporation a certificate for the number of shares of Common Stock to which the holder shall be entitled as aforesaid.

(iii) DATE OF CONVERSION. The date on which a voluntary conversion pursuant to Section 5(a) occurs (the "DATE OF VOLUNTARY CONVERSION") shall be deemed to be the date the applicable Notice of Conversion is faxed to the Corporation or the Transfer Agent, as the case may be, provided that the copy of the Notice of Conversion is faxed to the Corporation on or prior to 6:00 p.m. (Pacific time) on the Date of Conversion. A forced conversion pursuant to Section 5(b) shall occur on the date on which such forced conversion is deemed to occur pursuant to Section 5(b) (the "DATE OF FORCED CONVERSION", and together with the Date of Voluntary Conversion, the "DATE OF CONVERSION"). The original Preferred Stock Certificates representing the shares of Series A Preferred Stock to be converted shall be surrendered by depositing such certificates with a common courier for either overnight or two (2) day delivery, as soon as practicable following the Date of Voluntary Conversion or as soon as practicable following the date such holder receives notice of the Date of Forced Conversion. The person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock on the Date of Conversion.

(iv) NO FRACTIONAL SHARES ON CONVERSION. No fractional shares of Common Stock shall be issued upon conversion of the Series A Preferred Stock. In lieu of any fractional share to which the holder would otherwise be entitled, the Corporation shall (after aggregating all shares into which shares of Series A Preferred held by each holder could be converted) pay cash equal to such fraction multiplied by the market price per share of Common Stock (as determined in a reasonable manner by the Board) at the close of business on the Date of Conversion.

(d) ADJUSTMENT OF CONVERSION PRICE.

(i) ADJUSTMENTS OF CONVERSION PRICE UPON ISSUANCE OF COMMON STOCK. If at any time after the first filing of this Certificate of Designations, the Corporation shall issue or sell, or is, in accordance with Section 5(d)(i)(A) through (G) below, deemed to have issued or sold, any shares of Common Stock for a consideration per share less than the Conversion Price in effect immediately prior to the time of such issue or sale or deemed issue or sale, then, forthwith upon such issue or sale or deemed issue or sale, the Conversion Price shall be reduced to the price determined by dividing (x) an amount equal to the sum of (a) the number of shares of Common Stock outstanding immediately prior to such issue or sale multiplied by the then existing Conversion Price and (b) the consideration, if any, received by the Corporation upon such issue or sale, by (y) the total number of shares of Common Stock outstanding immediately after such issue or sale. For purposes of determining the number of shares of Common Stock outstanding as provided in clauses (x) and (y) above, the number of shares of Common Stock issuable upon conversion of all outstanding shares of Series A Preferred Stock, exercise of all outstanding Options (as defined below) and conversion of all outstanding Convertible Securities (as defined below) shall be deemed to be outstanding.

For purposes of this Section 5(d)(i), the following subparagraphs (A) to (G) of this Section 5(d)(i) shall also be applicable:

(A) ISSUANCE OF RIGHTS OR OPTIONS. In case at any time the Corporation shall in any manner grant (whether directly or by assumption in a merger or otherwise) any warrants or other rights to subscribe for or to purchase, or any options for the purchase of, Common Stock or any stock or security convertible into or exchangeable for Common Stock (such warrants, rights or options being called "OPTIONS" and such convertible or exchangeable stock or securities being called "CONVERTIBLE SECURITIES") whether or not such Options or the right to convert or exchange any such Convertible Securities are immediately exercisable, and the price per share for which Common Stock is issuable upon the exercise of such Options or upon the conversion or exchange of such Convertible Securities (determined by dividing (i) the total amount, if any, received or receivable by the Corporation as consideration for the granting of such Options, plus the minimum aggregate amount of additional consideration payable to the Corporation upon the exercise of all such Options, plus, in the case of such Options which relate to Convertible Securities, the minimum aggregate amount of additional consideration, if any, payable upon the issue or sale of such Convertible Securities and upon the conversion or exchange thereof (in all cases excluding the effect of a net issue election), by (ii) the total maximum number of shares of Common Stock issuable upon the exercise of such Options or upon the conversion or exchange of all such Convertible Securities issuable upon the exercise of such Options) shall be less than the Conversion Price in effect immediately prior to the time of the granting of such Options, then the total maximum number of shares of Common Stock issuable upon the exercise of such Options or upon conversion or exchange of the total maximum amount of such Convertible Securities issuable upon the exercise of such Options shall be deemed to have been issued for such price per share as of the date of granting of such Options and thereafter shall be deemed to be outstanding. Except as otherwise provided in Section 5(d)(i)(C), no adjustment of the Conversion Price shall be made upon the actual issue of such Common Stock or of such Convertible Securities upon exercise of such Options or upon the actual issue of such Common Stock upon conversion or exchange of such Convertible Securities.

(B) ISSUANCE OF CONVERTIBLE SECURITIES. In case the Corporation shall in any manner issue (whether directly or by assumption in a merger or otherwise) or sell any Convertible Securities, whether or not the rights to exchange or convert any such Convertible Securities are immediately exercisable, and the price per share for which Common Stock is issuable upon such conversion or exchange (determined by dividing (i) the total amount received or receivable by the Corporation as consideration for the issue or sale of such Convertible Securities, plus the aggregate amount of additional consideration, if any, payable to the Corporation upon the conversion or exchange thereof, by (ii) the total maximum number of shares of Common Stock issuable upon the conversion or exchange of all such Convertible Securities) shall be less than the Conversion Price in effect immediately prior to the time of such issue or sale, then the total maximum number of shares of Common Stock issuable upon conversion or exchange of all such Convertible Securities shall be deemed to have been issued for such price per share as of the date of the issue or sale of such Convertible Securities and thereafter shall be deemed to be outstanding; PROVIDED that (a) except as otherwise provided in Section 5(d)(i)(C), no adjustment of the Conversion Price shall be made upon the actual issue of such Common Stock upon conversion or exchange of such Convertible Securities and (b) if any such issue or sale of such Convertible Securities is made upon exercise of any Options to purchase any such Convertible Securities for which adjustments of the Conversion Price have been or are to be made pursuant to other provisions of this Section 5(d)(i), no further adjustment of the Conversion Price shall be made by reason of such issue or sale.

(C) CHANGE IN OPTION PRICE OR CONVERSION RATE. Upon the happening of any of the following events, namely, if (1) the purchase price or exercise price provided for in any Option referred to in Section 5(d)(i)(A), (2) the number of shares into which the Option is exercisable, (3) the additional consideration, if any, payable upon the conversion or exchange of any Convertible Securities referred to in Section 5(d)(i)(A) or (B), or (4) the rate at which Convertible Securities referred to in Section 5(d)(i)(A) or (B) are convertible into or exchangeable for Common Stock shall change at any time (including, but not limited to, changes under or by reason of provisions designed to protect against dilution), the Conversion Price in effect at the time of such event shall forthwith be readjusted to the Conversion Price which would have been in effect at such time had such Options or Convertible Securities still outstanding provided for such changed purchase price, additional consideration or conversion rate, as the case may be, at

the time initially granted, issued or sold.

(D) STOCK DIVIDENDS. In case the Corporation shall declare a dividend or make any other distribution upon any stock of the Corporation (other than Common Stock or Series A Preferred Stock) payable in Common Stock, then any Common Stock issuable in payment of such dividend or distribution shall be deemed to have been issued or sold for \$.001 per share, unless the holders of at least 66 2/3% of the then outstanding Series A Preferred Stock shall have consented to such dividend or distribution.

(E) CONSIDERATION FOR STOCK. In case any shares of Common Stock, Options or Convertible Securities shall be issued or sold for cash, the consideration received therefor shall be deemed to be the amount received by the Corporation therefor, without deduction therefrom of any expenses incurred or any underwriting commissions or concessions paid or allowed by the Corporation in connection therewith. In case any shares of Common Stock, Options or Convertible Securities shall be issued or sold for a consideration other than cash, the amount of the consideration other than cash received by the Corporation shall be deemed to be the fair value of such consideration as determined in good faith by the Board, without deduction of any expenses incurred or any underwriting commissions or concessions paid or allowed by the Corporation in connection therewith. In case any Options shall be issued in connection with the issue and sale of other securities of the Corporation, together comprising one integral transaction in which no specific consideration is allocated to such Options by the parties thereto, such Options shall be deemed to have been issued for such consideration as determined in good faith by the Board.

(F) RECORD DATE. In case the Corporation shall take a record of the holders of its Common Stock for the purpose of entitling them (i) to receive a dividend or other distribution payable in Common Stock, Options or Convertible Securities or (ii) to subscribe for or purchase Common Stock, Options or Convertible Securities, then such record date shall be deemed to be the date of the issue or sale of the shares of Common Stock deemed to have been issued or sold upon the declaration of such dividend or the making of such other distribution or the date of the granting of such right of subscription or purchase, as the case may be.

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(G) TREASURY SHARES. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Corporation, and the disposition of any such shares shall be considered an issue or sale of Common Stock for the purpose of this Section 5(d)(i).

(ii) CERTAIN ISSUES OF COMMON STOCK EXCEPTED. Anything herein to the contrary notwithstanding, the Corporation shall not be required to make any adjustment of the Conversion Price in the case of the issuance or sale from and after the date of filing of this Certificate of Designations of Anti-Dilution Excluded Securities (as defined below).

(iii) ADJUSTMENTS FOR SUBDIVISIONS, COMMON STOCK DIVIDENDS, COMBINATIONS OR CONSOLIDATIONS OF COMMON STOCK. If the outstanding shares of Common Stock shall be subdivided or increased, by stock split, stock dividend or otherwise, into a greater number of shares of Common Stock, the Conversion Price shall concurrently with the effectiveness of such subdivision or payment of such stock dividend, be proportionately decreased. If the outstanding shares of Common Stock shall be combined or consolidated, by reclassification or otherwise, into a lesser number of shares of Common Stock, the Conversion Price shall, concurrently with the effectiveness of such combination or consolidation, be proportionately increased.

(iv) ADJUSTMENTS FOR RECLASSIFICATION, EXCHANGE AND SUBSTITUTION. If the Common Stock issuable upon conversion of the Series A Preferred Stock shall be changed into the same or a different number of shares of any other class or classes of stock, whether by capital reorganization, reclassification or otherwise (other than a subdivision or combination of shares provided for above), the Conversion Price shall, concurrently with the effectiveness of such reorganization or reclassification, be proportionately adjusted such that the Series A Preferred Stock shall be convertible into, in lieu of the number of shares of Common Stock which the holders would otherwise have been entitled to receive, a number of shares of such other class or classes of stock equivalent to the number of shares of Common Stock that would have been subject to receipt by the holders upon conversion of the Series A Preferred Stock immediately before that change.

(v) ADJUSTMENTS FOR MERGER, SALE, LEASE OR CONVEYANCE. In case of any share exchange, reorganization, consolidation with or merger of the Corporation with or into another corporation, or in case of any sale, lease, conveyance or disposition to another Corporation of the assets of the Corporation as an entirety or substantially as an entirety, which is not treated as a liquidation, dissolution or winding up pursuant to Section 4(d) above, the Series A Preferred Stock shall after the date of such share exchange, reorganization, consolidation, merger, sale, lease, conveyance or disposition be convertible into the number of shares of stock or other securities or property (including cash) to which the Common Stock issuable (at the time of such consolidation, merger, sale, lease, conveyance or disposition) upon conversion of the Series A Preferred Stock would have been entitled upon such share exchange, reorganization, consolidation, merger, sale, lease, conveyance or disposition; and in any such case, if necessary, the provisions set forth herein with respect to the rights and interests thereafter of the holders of the Series A Preferred Stock shall be appropriately adjusted so as to be applicable, as nearly as may reasonably be, to any shares of stock or other securities or property thereafter deliverable on the conversion of the shares of Series A Preferred Stock.

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(vi) FRACTIONAL SHARES. If any adjustment under this Section 5(d) would create a fractional share of Common Stock or a right to acquire a fractional share of Common Stock, such fractional share shall be rounded to the nearest whole number of shares with one-half share being rounded up.

(vii) NOTICE OF ADJUSTMENT. Concurrent with any adjustment pursuant to this Section 5(d), the Corporation shall provide prompt notice to the holders of Series A Preferred Stock notifying such holders of any such adjustment.

Section 6. VOTING RIGHTS. Except to the extent otherwise expressly provided by law and in Section 7, the Series A Preferred Stock shall vote together with all other classes and series of voting stock of the Corporation as a single class on all actions to be taken by the stockholders of the Corporation. Each share of Series A Preferred Stock shall entitle the holder thereof to the number of votes equal to the number of shares of Common Stock into which each share of Series A Preferred Stock is convertible (determined without regard to Section 5(c)(iv)) on all matters to be voted on by the stockholders of the Corporation; provided however that, solely for purposes of this Section 6, the number of votes for each share of Series A Preferred Stock shall not exceed the number of shares of Common Stock into which each share of Series A Preferred Stock would be convertible if the applicable Conversion Price were \$8.99 (subject to appropriate adjustment for stock splits, stock dividends, combinations and other similar recapitalizations affecting such shares).

Section 7. PROTECTIVE PROVISIONS. The Corporation shall not, without first obtaining the written consent of the holders of at least a majority of the then outstanding shares of Series A Preferred Stock voting as a separate class:

(i) increase or decrease the total number of authorized shares of Series A Preferred Stock or the authorized shares of Common Stock reserved for issuance upon conversion of the Series A Preferred Stock (except as otherwise required by the Charter or this Certificate of Designations);

(ii) increase or decrease the number of authorized shares of Preferred Stock or Common Stock (except as otherwise required by the Charter or this Certificate of Designations);

(iii) alter, amend, repeal, substitute or waive any provision of the Charter or the Corporation's bylaws, so as to affect adversely the voting powers, preferences or other rights, including, without limitation, the liquidation preferences, dividend rights, conversion rights, redemption rights or any reduction in the stated value of the Series A Preferred Stock, whether by merger, consolidation or otherwise;

(iv) authorize, create, issue or sell any Senior Securities or any Parity Securities or securities that are convertible into Senior Securities or Parity Securities with respect to voting, dividend, liquidation or redemption rights, including subordinated debt;

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(v) authorize, create, issue or sell any Junior Securities other than Common Stock or securities that are convertible into Junior Securities other than Common Stock with respect to voting, dividend, liquidation or redemption rights, including subordinated debt;

(vi) authorize, create, issue or sell any Series A Preferred Stock other than the Series A Preferred Stock authorized, created, issued and sold pursuant to the Purchase Agreement and Series A Preferred Stock issued in accordance with Section 3(a) and Series A Preferred Stock issued in replacement or exchange therefore;

(vii) engage in a Transaction which would result in an Internal Rate of Return to holders of Series A Preferred Stock of less than 25.00%;

(viii) declare or pay any dividends or distributions on the capital stock of the Corporation in a cumulative amount in excess of the dividends and distributions paid on the Series A Preferred Stock in accordance with this Certificate of Designations;

(ix) authorize or effect the voluntary liquidation, dissolution, recapitalization, reorganization or winding up of the business of the Corporation;

(x) purchase, redeem or otherwise acquire any capital stock of the Corporation other than Series A Preferred Stock, or any warrants or other rights to subscribe for or to purchase, or any options for the purchase of, capital stock of the Corporation or securities convertible into or exchangeable for capital stock of the Corporation;

(xi) change the number of members of the Board to be more than nine members or less than seven members;

(xii) effect any material change in the industry focus of the Corporation and its subsidiaries, considered on a consolidated basis;

(xiii) authorize or engage in, or permit any subsidiary of the Corporation to authorize or engage in, any transaction or series of transactions with a current or former officer, director or member of the Corporation or any of its subsidiaries with value in excess of \$100,000, excluding compensation or the grant of Options approved by the Board; or

(xiv) authorize or engage in, or permit any subsidiary of the Corporation to authorize or engage in, any transaction with any entity or person that is affiliated with any current or former director, officer or member of the Corporation or any of its subsidiaries, excluding any director nominated by the initial holder of the Series A Preferred Stock in accordance with the Registration Rights Agreement.

Section 8. STATUS OF CONVERTED STOCK. In the event any shares of Series A Preferred Stock shall be converted pursuant to Section 5 hereof, the shares so converted shall be canceled, shall return to the status of authorized but unissued Preferred Stock of no designated series, and shall not be issuable by the Corporation as Series A Preferred Stock.

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Section 9. PREEMPTIVE RIGHTS. (a) The Corporation shall not issue, sell or exchange, agree to issue, sell or exchange, or reserve or set aside for issuance, sale or exchange, (i) any shares of the capital stock of the Corporation, (ii) any option, warrant or other right to subscribe for, purchase or otherwise acquire any capital stock of the Corporation, or (iii) any securities convertible into capital stock of the Corporation (collectively, the "Offered Securities"), unless in each such case the Corporation shall have first complied with this Section 9. The Corporation shall deliver to each holder of the Series A Preferred Stock a written notice of any proposed or intended issuance, sale or exchange of Offered Securities (the "Offer"), which Offer shall (i) identify and describe the Offered Securities, (ii) describe the price and other terms upon which they are to be issued, sold or exchanged, and the number or amount of the Offered Securities to be issued, sold or exchanged, (iii) identify the persons or entities (if known) to which or with which the Offered Securities are to be offered, issued, sold or exchanged, and (iv) offer to issue and sell to or exchange with such holder of the Series A Preferred Stock (A) a pro rata portion of the Offered Securities determined by dividing (x) the aggregate number of shares of Common Stock then held by such holder of the Series A Preferred Stock (giving effect to the conversion of all shares of convertible preferred stock then held by such holder) by (y) the total number of shares of Common Stock then held by all holders of the Series A Preferred Stock (giving effect to the conversion of all outstanding shares of convertible preferred stock then held by such holders) (such pro rata portion of the Offered Securities, the "Basic Amount"), and (B) any additional portion of the Offered Securities attributable to the Basic Amounts of other holders of the Series A Preferred Stock as such holder shall indicate it will purchase or acquire should the other holders subscribe for less than their Basic Amounts (the "Undersubscription Amount"). In the case of a public offering of Common Stock of the Corporation for a purchase price of at least \$12.00 and a total gross offering price of at least \$50,000,000.00, the rights of the holders of the Series A Preferred Stock shall be limited to 50% of the Offered Securities.

(b) To accept an Offer, in whole or in part, a holder of the Series A Preferred Stock must deliver a written notice to the Corporation prior to the end of the 30-day period of the Offer, setting forth the portion of the holder's Basic Amount that such holder elects to purchase and, if such holder shall elect to purchase all of its Basic Amount, the Undersubscription Amount (if any) that such holder elects to purchase (the "Notice of Acceptance"). If the Basic Amounts subscribed for by all holders of the Series A Preferred Stock are less than the total of all of the Basic Amounts available for purchase, then each holder who has set forth an Undersubscription Amount in its Notice of Acceptance shall be entitled to purchase, in addition to the Basic Amounts subscribed for, the Undersubscription Amount it has subscribed for; provided, however, that if the Undersubscription Amounts subscribed for exceeds the difference between the total of all of the Basic Amounts available for purchase and the Basic Amounts subscribed for (the "Available Undersubscription Amount") each holder of Series A Preferred Stock who has subscribed for any Undersubscription Amount shall be entitled to purchase only that portion of the Available Undersubscription Amount as the Undersubscription Amounts subscribed for by such holder bears to the total Undersubscription Amounts subscribed for by all holders of the Series A Preferred Stock, subject to rounding by the Board to the extent it deems reasonably necessary.

(c) The Corporation shall have 90 days from the expiration of the period set forth in Section 9(b) to issue, sell or exchange all or any part of such Offered Securities as to which a Notice of Acceptance has not been given by the holders of the Series A Preferred Stock (the "Refused Securities"), but only to the offerees or purchasers described in the Offer (if so described therein) and only upon terms and conditions (including, without limitation, unit prices and interest rates) which are not more favorable, in the aggregate, to the acquiring person or persons or less favorable to the Corporation than those set forth in the Offer.

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(d) In the event the Corporation shall propose to sell less than all the Refused Securities (any such sale to be in the manner and on the terms specified in Section 9(c)), then each holder of the Series A Preferred Stock may, at its sole option and in its sole discretion, reduce the number or amount of the Offered Securities specified in its Notice of Acceptance to an amount that shall be not less than the number or amount of the Offered Securities that the holder of the Series A Preferred Stock elected to purchase pursuant to Section 9(b) multiplied by a fraction, (i) the numerator of which shall be the number or amount of Offered Securities the Corporation actually proposes to issue, sell or exchange (including Offered Securities to be issued or sold to Purchasers pursuant to Section 9(b) prior to such reduction) and (ii) the denominator of which shall be the original amount of the Offered Securities. In the event that any holder of the Series A Preferred Stock so elects to reduce the number or amount of Offered Securities specified in its Notice of Acceptance, the Corporation may not issue, sell or exchange more than the reduced number or amount of the Offered Securities unless and until such securities have again been offered to the Purchasers in accordance with Section 9(a).

(e) Upon the closing of the issuance, sale or exchange of all or less than all of the Refused Securities, the holders of the Series A Preferred Stock shall acquire from the Corporation, and the Corporation shall issue to the holders of the Series A Preferred Stock, the number or amount of Offered Securities specified in the Notices of Acceptance, as reduced pursuant to Section 9(d) if the holders have so elected, upon the terms and conditions specified in the Offer. The purchase by the holders of the Series A Preferred Stock of any Offered Securities is subject in all cases to the preparation, execution and delivery by the Corporation and the holders of a purchase agreement relating to such Offered Securities satisfactory in form and substance to the holders of the Series A Preferred Stock and their respective counsel.

(f) Any Offered Securities not acquired by the holders of the Series A Preferred Stock or other persons in accordance with Section 9(c) may not be issued, sold or exchanged until they are again offered to the holders of the Series A Preferred Stock under the procedures specified in this Section 9.

(g) The rights of the holders of the Series A Preferred Stock under this Section 9 shall not apply to Preemptive Rights Excluded Securities.

(h) The failure of any holder of Series A Preferred Stock to exercise its rights under this Section 9 shall not be deemed to be a waiver of its rights hereunder in connection with any subsequent issuance, sale or exchange, agreement to issue, sell or exchange, or reservation or setting aside for issuance, sale or exchange of Offered Securities.

Section 10. RESERVATION OF STOCK. The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of shares of Series A Preferred Stock issued or issuable to the holders, such number of shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of Series A Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of Series A Preferred Stock, in addition to such other remedies as shall be available to the holder of Series A Preferred Stock, the Corporation shall take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number as shall be sufficient for such purposes, including, without limitation, using best efforts to obtain stockholder approval of any necessary amendment to the Charter.

Section 11. REDEMPTION RIGHTS. The holders of the Series A Preferred Stock shall have redemption rights as follows:

(a) Upon the occurrence of a Redemption Event, the Series A Preferred Stock shall be subject to redemption, at the option of the holders of 66 2/3% of the then outstanding shares of Series A Preferred Stock, on the date specified by the holders of Series A Preferred Stock exercising such option (the "SERIES A REDEMPTION DATE"). The number of shares of the Series A Preferred Stock to be so redeemed shall be obtained by multiplying the number of shares of Series A Preferred Stock then outstanding by a fraction, the numerator of which is the Restricted Cash Amount and the denominator of which is \$80,000,000.00. The redemption price for shares of Series A Preferred Stock subject to such redemption shall be equal to the Series A Issue Price (as adjusted for any stock splits, combinations, recapitalizations involving a change with respect to the Series A Preferred Stock) per share plus any accrued but unpaid dividends plus an amount sufficient to yield an Internal Rate of Return of 5.00%, payable in immediately available funds. If less than all of the shares of the outstanding Series A Preferred Stock are to be redeemed pursuant to this Section 11(a), such shares shall be redeemed pro rata from the holders thereof in proportion to the number of shares held by such holders (with adjustments to avoid redemption of fractional shares).

(b) The funds legally available to the Corporation for the payment of the redemption price of any Junior Securities shall be used first to pay the redemption price of Series A Preferred Stock on the dates established for redemption pursuant to Section 11(a) and no such funds shall be used (or will be required to be used) to pay the redemption price of any Junior Securities unless the Corporation has paid, or reserved funds sufficient to pay, the entire redemption price of Series A Preferred Stock. If the funds legally available to the Corporation for the payment of the redemption price of the Series A Preferred Stock are not sufficient to redeem all of the shares of the Series A Preferred Stock required to be redeemed on any date, such funds shall be used to redeem the number of shares of Series A Preferred Stock which may be redeemed from such amount on a pro rata basis. If additional funds become available for the redemption of additional shares of Series A Preferred Stock required to be so redeemed, the Corporation shall immediately use such funds to redeem shares of Series A Preferred Stock until such time as all of the shares of Series A Preferred Stock required to be redeemed pursuant to this Section 11 have been redeemed.

(c) If, on the dates established for redemption pursuant to Section 11(a), all of the shares of Series A Preferred Stock to be redeemed on each such date are not redeemed in full, all rights in respect of such shares of Series A Preferred Stock that have not been redeemed, including the right to receive the applicable redemption price, plus accrued and unpaid dividends, shall continue to be outstanding as evidenced by the certificates representing such shares. The exercise by the holders of the option to redeem any shares of Series A Preferred Stock which were not redeemed on the dates established for redemption pursuant to Section 11(a), may be rescinded by such holders at any time following the date established for such redemption by written notice to the Corporation. All shares of Series A Preferred Stock redeemed pursuant to Section 11(a) shall be retired and shall be restored to the status of authorized and unissued shares of Preferred Stock, without designation as to series or class and may thereafter be reissued, subject to compliance with the terms hereof, as shares of any series of Preferred Stock other than shares of Series A Preferred Stock.

(d) (i) If the Corporation is unable to make any such payment of the redemption price after redemption was required to be paid pursuant to Section 11(a) a default in the payment of the redemption price for the purpose of this section shall be deemed to have occurred, and having so occurred, such default shall be deemed to exist thereafter until, but only until, all amounts payable pursuant to this section have been paid. If and whenever a default in the payment of the redemption price shall occur, and in addition to any other remedies available at law, a special meeting of shareholders of the Corporation shall be held for the purpose of electing directors upon the written request of the holders of at least 10% of the total number of shares of Series A Preferred Stock then outstanding. Such meeting shall be called by the secretary of the Corporation upon such written request and shall be held at the earliest practicable date upon like notice as that required for the annual meeting of shareholders of the Corporation and at the place for the holding of such annual meeting. If notice of such special meeting shall not be mailed by the secretary within thirty days after personal service of such written request upon the secretary of the Corporation or within thirty days of mailing the same in the United States of America by registered mail addressed to the secretary at the principal office of the Corporation, then the holders of at least 10% of the total number of shares of Series A Preferred Stock then outstanding may designate in writing one of their number to call such meeting and the person so designated may call such meeting upon like notice as that required for the annual meeting of shareholders and to be held at the place for the holding of such annual meeting. Any holder of Series A Preferred Stock so designated shall have access to the stock books of the Corporation for the purpose of causing a

meeting of shareholders to be called pursuant to the foregoing provisions of this subdivision.

(ii) At any such special meeting, or at the next annual meeting of shareholders of the Corporation for the election of directors and at each other meeting, annual or special, for the election of directors held thereafter (unless at the time of any such meeting such default in the payment of the redemption price shall no longer exist), the holders of the outstanding shares of Series A Preferred Stock, voting separately as a class, shall have the right to elect the smallest number of directors which shall constitute at least a majority of the total number of directors of the Corporation, or two directors, whichever shall be greater, and the holders of the outstanding shares of Common Stock, voting as a class, shall have the right to elect all other members of the Board, anything herein or in the bylaws of the Corporation to the contrary notwithstanding. The terms of office, as directors, of all persons who may be directors of the Corporation at any time when such special right to elect directors shall become vested in the holders of the Series A Preferred Stock shall terminate upon the election of any new directors to succeed them as aforesaid.

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(iii) At any meeting, annual or special, of the Corporation, at which the holders of Series A Preferred Stock shall have the special right to elect directors as aforesaid, the presence in person or by proxy of the holders of a majority of the total number of shares of Series A Preferred Stock then outstanding shall be required to constitute a quorum of such class for the election of directors, and the presence in person or by proxy of the holders of a majority of the total number of shares of Common Stock then outstanding shall be required to constitute a quorum of such class for the election of directors; provided, however, that the absence of a quorum of the holders of shares of any such class shall not prevent the election at any such meeting or adjournment thereof of directors by the other class, if necessary quorum of the holders of such other class shall be present at such meeting or any adjournment thereof; and provided further, that in the absence of a quorum of holders of shares of any class, a majority of the holders of the shares of such class who are present in person or by proxy shall have power to adjourn the election of the directors to be elected by such class from time to time, without notice other than announcement at the meeting, until the requisite quorum of holders of such class shall be present in person or by proxy, but no such adjournment shall be made to a date beyond the date for the mailing of the notice of the next annual meeting of shareholders of the Corporation or special meeting in lieu thereof.

(iv) So long as a default in the payment of the redemption price shall exist, any vacancy in the office of a director elected by the holders of the Series A Preferred Stock may be filled at any meeting of shareholders, annual or special, for the election of directors held thereafter, and a special meeting of shareholders, or of the holders of shares of the Series A Preferred Stock, may be called for the purpose of filling any such vacancy. So long as a default in the payment of the redemption price shall exist, any vacancy in the office of a director elected by the holders of the Common Stock may be filled by majority vote of the remaining directors elected by the holders of the Common Stock.

(v) If and when the default in the payment of the redemption price which permitted the election of directors by the holders of the Series A Preferred Stock shall cease to exist, the holders of the Series A Preferred Stock shall be divested of any special right with respect to the election of directors, and the voting power of the holders of the Series A Preferred Stock and of the holders of the Common Stock shall revert to the status existing before the first dividend payment date on which dividends on the Series A Preferred Stock were not paid in full, subject to reversion in the event of each and every subsequent like default in preferred dividends. Upon the termination of any such special right, the terms of office of all persons who may have been elected directors by vote of the holders of the Series A Preferred Stock pursuant to such special right shall forthwith terminate, and the resulting vacancies shall be filled by the majority of the remaining directors.

Section 12. DEFINITIONS. As used in this Certificate, the following capitalized terms have the following meanings.

"ANTI-DILUTION EXCLUDED SECURITIES" mean any of the following securities: (1) securities issued to employees, officers or directors of the Corporation or options to purchase Common Stock granted by the Corporation to employees, officers or directors of the Corporation pursuant to any option plan, agreement or other arrangement duly adopted by the Corporation and the grant of which is approved by the compensation committee of the Board; (2) the Series A Preferred Stock and any Common Stock issued upon conversion of the Series A Preferred Stock; (3) for the avoidance of doubt, securities issued on the conversion of any Convertible Securities or the exercise of any Options, in each case, outstanding on the date of the first filing of this Certificate of Designations; and (4) for the avoidance of doubt, securities issued in connection with a stock split, stock dividend, combination, reorganization, recapitalization or other similar event for which adjustment is made in accordance with Section 5(d) (iii) or (iv).

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"DEPOSIT AGREEMENT" means that certain Deposit Agreement, dated on or about the date hereof, between the Corporation and a bank or trust company, entered into pursuant to the Purchase Agreement.

"INTERNAL RATE OF RETURN" means the discount rate that makes the net present value of all cash payments equal zero. In determining the Internal Rate of Return, the initial investment of the holders of the Series A Preferred Stock shall include all transaction costs and expenses incurred by the initial holder of the Series A Preferred Stock in connection with the transactions contemplated by the Purchase Agreement and all additional costs and expenses of the holders of Series A Preferred Stock in respect of the investment incurred through the date of the determination shall be treated as cash expenditures when made. For purposes of determining the Internal Rate of Return, any dividends, distributions or payments other than in cash shall be deemed to have no value. In determining the Internal Rate of Return in respect of a Transaction, the final payment for purposes of such determination shall be the cash, if any, distributable or payable to holders of the Series A Preferred Stock upon the closing of the Transaction assuming that the holders had converted all of the outstanding Series A Preferred Stock to Common Stock immediately prior to the closing of the Transaction.

"PURCHASE AGREEMENT" means that certain Purchase Agreement, dated November 14, 2005, between the Corporation and Cascade Investment, L.L.C.

"PREEMPTIVE RIGHTS EXCLUDED SECURITIES" mean any of the following securities: (1) securities issued to employees, officers or directors of the Corporation or options to purchase Common Stock granted by the Corporation to employees, officers or directors of the Corporation pursuant to any option plan, agreement or other arrangement duly adopted by the Corporation and the grant of which is approved by the compensation committee of the Board; (2) the Series A Preferred Stock and any Common Stock issued on conversion of the Series A Preferred Stock; (3) for the avoidance of doubt, securities issued on the conversion of any Convertible Securities or the exercise of any Options, in each case, outstanding on the date of the first filing of this Certificate of Designations; (4) for the avoidance of doubt, securities issued in connection with a stock split, stock dividend, combination, reorganization, recapitalization or other similar event for which adjustment is made in accordance with Section 5(d)(iii), (iv) or (v); and (5) the issuance of securities of the Corporation issued for consideration other than cash pursuant to a merger, consolidation, acquisition or similar business combination by the Corporation approved by the Board.

"REDEMPTION EVENT" means (i) the Corporation withdraws or utilizes funds from the Restricted Cash Account in violation of the terms of the Deposit Agreement, (ii) the Corporation publicly disclosed an intent not to build or acquire additional ethanol production facilities for an indefinite period or for a period of at least two years from the time of the announcement, (iii) fails to withdraw funds from the Restricted Cash Account for a period of two years, or (iv) amounts remain in the Restricted Cash Account after December 31, 2009.

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"REGISTRATION RIGHTS AGREEMENT" means that certain Registration Rights and Stockholder's Agreement, dated on or about the date hereof, between the Corporation and Cascade Investment, L.L.C.

"RESTRICTED CASH ACCOUNT" means the account established and maintained pursuant to the Deposit Agreement.

"RESTRICTED CASH AMOUNT" means the total amount of money in the Restricted Cash Account on the Series A Redemption Date prior to any disbursement thereof on such date and after giving effect to the sale or other liquidation of all investments held in such account together with, if the Corporation shall have withdrawn or utilized moneys from the Restricted Cash Account in violation of the terms of the Deposit Agreement, the amount of any moneys so withdrawn or utilized.

SIGNATURE ON FOLLOWING PAGE.

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IN WITNESS WHEREOF, the Corporation has caused this Certificate to be duly executed on its behalf by its Chief Operating Officer this 12th day of April, 2006.

PACIFIC ETHANOL, INC.

By: /s/ Ryan W. Turner
Name: Ryan W. Turner
Title: Chief Operating Officer

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**CERTIFICATE OF DESIGNATIONS,
POWERS, PREFERENCES AND RIGHTS OF THE SERIES B
CUMULATIVE CONVERTIBLE PREFERRED STOCK**

OF

PACIFIC ETHANOL, INC.

**Pursuant to Section 151 of the
Delaware General Corporation Law**

Pacific Ethanol, Inc. (the “**Corporation**”), organized and existing under the laws of the State of Delaware, does, by its Chief Financial Officer and under its corporate seal, hereby certify that pursuant to the authority contained in Article Fourth of its Certificate of Incorporation and in accordance with the provisions of Section 151 of the Delaware General Corporation Law, its Board of Directors has adopted the following resolution creating the following classes and series of the Corporation’s Preferred Stock and determining the voting powers, designations, powers, preferences and relative, participating, optional or other special rights, and the qualifications, limitations and restrictions thereof, of such classes and series:

RESOLVED, that, pursuant to authority conferred upon the Board of Directors by the Certificate of Incorporation of the Corporation (the “**Certificate of Incorporation**”), there is hereby created the following series of Preferred Stock:

- 3,000,000 shares shall be designated Series B Cumulative Convertible Preferred Stock, par value \$0.001 per share (the “**Series B Preferred Stock**”).

The designations, powers, preferences, and rights and the qualifications, limitations and restrictions of the Series B Preferred Stock in addition to those set forth in the Certificate of Incorporation shall be as follows:

Section 1. Designation and Amount. 3,000,000 shares of the unissued preferred stock of the Corporation shall be designated as Series B Cumulative Convertible Preferred Stock, par value \$0.001 per share. The Series B Preferred Stock shall be issued in accordance with the Purchase Agreement at a purchase price of \$19.50 per share (the “**Series B Issue Price**”).

Section 2. Rank. The Series B Preferred Stock shall rank: (i) subject to the requirements of Section 7, junior to any other class or series of capital stock of the Corporation hereafter created specifically ranking as to dividend rights, redemption rights, liquidation preference and other rights senior to the Series B Preferred Stock (the “**Senior Securities**”); (ii) senior to all of the Corporation’s common stock, par value \$0.001 per share (the “**Common Stock**”); (iii) senior to any class or series of capital stock of the Corporation hereafter created not specifically ranking as to dividend rights, redemption rights, liquidation preference and other rights senior to or on parity with any Series B Preferred Stock of whatever subdivision (collectively, with the Common Stock, the “**Junior Securities**”); and (iv) *pari passu* with respect to dividend and liquidation rights with the Corporation’s Series A Cumulative Redeemable Convertible Preferred Stock (the “**Series A Preferred Stock**”) and, subject to the requirements of Section 7, *pari passu* with respect to any class or series of capital stock of the Corporation hereafter created specifically ranking on a parity with the Series B Preferred Stock (collectively, the “**Parity Securities**”).

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Section 3. Dividends.

(a) So long as shares of Series B Preferred Stock remain outstanding, the holders of each share of the Series B Preferred Stock shall be entitled, from and after the date of issuance of such share, to receive, and shall be paid quarterly in arrears (beginning on the last day of the calendar quarter following the date of the initial issuance of Series B Preferred Stock) in cash out of funds legally available therefor, on a *pari passu* basis with the Holders of Series A Preferred Stock, prior and in preference to any distribution of any of the assets of the Corporation to the holders of the Common Stock, cumulative dividends, of an amount equal to 7.00% of the Series B Issue Price per share (as adjusted for any stock dividends, stock splits, combinations, recapitalizations involving equity securities of the Corporation, reclassifications or other similar events involving a change with respect to the Series B Preferred Stock) per annum with respect to each share of the Series B Preferred Stock; provided, however, that such dividend may, at the option of the Corporation, be paid to the holders of Series B Preferred Stock in shares of the Series B Preferred Stock valued at the Series B Issue Price (as adjusted for any stock dividends, stock splits, combinations, recapitalizations involving equity securities of the Corporation, reclassifications or other similar events involving a change with respect to the Series B Preferred Stock). The holders of shares of Series B Preferred Stock shall be entitled to receive such dividends immediately after the payment of any dividends to Senior Securities required by the Corporation’s Certificate of Incorporation, as amended or amended and restated and in effect, including for this purpose any certificate(s) of designation (the “**Charter**”), prior and in preference to any dividends paid to Junior Securities but in parity with any distribution to the holders of Series A Preferred Stock and all other Parity Securities.

(b) In case the Corporation shall at any time or from time to time declare, order, pay or make a dividend or other distribution (including, without limitation, any distribution of stock or other securities or property or rights or warrants to subscribe for securities of the Corporation or any of its subsidiaries by way of a dividend, distribution or spin-off) on its Common Stock, other than (i) a distribution made in compliance with the provisions of Section 4 or (ii) a dividend or distribution made in Common Stock, the holders of the Series B Preferred Stock shall be entitled to receive from the Corporation with respect to each share of Series B Preferred Stock held, any dividend or distribution that would be received by a holder of the number of shares (including fractional shares) of Common Stock into which such Series B Preferred Stock is convertible on the record date for such dividend or distribution, with fractional shares of Common Stock deemed to be entitled to the corresponding fraction of any dividend or distribution that would be received by a whole share. Any such dividend or distribution shall be declared, ordered, paid and made at the same time such dividend or distribution is declared, ordered, paid and made on the Common Stock. No dividend or distribution shall be declared, ordered, paid or made on the Common Stock unless the dividend or distribution on the Series B Preferred Stock provided for by this paragraph shall be declared, ordered, paid or made at the same time.

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Section 4. Liquidation Preference.

(a) In the event of any liquidation, dissolution or winding up of the Corporation, either voluntary or involuntary, the holders of Series B Preferred Stock shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders, whether from capital, surplus or earnings, immediately after any distributions to Senior Securities required by the Charter, and prior and in preference to any distribution to Junior Securities but *pari passu* with any distribution to the holders of Series A Preferred Stock or other Parity Securities, an amount per share equal to the sum of the Series B Issue Price (as adjusted for any stock splits, combinations, recapitalizations involving equity securities of the Corporation, reclassifications of other similar events involving a change with respect to the Series B Preferred Stock) and any accrued but unpaid dividends on the Series B Preferred Stock. If upon the occurrence of such event, and after the payment in full of the preferential amounts with respect to the

Senior Securities, the assets and funds available to be distributed among the holders of the Series B Preferred Stock, the Series A Preferred Stock and any other Parity Securities shall be insufficient to permit the payment to such holders of the full preferential amounts due to such holders, respectively, then the entire assets and funds of the Corporation legally available for distribution shall be distributed among the holders of the Series B Preferred Stock, Series A Preferred Stock and any other Parity Securities, pro rata, based on the amount each such holder would receive if such full preferential amounts were paid unless otherwise provided in the Charter.

(b) Upon the completion of the distributions required by Section 4(a), if assets remain in the Corporation, they shall be distributed to the holders of Junior Securities other than Common Stock with respect to any liquidation preference payable to such holders.

(c) Upon the completion of the distributions required by Section 4(a) and Section 4(b), if assets remain in the Corporation, they shall be distributed pro rata, on an as-converted to Common Stock basis, to the holders of Common Stock, Series A Preferred Stock and Series B Preferred Stock.

(d) A sale, lease, conveyance or disposition of all or substantially all of the capital stock or assets of the Corporation or a merger, consolidation, share exchange, reorganization or other transaction or series of related transactions (whether involving the Corporation or a subsidiary thereof) in which the Corporation's stockholders immediately prior to such transaction do not retain a majority of the voting power in the surviving entity (a "**Transaction**"), shall be deemed to be a liquidation, dissolution or winding up within the meaning of this Section 4, unless (i) the holders of 66 2/3% of the then outstanding shares of the Series B Preferred Stock vote affirmatively or consent in writing that such transaction shall not be treated as a liquidation, dissolution or winding up within the meaning of this Section 4 or (ii) such Transaction shall have resulted in the conversion of the Series B Preferred Stock in accordance with Section 5(b); provided, however, that each holder of Series B Preferred Stock shall have the right to elect the conversion benefits of the provisions of Section 5(a) or other applicable conversion provisions in lieu of receiving payment in liquidation, dissolution or winding up of the Corporation pursuant to this Section; and provided, further, that shares of the surviving entity held by holders of the capital stock of the Corporation acquired by means of other than the Transaction shall not be used in determining if the shareholders of the Corporation own a majority of the voting power of the surviving entity, but shall be used for determining the total outstanding voting power of such entity.

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(e) Prior to the closing of a Transaction described in Section 4(d) which would constitute a liquidation, dissolution or winding up within the meaning of this Section 4, the Corporation shall, at its sole option, either (i) make all distributions of cash or other property that it is required to make to the holders of Series B Preferred Stock pursuant to the first sentence of Section 4(a), (ii) set aside sufficient funds or other property from which the distributions required to be made to such holders can be made, or (iii) establish an escrow or other similar arrangement with a third party pursuant to which the proceeds payable to the Corporation from the Transaction will be used to make the liquidating payments to such holders immediately after the consummation of the Transaction. In the event that the Corporation is unable to fully comply with any of the foregoing alternatives, the Corporation shall either: (x) cause such closing to be postponed until the Corporation complies with one of the foregoing alternatives, or (y) cancel such Transaction, in which event the rights of the holders of Series B Preferred Stock shall be the same as existing immediately prior to such proposed Transaction.

Section 5. Conversion of Series B Preferred Stock. The Corporation and the record holders of the Series B Preferred Stock shall have conversion rights as follows:

(a) Right to Convert. Each record holder of Series B Preferred Stock shall be entitled to convert whole shares of Series B Preferred Stock for the Common Stock issuable upon conversion of the Series B Preferred Stock, at any time at the option of the holder thereof, subject to adjustment and limitations on conversion prior to obtaining stockholder approval as provided in Section 5(d) hereof, as follows: Each share of Series B Preferred Stock shall be convertible into such number of fully paid and nonassessable shares of Common Stock as is obtained by (I) multiplying the number of shares of Series B Preferred Stock so to be converted by the Series B Issue Price and (II) dividing the result thereof by the Conversion Price. The Conversion Price shall initially be \$6.50 per share of Series B Preferred Stock, subject to adjustment as provided in Section 5(d). Accrued but unpaid dividends will be paid in cash upon any such conversion.

(b) Forced Conversion. (i) In the event of a Transaction which will result in an Internal Rate of Return to holders of Series B Preferred Stock of 25.00% or more, each share of outstanding Series B Preferred Stock shall, concurrently with the closing of such Transaction, be converted into fully-paid and non-assessable shares of Common Stock. Any such conversion shall be made into the number of shares of Common Stock determined pursuant to Section 5(a) using the Conversion Price, as last adjusted. Accrued but unpaid dividends will be paid in cash on any such conversion.

(ii) Notwithstanding anything to the contrary herein, no shares of outstanding Series B Preferred Stock shall be converted into Common Stock pursuant to this Section 5(b) unless at the time of such proposed conversion the Corporation shall have on file with the Securities and Exchange Commission an effective registration statement with respect to the shares of Common Stock issued or issuable to the holders on conversion of the Series B Preferred Stock then issued or issuable to such holders and such shares of Common Stock are eligible for trading on NASDAQ (or approved by and listed on a stock exchange approved by the holders of 66 2/3% of the then outstanding shares of Series B Preferred Stock).

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(c) Mechanics of Conversion. In order to convert Series B Preferred Stock into full shares of Common Stock if (i) such conversion is pursuant to Section 5(a), the holder shall (A) fax a copy of a fully executed notice of conversion ("**Notice of Conversion**") to the Corporation at the office of the Corporation or to the Corporation's designated transfer agent (the "**Transfer Agent**") for the Series B Preferred Stock stating that the holder elects to convert, which notice shall specify the date of conversion, the number of shares of Series B Preferred Stock to be converted, the Conversion Price (together with a copy of the front page of each certificate to be converted) and (B) surrender to a common courier for either overnight or two (2) day delivery to the office of the Corporation or its transfer agent, the original certificates representing the Series B Preferred Stock (the "**Preferred Stock Certificates**") being converted, duly endorsed for transfer, and (ii) such conversion is pursuant to Section 5(b), the Corporation shall fax a copy of a Notice of Conversion to the holders of Series B Preferred Stock stating that the shares of Series B Preferred Stock shall be converted into Common Stock, which notice shall describe the Transaction and the calculation of the Internal Rate of Return and specify the date of such conversion, the number of shares of Series B Preferred Stock that are being converted, the Conversion Price and a calculation of the number of shares of Common Stock issuable upon such conversion (together with a copy of the front page of each certificate to be converted); provided, however, that the Corporation's failure to deliver a Notice of Conversion to each holder shall not affect the conversion of such shares of Series B Preferred Stock on the date of the closing of the Transaction and the cancellation of the certificates representing such shares of Series B Preferred Stock. In the event of a conversion pursuant to Section 5(b), the outstanding shares of Series B Preferred Stock shall be converted automatically without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent and the Corporation shall not be obligated to issue certificates evidencing the shares of Common Stock issuable upon such conversion unless either the Preferred Stock Certificates are delivered to the Corporation or the Transfer Agent as provided above, or the holder notifies the Corporation or its Transfer Agent that such certificates have been lost, stolen or destroyed (subject to the requirements of Section 5(c)(i) below).

(i) Lost or Stolen Certificates. Upon receipt by the Corporation of evidence of the loss, theft, destruction or mutilation of any Preferred Stock Certificates representing shares of Series B Preferred Stock, and (in the case of loss, theft or destruction) of indemnity or security reasonably satisfactory to the Corporation, and upon surrender and cancellation of the Preferred Stock Certificates, if mutilated, the Corporation shall execute and deliver new Preferred Stock Certificates of like tenor and date; provided that the Corporation shall pay all costs of delivery (including insurance against loss and theft until delivered in an amount satisfactory to the holders of Series B Preferred Stock). However, the Corporation shall not be obligated to reissue such lost or stolen Preferred Stock Certificates if the holder contemporaneously

requests the Corporation to convert such Series B Preferred Stock into Common Stock or if such shares of Series B Preferred Stock have been otherwise converted into Common Stock.

(ii) Delivery of Common Stock Upon Conversion. The Corporation no later than 6:00 p.m. (Pacific time) on the third (3rd) business day after receipt by the Corporation or its transfer agent of all necessary documentation duly executed and in proper form required for conversion, including the original Preferred Stock Certificates to be converted (or after provision for security or indemnification in the case of lost, stolen or destroyed certificates, if required), shall issue and surrender to a common courier for either overnight or (if delivery is outside the United States) two (2) day delivery to the holder as shown on the stock records of the Corporation a certificate for the number of shares of Common Stock to which the holder shall be entitled as aforesaid.

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(iii) Date of Conversion. The date on which a voluntary conversion pursuant to Section 5(a) occurs (the “**Date of Voluntary Conversion**”) shall be deemed to be the date the applicable Notice of Conversion is faxed to the Corporation or the Transfer Agent, as the case may be, provided that the copy of the Notice of Conversion is faxed to the Corporation on or prior to 6:00 p.m. (Pacific time) on the Date of Conversion. A forced conversion pursuant to Section 5(b) shall occur on the date on which such forced conversion is deemed to occur pursuant to Section 5(b) (the “**Date of Forced Conversion**”, and together with the Date of Voluntary Conversion, the “**Date of Conversion**”). The original Preferred Stock Certificates representing the shares of Series B Preferred Stock to be converted shall be surrendered by depositing such certificates with a common courier for either overnight or two (2) day delivery, as soon as practicable following the Date of Voluntary Conversion or as soon as practicable following the date such holder receives notice of the Date of Forced Conversion. The person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock on the Date of Conversion.

(iv) No Fractional Shares on Conversion. No fractional shares of Common Stock shall be issued upon conversion of the Series B Preferred Stock. In lieu of any fractional share to which the holder would otherwise be entitled, the Corporation shall (after aggregating all shares into which shares of Series B Preferred held by each holder could be converted) pay cash equal to such fraction multiplied by the Market Price per share of Common Stock on the Date of Conversion.

(d) Adjustment of Conversion Price.

(i) Adjustments of Conversion Price Upon Issuance of Common Stock. If at any time after the first filing of this Certificate of Designations, the Corporation shall issue or sell, or is, in accordance with Section 5(d)(i)(A) through (G) below, deemed to have issued or sold, any shares of Common Stock for a consideration per share less than the Conversion Price in effect immediately prior to the time of such issue or sale or deemed issue or sale, then, forthwith upon such issue or sale or deemed issue or sale, the Conversion Price shall be reduced to the price determined by dividing (x) an amount equal to the sum of (a) the number of shares of Common Stock outstanding immediately prior to such issue or sale multiplied by the then existing Conversion Price and (b) the consideration, if any, received by the Corporation upon such issue or sale, by (y) the total number of shares of Common Stock outstanding immediately after such issue or sale. For purposes of determining the number of shares of Common Stock outstanding as provided in clauses (x) and (y) above, the number of shares of Common Stock issuable upon conversion of all outstanding shares of Series A Preferred Stock and Series B Preferred Stock, exercise of all outstanding Options (as defined below) and conversion of all outstanding Convertible Securities (as defined below) shall be deemed to be outstanding. Notwithstanding any other provision in this subsection to the contrary, if an adjustment to the Conversion Price pursuant to this Section 5(d) would require the Corporation, (I) to issue any shares of Common Stock upon conversion of the Series B Preferred Stock in excess of 19.99% of the total number of shares of Common Stock outstanding immediately prior to the closing (the “**Closing**”) of the transactions contemplated by the Purchase Agreement (when aggregated with all shares of Common Stock issued or issuable to such holders upon conversion of the Series B Preferred Stock or upon the payment of a dividend on the Series B Preferred Stock) at a price less than the greater of the Market Price per share immediately prior to the Closing or the Corporation’s book value per share at December 31, 2007 as reflected in the Corporation’s Form 8-K filed with the Securities and Exchange Commission immediately after the Closing (the “**Conversion Limitation**”), or (II) to otherwise obtain stockholder approval of the transactions contemplated by the Purchase Agreement pursuant to NASDAQ Marketplace Rule 4350(i), and such stockholder approval has not been obtained, (1) the Conversion Price shall not be reduced below the maximum extent that would not require shareholder approval under NASDAQ Marketplace Rule 4350(i), and (2) the Corporation shall use its commercially best efforts to obtain such stockholder approval as soon as reasonably practicable, including by calling a special meeting of the stockholders to vote on such Conversion Price adjustment. In no event shall the Corporation be obligated to issue any shares of Common Stock upon conversion of the Series B Preferred Stock in excess of the Conversion Limitation until stockholder approval has been obtained. Once stockholder approval of the transactions contemplated by the Purchase Agreement has been obtained, the Conversion Limitation shall be of no further force or effect.

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For purposes of this Section 5(d)(i), the following subparagraphs (A) to (G) of this Section 5(d)(i) shall also be applicable:

(A) Issuance of Rights or Options. In case at any time the Corporation shall in any manner grant (whether directly or by assumption in a merger or otherwise) any warrants or other rights to subscribe for or to purchase, or any options for the purchase of, Common Stock or any stock or security convertible into or exchangeable for Common Stock (such warrants, rights or options being called “**Options**” and such convertible or exchangeable stock or securities being called “**Convertible Securities**”) whether or not such Options or the right to convert or exchange any such Convertible Securities are immediately exercisable, and the price per share for which Common Stock is issuable upon the exercise of such Options or upon the conversion or exchange of such Convertible Securities (determined by dividing (i) the total amount, if any, received or receivable by the Corporation as consideration for the granting of such Options, plus the minimum aggregate amount of additional consideration payable to the Corporation upon the exercise of all such Options, plus, in the case of such Options which relate to Convertible Securities, the minimum aggregate amount of additional consideration, if any, payable upon the issue or sale of such Convertible Securities and upon the conversion or exchange thereof (in all cases excluding the effect of a net issue election), by (ii) the total maximum number of shares of Common Stock issuable upon the exercise of such Options or upon the conversion or exchange of all such Convertible Securities issuable upon the exercise of such Options) shall be less than the Conversion Price in effect immediately prior to the time of the granting of such Options, then the total maximum number of shares of Common Stock issuable upon the exercise of such Options or upon conversion or exchange of the total maximum amount of such Convertible Securities issuable upon the exercise of such Options shall be deemed to have been issued for such price per share as of the date of granting of such Options and thereafter shall be deemed to be outstanding. Except as otherwise provided in Section 5(d)(i)(C), no adjustment of the Conversion Price shall be made upon the actual issue of such Common Stock or of such Convertible Securities upon exercise of such Options or upon the actual issue of such Common Stock upon conversion or exchange of such Convertible Securities.

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(B) Issuance of Convertible Securities. In case the Corporation shall in any manner issue (whether directly or by assumption in a merger or otherwise) or sell any Convertible Securities, whether or not the rights to exchange or convert any such Convertible Securities are immediately exercisable, and the price per share for which Common Stock is issuable upon such conversion or exchange (determined by dividing (i) the total amount received or receivable by the Corporation as consideration for the issue or sale of such Convertible Securities, plus the aggregate amount of additional consideration, if any, payable to the Corporation upon the conversion

or exchange thereof, by (ii) the total maximum number of shares of Common Stock issuable upon the conversion or exchange of all such Convertible Securities) shall be less than the Conversion Price in effect immediately prior to the time of such issue or sale, then the total maximum number of shares of Common Stock issuable upon conversion or exchange of all such Convertible Securities shall be deemed to have been issued for such price per share as of the date of the issue or sale of such Convertible Securities and thereafter shall be deemed to be outstanding; provided that (a) except as otherwise provided in Section 5(d)(i)(C), no adjustment of the Conversion Price shall be made upon the actual issue of such Common Stock upon conversion or exchange of such Convertible Securities and (b) if any such issue or sale of such Convertible Securities is made upon exercise of any Options to purchase any such Convertible Securities for which adjustments of the Conversion Price have been or are to be made pursuant to other provisions of this Section 5(d)(i), no further adjustment of the Conversion Price shall be made by reason of such issue or sale.

(C) Change in Option Price or Conversion Rate. Upon the happening of any of the following events, namely, if (1) the purchase price or exercise price provided for in any Option referred to in Section 5(d)(i)(A), (2) the number of shares into which the Option is exercisable, (3) the additional consideration, if any, payable upon the conversion or exchange of any Convertible Securities referred to in Section 5(d)(i)(A) or (B), or (4) the rate at which Convertible Securities referred to in Section 5(d)(i)(A) or (B) are convertible into or exchangeable for Common Stock shall change at any time (including, but not limited to, changes under or by reason of provisions designed to protect against dilution), the Conversion Price in effect at the time of such event shall forthwith be readjusted to the Conversion Price which would have been in effect at such time had such Options or Convertible Securities still outstanding provided for such changed purchase price, additional consideration or conversion rate, as the case may be, at the time initially granted, issued or sold.

(D) Stock Dividends. In case the Corporation shall declare a dividend or make any other distribution upon any stock of the Corporation (other than Common Stock, Series A Preferred Stock or Series B Preferred Stock) payable in Common Stock, then any Common Stock issuable in payment of such dividend or distribution shall be deemed to have been issued or sold for \$.001 per share, unless the holders of at least 66 2/3% of the then outstanding Series B Preferred Stock shall have consented to such dividend or distribution.

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(E) Consideration for Stock. In case any shares of Common Stock, Options or Convertible Securities shall be issued or sold for cash, the consideration received therefor shall be deemed to be the amount received by the Corporation therefor, without deduction therefrom of any expenses incurred or any underwriting commissions or concessions paid or allowed by the Corporation in connection therewith. In case any shares of Common Stock, Options or Convertible Securities shall be issued or sold for a consideration other than cash, the amount of the consideration other than cash received by the Corporation shall be deemed to be the fair value of such consideration as determined in good faith by the Board, without deduction of any expenses incurred or any underwriting commissions or concessions paid or allowed by the Corporation in connection therewith. In case any Options shall be issued in connection with the issue and sale of other securities of the Corporation, together comprising one integral transaction in which no specific consideration is allocated to such Options by the parties thereto, such Options shall be deemed to have been issued for such consideration as determined in good faith by the Board.

(F) Record Date. In case the Corporation shall take a record of the holders of its Common Stock for the purpose of entitling them (i) to receive a dividend or other distribution payable in Common Stock, Options or Convertible Securities or (ii) to subscribe for or purchase Common Stock, Options or Convertible Securities, then such record date shall be deemed to be the date of the issue or sale of the shares of Common Stock deemed to have been issued or sold upon the declaration of such dividend or the making of such other distribution or the date of the granting of such right of subscription or purchase, as the case may be.

(G) Treasury Shares. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Corporation, and the disposition of any such shares shall be considered an issue or sale of Common Stock for the purpose of this Section 5(d)(i).

(ii) Certain Issues Excepted. Anything herein to the contrary notwithstanding, the Corporation shall not be required to make any adjustment of the Conversion Price in the case of the issuance or sale from and after the date of filing of this Certificate of Designations of Anti-Dilution Excluded Securities (as defined below).

(iii) Adjustments for Subdivisions, Common Stock Dividends, Combinations or Consolidations of Common Stock. If the outstanding shares of Common Stock shall be subdivided or increased, by stock split, stock dividend or otherwise, into a greater number of shares of Common Stock, the Conversion Price shall concurrently with the effectiveness of such subdivision or payment of such stock dividend, be proportionately decreased. If the outstanding shares of Common Stock shall be combined or consolidated, by reclassification or otherwise, into a lesser number of shares of Common Stock, the Conversion Price shall, concurrently with the effectiveness of such combination or consolidation, be proportionately increased.

(iv) Adjustments for Reclassification, Exchange and Substitution. If the Common Stock issuable upon conversion of the Series B Preferred Stock shall be changed into the same or a different number of shares of any other class or classes of stock, whether by capital reorganization, reclassification or otherwise (other than a subdivision or combination of shares provided for above), the Conversion Price shall, concurrently with the effectiveness of such reorganization or reclassification, be proportionately adjusted such that the Series B Preferred Stock shall be convertible into, in lieu of the number of shares of Common Stock which the holders would otherwise have been entitled to receive, a number of shares of such other class or classes of stock equivalent to the number of shares of Common Stock that would have been subject to receipt by the holders upon conversion of the Series B Preferred Stock immediately before that change.

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(v) Adjustments for Merger, Sale, Lease or Conveyance. In case of any share exchange, reorganization, consolidation with or merger of the Corporation with or into another corporation, or in case of any sale, lease, conveyance or disposition to another Corporation of the assets of the Corporation as an entirety or substantially as an entirety, which is not treated as a liquidation, dissolution or winding up pursuant to Section 4(d) above, the Series B Preferred Stock shall after the date of such share exchange, reorganization, consolidation, merger, sale, lease, conveyance or disposition be convertible into the number of shares of stock or other securities or property (including cash) to which the Common Stock issuable (at the time of such consolidation, merger, sale, lease, conveyance or disposition) upon conversion of the Series B Preferred Stock would have been entitled upon such share exchange, reorganization, consolidation, merger, sale, lease, conveyance or disposition; and in any such case, if necessary, the provisions set forth herein with respect to the rights and interests thereafter of the holders of the Series B Preferred Stock shall be appropriately adjusted so as to be applicable, as nearly as may reasonably be, to any shares of stock or other securities or property thereafter deliverable on the conversion of the shares of Series B Preferred Stock.

(vi) Fractional Shares. If any adjustment under this Section 5(d) would create a fractional share of Common Stock or a right to acquire a fractional share of Common Stock, such fractional share shall be rounded to the nearest whole number of shares with one-half share being rounded up.

(vii) Notice of Adjustment. Concurrent with any adjustment pursuant to this Section 5(d), the Corporation shall provide prompt notice to the holders of Series B Preferred Stock notifying such holders of any such adjustment.

Section 6. Voting Rights. Except to the extent otherwise expressly provided by law and in Section 7, the Series B Preferred Stock shall vote together with all other classes and series of voting stock of the Corporation as a single class on all actions to be taken by the stockholders of the Corporation. Each share of Series B Preferred

Stock shall entitle the holder thereof to the number of votes equal to the number of shares of Common Stock into which each share of Series B Preferred Stock is convertible (determined without regard to Section 5(c)(iv)) on all matters to be voted on by the stockholders of the Corporation; provided, however, that solely for purposes of this Section 6, the number of votes for each share of Series B Preferred Stock shall not exceed the number of shares of Common Stock into which each share of Series B Preferred Stock would be convertible if the applicable Conversion Price were \$6.50 (subject to appropriate adjustment for stock splits, stock dividends, combinations and other similar recapitalizations affecting such shares).

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Section 7. Protective Provisions. The Corporation shall not, without first obtaining the written consent of the holders of at least a majority of the then outstanding shares of Series B Preferred Stock voting as a separate class:

(i) increase or decrease the total number of authorized shares of Series B Preferred Stock or the authorized shares of Common Stock reserved for issuance upon conversion of the Series B Preferred Stock (except as otherwise required by the Charter or this Certificate of Designations);

(ii) increase or decrease the number of authorized shares of Preferred Stock or Common Stock (except any increase or decrease in the number of authorized shares of Series A Preferred Stock and the shares of Common Stock into which they are convertible, and as otherwise required by the Charter and this Certificate of Designations);

(iii) alter, amend, repeal, substitute or waive any provision of the Charter or the Corporation's bylaws, so as to affect adversely the voting powers, preferences or other rights, including, without limitation, the liquidation preferences, dividend rights, conversion rights, redemption rights or any reduction in the stated value of the Series B Preferred Stock, whether by merger, consolidation or otherwise;

(iv) authorize, create, issue or sell any Senior Securities or any Parity Securities (other than additional shares of Series A Preferred Stock that may be issued as a dividend on the Series A Preferred Stock pursuant to Section 3(a) of the Certificate of Designations, Powers, Preferences and Rights of the Series A Preferred Stock (the "**Series A Preferred Certificate of Designations**")) or securities that are convertible into Senior Securities or Parity Securities with respect to voting, dividend, liquidation or redemption rights, including subordinated debt;

(v) authorize, create, issue or sell any Junior Securities other than Common Stock or securities that are convertible into Junior Securities other than Common Stock with respect to voting, dividend, liquidation or redemption rights, including subordinated debt;

(vi) authorize, create, issue or sell any Series B Preferred Stock other than the Series B Preferred Stock authorized, created, issued and sold pursuant to the Purchase Agreement and Series B Preferred Stock issued in replacement or exchange therefore;

(vii) engage in a Transaction which would result in an Internal Rate of Return to holders of Series B Preferred Stock of less than 25.00%;

(viii) declare or pay any dividends or distributions on the capital stock of the Corporation in a cumulative amount in excess of the dividends and distributions paid on the Series A Preferred Stock and the Series B Preferred Stock in accordance with their respective Certificates of Designations;

(ix) authorize or effect the voluntary liquidation, dissolution, recapitalization, reorganization or winding up of the business of the Corporation;

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(x) purchase, redeem or otherwise acquire any capital stock of the Corporation other than Series A Preferred Stock or Series B Preferred Stock, or any warrants or other rights to subscribe for or to purchase, or any options for the purchase of, capital stock of the Corporation or securities convertible into or exchangeable for capital stock of the Corporation; or

(xi) unless the Corporation has obtained stockholder approval of the transactions contemplated by the Purchase Agreement pursuant to NASDAQ Marketplace Rule 4350(i), issue or sell, or engage in any transaction wherein the Corporation shall have been deemed to have issued or sold, any shares of Common Stock or securities convertible into Common Stock for a consideration per share that, as a result of the provisions of Section 5(d)(i), would result in the issuance of Common Stock upon conversion of the Series B Preferred Stock in excess of the Conversion Limitation.

Section 8. Status of Converted Stock. In the event any shares of Series B Preferred Stock shall be converted pursuant to Section 5 hereof, the shares so converted shall be canceled, shall return to the status of authorized but unissued Preferred Stock of no designated series, and shall not be issuable by the Corporation as Series B Preferred Stock.

Section 9. Preemptive Rights.

(a) So long as at least 50% of the shares of Series B Preferred Stock remain outstanding, the Corporation shall not issue, sell or exchange, agree to issue, sell or exchange, or reserve or set aside for issuance, sale or exchange, (i) any shares of the capital stock of the Corporation (excluding any shares of Series A Preferred Stock and any shares of Common Stock issuable upon conversion of Series A Preferred Stock), (ii) any option, warrant or other right to subscribe for, purchase or otherwise acquire any capital stock of the Corporation, or (iii) any securities convertible into capital stock of the Corporation (collectively, but not including any Series A Preemptive Rights Securities (as defined below), the "**Offered Securities**"), unless in each such case the Corporation shall have first complied with this Section 9; provided, however, that (x) the preemptive rights of any holder of Series B Preferred Stock shall not include rights with respect to any securities of the Corporation as to which any holder of Series A Preferred Stock has exercised its rights (the "**Series A Preemptive Rights Securities**") and (y) the preemptive rights of the holder of Series B Preferred Stock shall not arise or be exercisable until after all holders of Series A Preferred Stock have exercised their preemptive rights, in whole or in part, or declined to exercise such rights. The Corporation shall deliver to each holder of the Series B Preferred Stock a written notice of any proposed, intended or potential (i.e., in the event the holders of the Series A Preemptive Rights Securities elect not to exercise any or all of their preemptive rights with respect to the Series A Preemptive Rights Securities) issuance, sale or exchange of Offered Securities (the "**Offer**"), which Offer shall (i) identify and describe the Offered Securities, (ii) describe the price and other terms upon which they are to be issued, sold or exchanged, and the number or amount of the Offered Securities to be issued, sold or exchanged, (iii) identify the persons or entities (if known) to which or with which the Offered Securities are to be offered, issued, sold or exchanged, and (iv) offer to issue and sell to or exchange with such holder of the Series B Preferred Stock (A) a pro rata portion of the Offered Securities determined by dividing (x) the aggregate number of shares of Common Stock then held by such holder of the Series B Preferred Stock (giving effect to the conversion of all shares of convertible preferred stock then held by such holder) by (y) the total number of shares of Common Stock then held by all holders of the Series B Preferred Stock (giving effect to the conversion of all outstanding shares of convertible preferred stock then held by such holders) (such pro rata portion of the Offered Securities, the "**Basic Amount**"), and (B) any additional portion of the Offered Securities attributable to the Basic Amounts of other holders of the Series B Preferred Stock as such holder shall indicate it will purchase or acquire should the other holders subscribe for less than their Basic Amounts (the "**Undersubscription Amount**").

(b) To accept an Offer, in whole or in part, a holder of the Series B Preferred Stock must deliver a written notice to the Corporation prior to the end of the 30-day period of the Offer, setting forth the portion of the holder's Basic Amount that such holder elects to purchase and, if such holder shall elect to purchase all of its Basic Amount, the Undersubscription Amount (if any) that such holder elects to purchase (the "**Notice of Acceptance**"). If the Basic Amounts subscribed for by all holders of the Series B Preferred Stock are less than the total of all of the Basic Amounts available for purchase, then each holder who has set forth an Undersubscription Amount in its Notice of Acceptance shall be entitled to purchase, in addition to the Basic Amounts subscribed for, the Undersubscription Amount it has subscribed for; provided, however, that if the Undersubscription Amounts subscribed for exceeds the difference between the total of all of the Basic Amounts available for purchase and the Basic Amounts subscribed for (the "**Available Undersubscription Amount**") each holder of Series B Preferred Stock who has subscribed for any Undersubscription Amount shall be entitled to purchase only that portion of the Available Undersubscription Amount as the Undersubscription Amounts subscribed for by such holder bears to the total Undersubscription Amounts subscribed for by all holders of the Series B Preferred Stock, subject to rounding by the Board to the extent it deems reasonably necessary.

(c) The Corporation shall have 90 days from the expiration of the period set forth in Section 9(b) to issue, sell or exchange all or any part of such Offered Securities as to which a Notice of Acceptance has not been given by the holders of the Series B Preferred Stock (the "**Refused Securities**"), but only to the offerees or purchasers described in the Offer (if so described therein) and only upon terms and conditions (including, without limitation, unit prices and interest rates) which are not more favorable, in the aggregate, to the acquiring person or persons or less favorable to the Corporation than those set forth in the Offer.

(d) In the event the Corporation shall propose to sell less than all the Refused Securities (any such sale to be in the manner and on the terms specified in Section 9(c)), then each holder of the Series B Preferred Stock may, at its sole option and in its sole discretion, reduce the number or amount of the Offered Securities specified in its Notice of Acceptance to an amount that shall be not less than the number or amount of the Offered Securities that the holder of the Series B Preferred Stock elected to purchase pursuant to Section 9(b) multiplied by a fraction, (i) the numerator of which shall be the number or amount of Offered Securities the Corporation actually proposes to issue, sell or exchange (including Offered Securities to be issued or sold to Purchasers pursuant to Section 9(b) prior to such reduction), plus the number or amount of the Series A Preemptive Rights Securities, if any, and (ii) the denominator of which shall be the original amount of the Offered Securities plus the number or amount of the Series A Preemptive Rights Securities, if any. In the event that any holder of the Series B Preferred Stock so elects to reduce the number or amount of Offered Securities specified in its Notice of Acceptance, the Corporation may not issue, sell or exchange more than the reduced number or amount of the Offered Securities unless and until such securities have again been offered to the Purchasers in accordance with Section 9(a).

(e) Upon the closing of the issuance, sale or exchange of all or less than all of the Refused Securities, the holders of the Series B Preferred Stock shall acquire from the Corporation, and the Corporation shall issue to the holders of the Series B Preferred Stock, the number or amount of Offered Securities specified in the Notices of Acceptance, as reduced pursuant to Section 9(d) if the holders have so elected, upon the terms and conditions specified in the Offer. The purchase by the holders of the Series B Preferred Stock of any Offered Securities is subject in all cases to the preparation, execution and delivery by the Corporation and the holders of a purchase agreement relating to such Offered Securities satisfactory in form and substance to the holders of the Series B Preferred Stock and their respective counsel.

(f) Any Offered Securities not acquired by the holders of the Series B Preferred Stock or other persons in accordance with Section 9(c) may not be issued, sold or exchanged until they are again offered to the holders of the Series B Preferred Stock under the procedures specified in this Section 9.

(g) The rights of the holders of the Series B Preferred Stock under this Section 9 shall not apply to Preemptive Rights Excluded Securities.

(h) The failure of any holder of Series B Preferred Stock to exercise its rights under this Section 9 shall not be deemed to be a waiver of its rights hereunder in connection with any subsequent issuance, sale or exchange, agreement to issue, sell or exchange, or reservation or setting aside for issuance, sale or exchange of Offered Securities.

Section 10. Reservation of Stock. The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, for the purpose of effecting the conversion of shares of Series B Preferred Stock issued or issuable to the holders, such number of shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of Series B Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of Series B Preferred Stock, in addition to such other remedies as shall be available to the holder of Series B Preferred Stock, the Corporation shall take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number as shall be sufficient for such purposes, including, without limitation, using best efforts to obtain stockholder approval of any necessary amendment to the Charter.

Section 11. Definitions. As used in this Certificate, the following capitalized terms have the following meanings.

"**Anti-Dilution Excluded Securities**" mean any of the following securities: (1) securities issued to employees, officers or directors of the Corporation or options to purchase Common Stock granted by the Corporation to employees, officers or directors of the Corporation pursuant to any option plan, agreement or other arrangement duly adopted by the Corporation and the grant of which is approved by the compensation committee of the Board; (2) any Series A Preferred Stock issued as a dividend on shares of Series A Preferred Stock, (3) any Common Stock issued upon conversion of the Series A Preferred Stock; (4) the Series B Preferred Stock and any Common Stock issued upon conversion of the Series B Preferred Stock; (5) for the avoidance of doubt, securities issued on the conversion of any Convertible Securities or the exercise of any Options, in each case, outstanding on the date of the first filing of this Certificate of Designations; and (6) for the avoidance of doubt, securities issued in connection with a stock split, stock dividend, combination, reorganization, recapitalization or other similar event for which adjustment is made in accordance with Section 5(d) (iii) or (iv).

"**Internal Rate of Return**" means the discount rate that makes the net present value of all cash payments equal zero. In determining the Internal Rate of Return, the initial investment of the holders of the Series B Preferred Stock shall include all transaction costs and expenses incurred by the initial holder of the Series B Preferred Stock in connection with the transactions contemplated by the Purchase Agreement and all additional costs and expenses of the holders of Series B Preferred Stock in respect of the investment incurred through the date of the determination shall be treated as cash expenditures when made. For purposes of determining the Internal Rate of Return, any dividends, distributions or payments other than in cash shall be deemed to have no value. In determining the Internal Rate of Return in respect of a Transaction, the final payment for purposes of such determination shall be the cash, if any, distributable or payable to holders of the Series B Preferred Stock upon the closing of the Transaction assuming that the holders had converted all of the outstanding Series B Preferred Stock to Common Stock immediately prior to the closing of the Transaction.

"**Market Price**" shall be the closing sale price (on the applicable Trading Market) per share of Common Stock on any specified date, or, if such date does not

fall on a Trading Day, then the closing sale price per share of Common Stock on the first Trading Day preceding such date which shall also constitute the "market price" for purposes of the Series A Preferred Certificate of Designations.

"Purchase Agreement" means that certain Securities Purchase Agreement, dated March 18, 2008, between the Corporation and Lyles United, LLC.

"Preemptive Rights Excluded Securities" mean any of the following securities: (1) securities issued to employees, officers or directors of the Corporation or options to purchase Common Stock granted by the Corporation to employees, officers or directors of the Corporation pursuant to any option plan, agreement or other arrangement duly adopted by the Corporation and the grant of which is approved by the compensation committee of the Board; (2) any Series A Preferred Stock issued as a dividend on shares of Series A Preferred Stock and any Common Stock issued on conversion of any shares of Series A Preferred Stock or as a dividend to any holder of Series A Preferred Stock; (3) the Series B Preferred Stock and any Common Stock issued on conversion of the Series B Preferred Stock or issued as a dividend on the Series B Preferred Stock; (4) for the avoidance of doubt, securities issued on the conversion of any Convertible Securities or the exercise of any Options, in each case, outstanding on the date of the first filing of this Certificate of Designations; (5) for the avoidance of doubt, securities issued in connection with a stock split, stock dividend, combination, reorganization, recapitalization or other similar event for which adjustment is made in accordance with Section 5(d)(iii), (iv) or (v); and (6) the issuance of securities of the Corporation issued for consideration other than cash pursuant to a merger, consolidation, acquisition or similar business combination by the Corporation approved by the Board.

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"Trading Day" means any day on which the Common Stock is listed or quoted and traded on the applicable Trading Market.

"Trading Market" means the NASDAQ Global Market or, if the Common Stock is not then traded on the NASDAQ Global Market, any national securities exchange, market or trading or quotation facility on which the Common Stock is then listed or quoted.

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IN WITNESS WHEREOF, the Corporation has caused this Certificate to be duly executed on its behalf by its Chief Financial Officer this 26th day of March, 2008.

PACIFIC ETHANOL, INC.

By: /s/ JOSEPH W. HANSEN

Name: Joseph W. Hansen

Title: Chief Financial Officer

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**CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
PACIFIC ETHANOL, INC.
a Delaware corporation**

PACIFIC ETHANOL, INC. a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), hereby certifies as follows:

1. The name of the Corporation is PACIFIC ETHANOL, INC.

2. That the Corporation's Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on February 28, 2005 (the "Original Certificate"). The following were subsequently filed: (i) Certificate of Designations, Powers, Preferences, Rights of the Series A Cumulative Redeemable Convertible Preferred Stock filed with the Secretary of State of Delaware on April 12, 2006, and (ii) Certificate of Designations, Powers, Preferences, Rights of the Series B Cumulative Convertible Preferred Stock filed with the Secretary of State of Delaware on April 2, 2008 (collectively, the Original Certificate with the subsequently filed certificates shall be referred to as the "Certificate of Incorporation").

3. The Certificate of Incorporation of the Corporation is hereby amended by striking out the first paragraph of the FOURTH Article thereof and by substituting in lieu of said paragraph the following new paragraph:

The corporation is authorized to issue one class of capital stock to be designated "common stock" and another class of capital stock to be designated "Preferred Stock." The total number of shares of common stock that the corporation is authorized to issue is three hundred million (300,000,000), with a par value of \$.001 per share. The total number of shares of Preferred Stock that the corporation is authorized to issue is ten million (10,000,000), with a par value of \$.001 per share.

4. The amendment of the Certificate of Incorporation herein certified has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said Corporation has caused this Certificate to be signed this 3rd day of June, 2010.

/s/ NEIL M. KOEHLER

Neil M. Koehler, President

**CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
PACIFIC ETHANOL, INC.
a Delaware corporation**

PACIFIC ETHANOL, INC. a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), hereby certifies as follows:

1. The name of the Corporation is PACIFIC ETHANOL, INC.

2. That the Corporation's Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on February 25, 2005 (the "Original Certificate"). The following were subsequently filed: (i) Certificate of Designations, Powers, Preferences and Rights of the Series A Cumulative Redeemable Convertible Preferred Stock filed with the Secretary of State of Delaware on April 12, 2006; (ii) Certificate of Designations, Powers, Preferences and Rights of the Series B Cumulative Convertible Preferred Stock filed with the Secretary of State of Delaware on April 2, 2008; and (iii) Certificate of Amendment of Certificate of Incorporation filed with the Secretary of State of Delaware on June 3, 2010 (collectively, the Original Certificate together with the subsequently filed certificates shall be referred to as the "Certificate of Incorporation").

3. The Certificate of Incorporation of the Corporation is hereby amended by adding the following at the end of Article FOURTH:

"Reverse Stock Split. On the effective date of the amendment adding this paragraph to Article FOURTH pursuant to the General Corporation Law of the State of Delaware (the "Effective Date"), each share of common stock, par value \$0.001 per share (the "Old Common Stock"), issued and outstanding immediately before the Effective Date, shall be and hereby is, reclassified as and changed into one-seventh (1/7) of a share of common stock, par value \$0.001 per share (the "New Common Stock"). The Corporation shall, through its transfer agent, provide certificates representing New Common Stock to holders of Old Common Stock in exchange for certificates representing Old Common Stock. From and after the Effective Date, certificates representing shares of Old Common Stock are hereby canceled and shall represent only the right of holders thereof to receive New Common Stock. The Corporation shall not issue fractional shares of New Common Stock. The reverse stock split shall not increase or decrease the amount of stated capital or paid-in surplus of the Corporation, provided that any fractional share that would otherwise be issuable as a result of the reverse stock split shall be rounded up to the nearest whole share of New Common Stock. From and after the Effective Date, the term "New Common Stock" as used in this Article FOURTH shall mean common stock as provided in the Certificate of Incorporation."

4. The amendment of the Certificate of Incorporation herein certified has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

5. The Effective Date of this Amendment will be Wednesday, June 8, 2011 at 12:01 a.m. Eastern Time.

IN WITNESS WHEREOF, said Corporation has caused this Certificate to be signed this 6th day of June, 2011.

/s/ Christopher W. Wright
Christopher W. Wright,
Vice President, General Counsel & Secretary

**CERTIFICATE OF AMENDMENT
 OF
 CERTIFICATE OF INCORPORATION
 OF
 PACIFIC ETHANOL, INC.
 a Delaware corporation**

PACIFIC ETHANOL, INC. a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), hereby certifies as follows:

1. The name of the Corporation is PACIFIC ETHANOL, INC.

2. That the Corporation's Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on February 28, 2005 (the "Original Certificate"). The following were subsequently filed: (i) Certificate of Designations, Powers, Preferences and Rights of the Series A Cumulative Redeemable Convertible Preferred Stock filed with the Secretary of State of Delaware on April 12, 2006; (ii) Certificate of Designations, Powers, Preferences and Rights of the Series B Cumulative Convertible Preferred Stock filed with the Secretary of State of Delaware on March 26, 2008; (iii) Certificate of Amendment of Certificate of Incorporation filed with the Secretary of State of Delaware on June 3, 2010; and (iv) Certificate of Amendment of Certificate of Incorporation filed with the Secretary of State of Delaware on June 6, 2011 (collectively, the Original Certificate together with the subsequently filed certificates shall be referred to as the "Certificate of Incorporation").

3. The Certificate of Incorporation of the Corporation is hereby amended by adding the following at the end of Article FOURTH:

"Reverse Stock Split. On the effective date of the amendment adding this paragraph to Article FOURTH pursuant to the General Corporation Law of the State of Delaware (the "Effective Date"), each share of common stock, par value \$0.001 per share (the "Old Common Stock"), issued and outstanding immediately before the Effective Date, shall be and hereby is, reclassified as and changed into one-fifteenth (1/15) of a share of common stock, par value \$0.001 per share (the "New Common Stock"). The Corporation shall, through its transfer agent, provide certificates representing New Common Stock to holders of Old Common Stock in exchange for certificates representing Old Common Stock. From and after the Effective Date, certificates representing shares of Old Common Stock are hereby canceled and shall represent only the right of holders thereof to receive New Common Stock. The Corporation shall not issue fractional shares of New Common Stock. The reverse stock split shall not increase or decrease the amount of stated capital or paid-in surplus of the Corporation, provided that any fractional share that would otherwise be issuable as a result of the reverse stock split shall be rounded up to the nearest whole share of New Common Stock. From and after the Effective Date, the term "New Common Stock" as used in this Article FOURTH shall mean common stock as provided in the Certificate of Incorporation."

4. The amendment of the Certificate of Incorporation herein certified has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

5. The Effective Date of this Amendment will be May 14, 2013 at 12:01 a.m. Eastern Time.

IN WITNESS WHEREOF, said Corporation has caused this Certificate to be signed this 10th day of May, 2013.

/s/ CHRISTOPHER W. WRIGHT

 Christopher W. Wright
 Vice President, General Counsel & Secretary

**CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
PACIFIC ETHANOL, INC.
a Delaware corporation**

PACIFIC ETHANOL, INC. a corporation organized and existing under the laws of the State of Delaware (the “**Corporation**”), hereby certifies as follows:

1. The name of the Corporation is PACIFIC ETHANOL, INC.

2. That the Corporation’s Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on February 28, 2005 (the “**Original Certificate**”). The following were subsequently filed: (i) Certificate of Designations, Powers, Preferences and Rights of the Series A Cumulative Redeemable Convertible Preferred Stock filed with the Secretary of State of Delaware on April 12, 2006; (ii) Certificate of Designations, Powers, Preferences and Rights of the Series B Cumulative Convertible Preferred Stock filed with the Secretary of State of Delaware on March 26, 2008; (iii) Certificate of Amendment of Certificate of Incorporation filed with the Secretary of State of Delaware on June 3, 2010; (iv) Certificate of Amendment of Certificate of Incorporation filed with the Secretary of State of Delaware on June 6, 2011; and (v) Certificate of Amendment of Certificate of Incorporation filed with the Secretary of State of Delaware on May 10, 2013 (the Original Certificate, together with the subsequently filed certificates, shall be collectively referred to as the “**Certificate of Incorporation**”).

3. The Certificate of Incorporation of the Corporation is hereby amended by striking out Article FOURTH thereof and by substituting in lieu of said Article the following new Article FOURTH:

“FOURTH: The total number of shares of all classes of stock that the corporation shall have authority to issue is 313,553,000 shares, consisting of (A) three hundred million (300,000,000) shares of Common Stock, with the par value of \$0.001 per share (“**Common Stock**”), (B) three million five hundred fifty three thousand (3,553,000) shares of Non-Voting Common Stock, with the par value of \$0.001 per share (“**Non-Voting Common Stock**”) and (C) ten million (10,000,000) shares of Preferred Stock, with the par value of \$0.001 per share (“**Preferred Stock**”), each having the rights set forth in this Article FOURTH.

4.1 Common Stock. Except as otherwise provided by the General Corporation Law of the State of Delaware or in this Article FOURTH (or in any certificate of designation establishing a series of Preferred Stock), the holders of Common Stock shall exclusively possess all voting power of the corporation. Each share of Common Stock shall be equal in all respects to every other share of Common Stock. Each holder of record of issued and outstanding Common Stock shall be entitled to one (1) vote on all matters for each share so held. Subject to the rights and preferences, if any, of the holders of Preferred Stock, each issued and outstanding share of Common Stock shall entitle the record holder thereof to receive dividends and distributions out of funds legally available therefor, when, as and if declared by the board of directors of this corporation (the “**Board of Directors**”), in such amounts and at such times, if any, as the board of directors shall determine, ratably in proportion to the number of shares of Common Stock held by each such record holder. Upon any voluntary or involuntary liquidation, dissolution or winding up of the corporation, after there shall have been paid to or set aside for the holders of any class of capital stock having preference over the Common Stock in such circumstances the full preferential amounts to which they are respectively entitled, the holders of the Common Stock, and of any class or series of capital stock entitled to participate in whole or in part therewith as to the distribution of assets, shall be entitled, after payment or provision for the payment of all debts and liabilities of the corporation, to receive the remaining assets of the corporation available for distribution, in cash or in kind, ratably in proportion to the number of shares of Common Stock (or any class or series of capital stock entitled to participate in whole or in part therewith) held by each such holder.

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4.2 Non-Voting Common Stock. Each share of Non-Voting Common Stock shall rank equally in all respects and shall be subject to the following provisions of this Certificate of Incorporation.

4.2.1 Rank. Non-Voting Common Stock shall, with respect to rights on liquidation, winding up and dissolution, rank equally with the Common Stock.

4.2.2 Dividends. Holders of Non-Voting Common Stock shall receive dividends and distributions on parity in all respects with holders of Common Stock ~~provided~~, however, that if holders of shares of Common Stock become entitled to receive a distribution or dividend of shares of Common Stock, holders of Non-Voting Common Stock shall receive, in lieu of the shares of Common Stock that they are entitled to receive, an equal number of shares of Non-Voting Common Stock. Dividends or distributions payable pursuant to the preceding sentence shall be payable on the same date that such dividends or distributions are payable to the holders of record of Common Stock.

4.2.3 Liquidation Preference. Holders of Non-Voting Common Stock shall be entitled to receive, in all respects, the same preference as holders of Common Stock in the event of any voluntary or involuntary liquidation, dissolution or winding up of the affairs of the corporation.

4.2.4 Voting Rights.

(A) Except as set forth in Section 4.2.4(B) and Section 4.2.4(C) below, holders of shares of Non-Voting Common Stock shall not be entitled to vote (in their capacity as holders of Non-Voting Common Stock) on any matter submitted to a vote of the stockholders of the corporation, but shall be entitled to prior written notice of, and to attend and observe, all special and annual meetings of the stockholders of the corporation.

(B) So long as any shares of Non-Voting Common Stock are outstanding, the corporation shall not, without the affirmative vote at a meeting called for that purpose by holders of at least a majority of the then outstanding shares of Non-Voting Common Stock, voting as a single and separate class, amend, alter or repeal any provision of this Article FOURTH or any other provision of the Certificate of Incorporation (by any means, including by merger, consolidation, reclassification, or otherwise) so as to, or in a manner that would, disproportionately and adversely affect the preferences, rights, privileges or powers of the Non-Voting Common Stock relative to the preferences, rights, privileges or powers of the Common Stock.

(C) The consent or votes required by Section 4.2.4(B) hereof shall be in addition to any approval of stockholders of the corporation which may be required by applicable law or pursuant to any provision of this Certificate of Incorporation.

4.2.5 Conversion.

(A) Optional Conversion; Conversion Upon Transfer.

(i) Holders of Non-Voting Common Stock shall have the right, at any time and from time to time, at the option of such holder, to convert any share of Non-Voting Common Stock held by such holder into one fully paid and non-assessable share of Common Stock, subject to the provisions contained in Section 4.2.5(A)(iii) and subject to the adjustments as described in Section 4.2.5(C) hereof.

(ii) Notwithstanding anything contained in Section 4.2.5(A)(i), at any time when a share of Non-Voting Common Stock is not or ceases to be owned

by an Initial Holder or an Affiliate of an Initial Holder, such share of Non-Voting Common Stock, without any further action or deed on the part of the corporation or any other Person, shall automatically convert into one (1) fully paid and non-assessable share of Common Stock subject to adjustments as described in Section 4.2.5(C) hereof.

(iii) Notwithstanding anything to the contrary contained in this Article FOURTH, no Non-Voting Common Stock shall be convertible to Common Stock to the extent (but only to the extent) that after giving effect to such conversion pursuant to this Section 4.2.5, the holder (together with any of its Affiliates) of the Common Stock received from such conversion would beneficially own in excess of 9.99% (the “**Maximum Percentage**”) of the Common Stock of the corporation. To the extent the above limitation applies, the determination of whether the Non-Voting Common Stock shall be convertible (vis-à-vis other convertible, exercisable or exchangeable securities owned by the holder or any of its Affiliates) and of which such securities shall be convertible, exercisable or exchangeable (as the case may be, as among all such securities owned by the holder) shall, subject to such Maximum Percentage limitation, be determined on the basis of the first submission to the corporation for conversion, exercise or exchange (as the case may be). No prior inability to convert the Non-Voting Common Stock pursuant to this Section 4.2.5(A)(iii) shall have any effect on the applicability of the provisions of this Section 4.2.5(A)(iii) with respect to any subsequent determination of exercisability. For the purposes of this Section 4.2.5(A)(iii), beneficial ownership and all determinations and calculations (including, without limitation, with respect to calculations of percentage ownership) shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. To the extent permitted by applicable law, the provisions of this Section 4.2.5(A)(iii) shall be implemented in a manner otherwise than in strict conformity with the terms of this Section 4.2.5(A)(iii) to correct this Section 4.2.5(A)(iii) (or any portion hereof) which may be defective or inconsistent with the intended Maximum Percentage beneficial ownership limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such Maximum Percentage limitation. For purposes of determining Maximum Percentage, in determining the number of outstanding shares of Common Stock, the holder of Non-Voting Common Stock may rely on the number of outstanding shares of Common Stock as reflected in (1) the corporation’s most recent Form 10-K, Form 10-Q, Current Report on Form 8-K or other public filing with the Securities and Exchange Commission, as the case may be, (2) a more recent public announcement by the corporation or (3) any other notice by the corporation or the corporation’s transfer agent setting forth the number of shares of Common Stock outstanding. For any reason at any time, upon the written or oral request of the holder of Non-Voting Common Stock, the corporation shall within one (1) Business Day confirm orally and in writing to such holder the number of shares of Common Stock then outstanding, including by virtue of any prior conversion or exercise of convertible or exercisable securities into Common Stock. By written notice to the corporation, any holder of Non-Voting Common Stock may increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99% specified in such notice; provided that (i) any such increase will not be effective until the sixty-first (61st) day after such notice is delivered to the corporation, and (ii) any such increase or decrease will apply only to the holder sending such notice and not to any other holder of Non-Voting Common Stock.

(B) Mechanics of Conversion.

(i) In order to exercise its conversion right pursuant to Section 4.2.5(A)(i), a holder of Non-Voting Common Stock shall (i) surrender the certificate or certificates representing shares of Non-Voting Common Stock at the office of the corporation (or any transfer agent of the corporation previously designated by the corporation to the holders of Non-Voting Common Stock for this purpose) with a written notice of election to convert, completed and signed, specifying the number of shares to be converted.

(ii) Each conversion shall be deemed to have been effected immediately prior to the close of business on (x) in the case of conversion pursuant to Section 4.2.5(A)(i) hereof, the sixty-first (61st) day following the day on which the certificates for shares of Non-Voting Common Stock shall have been surrendered and such notice received by the corporation pursuant to Section 4.2.5(B)(i), and (y) in the case of conversion pursuant to Section 4.2.5(A)(ii) hereof, the date the Non-Voting Common Stock is not or ceases to be owned by an Initial Holder or an Affiliate of an Initial Holder (in either case, the “**Conversion Date**”). On the Conversion Date: (a) the Person in whose name or names any certificate or certificates for shares of Common Stock shall be issuable upon such conversion shall be deemed to have become the holder of record of the shares of Common Stock represented thereby at such time, and (b) the shares of Non-Voting Common Stock so converted shall no longer be deemed to be outstanding, and all rights of a holder with respect to such shares shall immediately terminate except the right to receive the Common Stock pursuant to this Section 4.2.5. All shares of Common Stock delivered upon conversion of the Non-Voting Common Stock shall, upon delivery, be duly and validly authorized and issued, fully paid and nonassessable.

(iii) Holders of shares of Non-Voting Common Stock at the close of business on the record date for any payment of a dividend in which shares of Non-Voting Common Stock are to participate pursuant to Section 4.2.2 hereof shall be entitled to receive the dividend payable on such shares on the corresponding dividend payment date notwithstanding the conversion thereof following such dividend payment record date and prior to such dividend payment date.

(iv) The corporation shall at all times reserve and keep available, free from preemptive rights, out of its authorized but unissued Common Stock, solely for the purpose of effecting conversions of the Non-Voting Common Stock, the aggregate number of shares of Common Stock issuable upon conversion of the Non-Voting Common Stock (as if all shares of Non-Voting Common Stock are so convertible). To the extent that shares of Common Stock are listed or traded on a securities exchange, the corporation shall procure, at its sole expense, the listing of all shares of Common Stock issuable upon conversion of the Non-Voting Common Stock, subject to issuance or notice of issuance, on such stock exchange, and shall take all action as may be necessary to ensure that all shares of Common Stock issuable upon conversion of Non-Voting Common Stock shall be issued without violation of any applicable law or regulation or of any requirement of such securities exchange.

(v) Issuance of certificates for shares of Common Stock upon conversion of the Non-Voting Common Stock shall be made without charge to the holder of shares of Non-Voting Common Stock or any of its transferees for any issue or transfer tax (other than taxes in respect of any transfer of Non-Voting Common Stock occurring contemporaneously therewith) or other incidental expense in respect of the issuance of such certificates, all of which taxes and expenses shall be paid by the corporation; provided, however, that the corporation shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance or delivery of shares of Common Stock in a name other than that of the transferee of the Non-Voting Common Stock pursuant to Section 4.2.5(A)(ii) hereof, and no such issuance or delivery need be made unless and until the Person requesting such issuance or delivery has paid to the corporation the amount of any such tax or has established, to the reasonable satisfaction of the corporation, that such tax has been, or will timely be, paid.

(vii) Each share of Common Stock issued as a result of conversion of Non-Voting Common Stock shall be accompanied by any rights associated generally with each other share of Common Stock outstanding as of the applicable Conversion Date.

(C) Adjustments to Non-Voting Common Stock. From and after the date hereof, Non-Voting Common Stock shall be adjusted from time to time as follows:

(i) Stock Splits, Subdivisions, Reclassifications or Combinations. If the corporation shall (a) subdivide or reclassify the outstanding shares of Common Stock into a greater number of shares, or (b) combine or reclassify the outstanding Common Stock into a smaller number of shares, the Non-Voting Common Stock shall be equally and ratably subdivided, combined or reclassified on the same basis as that of Common Stock.

(ii) Other Distributions. In case the corporation shall fix a record date for the making of a dividend or distribution to all holders of shares of its Common Stock of (a) shares of any class or of any Person other than shares of the corporation’s Common Stock, (b) evidence of indebtedness of the corporation or any Subsidiary, (c) assets (excluding dividends or distributions covered by Section 4.2.5(C)(i)), or (d) rights or warrants in respect of any of the foregoing, in each such case all holders of Non-Voting Common stock shall receive such dividend or distribution equally and ratably in all respects with holders of Common Stock.

(iii) Certain Repurchases of Common Stock. In the event that the corporation effects a Pro Rata Repurchase (as defined below) of Common Stock, the corporation shall, simultaneously with the Offer related to such Pro Rata Repurchase of Common Stock, offer, in writing and in compliance with applicable laws, to all holders of Non-Voting Common Stock to purchase, on an equal, share-for-share basis, a percentage of all shares of Non-Voting Common Stock equal to the percentage of all shares of Common Stock that the corporation has offered to purchase under the related Offer, which offer to the holders of Non-Voting Common Stock shall be open for the same period, offer the same form and value of consideration, and otherwise be on the same terms and conditions, as such Offer to the holders of Common Stock in all respects.

As used in this Section 4.2.5(C)(iii): “**Pro Rata Repurchase**” means any purchase of shares of Common Stock by the corporation or any Subsidiary thereof pursuant to any Offer. “**Offer**” means any tender offer or exchange offer subject to Section 13(e) of the Exchange Act, or pursuant to any other offer available to substantially all holders of Common Stock, whether for cash, shares of capital stock of the corporation, other securities of the corporation, evidences of indebtedness of the corporation or any other Person or any other property (including, without limitation, shares of capital stock, other securities or evidences of indebtedness of a Subsidiary of the corporation), or any combination thereof, effected while the Non-Voting Common Stock is outstanding.

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(iv) Business Combinations. In case of any Business Combination or reclassification of Common Stock (other than a reclassification of Common Stock covered by Section 4.2.5(C)(i)), lawful provision shall be made as part of the terms of such Business Combination or reclassification whereby the holder of each share of Non-Voting Common Stock then outstanding shall have the right thereafter, to convert such share only into the kind and amount of securities, cash and other property receivable upon the Business Combination or reclassification by holders of Common Stock; provided, that, if the holders of at least a majority of the outstanding shares of Non-Voting Common Stock so elect, any such security receivable upon such Business Combination or reclassification by holders of Common Stock shall not have voting rights greater than those contained in Section 4.2.4 hereof.

(v) Adjustment for Unspecified Actions. If the corporation takes any action affecting the Common Stock, other than an action described in this Section 4.2.5(C), which would materially adversely affect the conversion rights of the holders of shares of Non-Voting Common Stock, the provisions of this Certificate of Incorporation shall be adjusted, to the extent permitted by law, in such manner, if any, and at such time, as the Board of Directors of the corporation may determine in good faith to be equitable in the circumstances.

(vi) Notices. In the event that the corporation shall give notice or make a public announcement to the holders of Common Stock of any action of the type described in this Section 4.2.5(C) or in Sections 4.2.2 or 4.2.4 hereof, the corporation shall, at the time of such notice or announcement, and in the case of any action which would require the fixing of a record date, at least ten (10) days prior to such record date, give notice to the holders of shares of Non-Voting Common Stock, by mail, first class postage prepaid, which notice shall specify the record date, if any, with respect to any such action and the approximate date on which such action is to take place. Such notice shall also set forth the facts with respect thereto as shall be reasonably necessary to indicate the effect on the Non-Voting Common Stock and the number, kind or class of shares or other securities or property which shall be deliverable upon conversion of the Non-Voting Common Stock.

4.2.6 Certain Other Provisions.

(A) The provisions of this Section 4.2 shall not be in effect at any time that there are no shares of Non-Voting Common Stock outstanding.

(B) No provision in this Section 4.2 shall be construed to limit or impair the right of each holder of Non-Voting Common Stock to participate equally and ratably in dividends and distributions pursuant to Section 4.2.2 hereof, the operation of any of the provisions of Section 4.2.5 hereof or the rights, preferences and privileges of a holder of Non-Voting Common Stock pursuant to Sections 4.2.1 and 4.2.3 hereof.

(C) If any Non-Voting Common Stock certificate shall be mutilated, lost, stolen or destroyed, the corporation shall issue, in exchange and in substitution for and upon cancellation of the mutilated certificate, or in lieu of and substitution for the certificate lost, stolen or destroyed, a new Non-Voting Common Stock certificate of like tenor and representing an equivalent amount of Non-Voting Common Stock, upon receipt of evidence of such loss, theft or destruction of such certificate and, if requested by the corporation, an indemnity on customary terms for such situations reasonably satisfactory to the corporation.

(D) The corporation shall not, by amendment of this Certificate of Incorporation or through reorganization, consolidation, merger, dissolution, sale of assets, or otherwise, avoid or seek to avoid the observance or performance of any of the terms of this Section 4.2, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate in order to protect the rights of the holders of Non-Voting Common Stock against dilution or impairment. At all times, the corporation shall take all such actions as may be necessary or appropriate in order that the corporation may validly and legally issue shares of Common Stock as herein contemplated upon conversion of the shares of Non-Voting Common Stock.

(E) The headings and various subdivisions used within this Section 4.2 are for convenience of reference only and shall not affect the interpretation of any of the provisions hereof.

4.2.7 Definitions. Unless the context otherwise requires, when used in this Section 4.2, the following terms shall have the meaning indicated.

“**Affiliate**” means with respect to any Person, any other Person directly, or indirectly through one or more intermediaries, controlling, controlled by or under common control with such Person. For purposes of this definition, the term “control” (and correlative terms “controlling,” “controlled by” and “under common control with”) means possession of the power, whether by contract, equity ownership or otherwise, to direct the policies or management of a Person.

“**Business Day**” means any day other than Saturday, Sunday or other day on which commercial banks in the City of New York are authorized or required by law to remain closed.

“**Business Combination**” means (i) any reorganization, consolidation, merger, share exchange or similar business combination transaction involving the corporation or (ii) the sale, assignment, conveyance, transfer, lease or other disposition by the corporation of all or substantially all of its assets.

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“**Exchange Act**” means the Securities Exchange Act of 1934, as amended, or any successor statute, and the rules and regulations promulgated thereunder.

“**Initial Holder**” means any Person who received shares of Non-Voting Common Stock upon the closing of that certain Agreement and Plan of Merger by and among Pacific Ethanol, Inc., Aventine Merger Sub, Inc. and Aventine Renewable Energy Holdings, Inc. dated December 30, 2014, as amended on March 31, 2015.

“**Person**” means an individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Exchange Act).

“**Subsidiary**” of a Person means (i) a corporation, a majority of whose stock with voting power, under ordinary circumstances, to elect directors is at the time of determination, directly or indirectly, owned by such Person or by one or more Subsidiaries of such Person, or (ii) any other entity (other than a corporation) in which such Person or one or more Subsidiaries of such Person, directly or indirectly, at the date of determination thereof has at least a majority ownership interest.

4.3 Preferred Stock. The Board of Directors is authorized by resolution or resolutions, from time to time adopted, to provide for the issuance of Preferred Stock in one or more series and to fix and state the voting powers, designations, preferences and relative participating, optional or other special rights of the shares of each series and the qualifications, limitations and restrictions thereof, including, but not limited to, determination of one or more of the following:

(i) the distinctive designations of each such series and the number of shares which shall constitute such series, which number may be increased (except where otherwise provided by the Board of Directors in creating such series) or decreased (but not below the number of shares thereof then outstanding) from time to time by the Board of Directors;

(ii) the annual rate or amount of dividends payable on shares of such series, whether such dividends shall be cumulative or non-cumulative, the conditions upon which and the dates when such dividends shall be payable, the date from which dividends on cumulative series shall accrue and be cumulative on all shares of such series issued prior to the payment date for the first dividend of such series, the relative rights of priority, if any, of payment of dividends on the shares of that series, and the participating or other special rights, if any, with respect to such dividends;

(iii) whether such series will have any voting rights in addition to those prescribed by law and, if so, the terms and conditions of the exercise of such voting rights;

(iv) whether the shares of such series will be redeemable or callable and, if so, the prices at which, and the terms and conditions on which, such shares may be redeemed or called, which prices may vary under different conditions and at different redemption or call dates;

(v) the amount or amounts payable upon the shares of such series in the event of voluntary or involuntary liquidation, dissolution or winding up of the corporation, and the relative rights of priority, if any, of payment of shares of such series;

(vi) whether the shares of such series shall be entitled to the benefit of a sinking or retirement fund to be applied to the purchase or redemption of such shares, and if so entitled, the amount of such fund and the manner of its application, including the price or prices at which such shares may be redeemed or purchased through the application of such fund;

(vii) whether the shares of such series shall be convertible into, or exchangeable for, shares of any other class or classes or of any other series of the same or any other class or classes of capital stock of the corporation, and if so convertible or exchangeable, the conversion price or prices, or the rate or rates of exchange, and the adjustments thereof, if any, at which such conversion or exchange may be made, and any other terms of such conversion or exchange;

(viii) whether the shares of such series that are redeemed or converted shall have the status of authorized but unissued shares of Preferred Stock and whether such shares may be reissued as shares of the same or any other series of stock;

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(ix) the conditions and restrictions, if any, on the payment of dividends or on the making of other distributions on, or the purchase, redemption or other acquisition by the corporation, or any subsidiary thereof, of, the Common Stock or any other class (or other series of the same class) ranking junior to the shares of such series as to dividends or upon liquidation, dissolution or winding up of the corporation; and

(x) the conditions and restrictions, if any, on the creation of indebtedness of the corporation, or any subsidiary thereof, or on the issue of any additional stock ranking on parity with or prior to the shares of such series as to dividends or upon liquidation, dissolution or winding up of the corporation.

All shares within each series of Preferred Stock shall be alike in every particular, except with respect to the dates from which dividends, if any, shall commence to accrue.

4.4 Reverse Stock Split on June 8, 2011. On June 8, 2011 (the “**First Split Date**”), each share of common stock, par value \$0.001 per share (the “**Oldest Common Stock**”), issued and outstanding immediately before the First Split Date, was reclassified as and changed into one-seventh (1/7) of a share of common stock, par value \$0.001 per share (the “**Newer Common Stock**”). The corporation, through its transfer agent, provided certificates representing Newer Common Stock to holders of Oldest Common Stock in exchange for certificates representing Oldest Common Stock. From and after the First Split Date, certificates representing shares of Oldest Common Stock were cancelled and as of the First Split Date represent only the right of holders thereof to receive Newer Common Stock. The corporation did not issue fractional shares of Newer Common Stock. The reverse stock split did not increase or decrease the amount of stated capital or paid-in surplus of the corporation, and any fractional share that would otherwise be issuable as a result of the reverse stock split was rounded up to the nearest whole share of Newer Common Stock. From the First Split Date until the Second Split Date (as defined below), the term “**Newer Common Stock**” as used in this Article FOURTH shall mean Common Stock as provided in the Certificate of Incorporation. From and after the Second Split Date, the term “**Newer Common Stock**” as used in this Article FOURTH shall mean Older Common Stock as provided in the Certificate of Incorporation.

4.5 Reverse Stock Split on May 14, 2013. On May 14, 2013 (the “**Second Split Date**”), each share of common stock, par value \$0.001 per share (the “**Older Common Stock**”), issued and outstanding immediately before the Second Split Date, was reclassified as and changed into one-fifteenth (1/15) of a share of common stock, par value \$0.001 per share (the “**Newest Common Stock**”). The corporation, through its transfer agent, provided certificates representing Newest Common Stock to holders of Older Common Stock in exchange for certificates representing Older Common Stock. From and after the Second Split Date, certificates representing shares of Older Common Stock were cancelled and now represent only the right of holders thereof to receive Newest Common Stock. The corporation did not issue fractional shares of Newest Common Stock. The reverse stock split did not increase or decrease the amount of stated capital or paid-in surplus of the corporation, and any fractional share that would otherwise be issuable as a result of the reverse stock split was rounded up to the nearest whole share of Newest Common Stock. From and after the Second Split Date, the term “**Newest Common Stock**” as used in this Article FOURTH shall mean common stock as provided in the Certificate of Incorporation.”

4. The amendment of the Certificate of Incorporation herein certified has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

5. The Effective Date of this Amendment will be July 1, 2015.

IN WITNESS WHEREOF, said Corporation has caused this Certificate to be signed as of the ¹st day of July, 2015.

/s/ CHRISTOPHER W. WRIGHT
Christopher W. Wright
Vice President, General Counsel & Secretary

**CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
PACIFIC ETHANOL, INC.
a Delaware corporation**

PACIFIC ETHANOL, INC. a corporation organized and existing under the laws of the State of Delaware (the “**Corporation**”), hereby certifies as follows:

1. The name of the Corporation is PACIFIC ETHANOL, INC.

2. That the Corporation’s Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on February 28, 2005 (the “**Original Certificate**”). The following were subsequently filed: (i) Certificate of Designations, Powers, Preferences and Rights of the Series A Cumulative Redeemable Convertible Preferred Stock filed with the Secretary of State of Delaware on April 12, 2006; (ii) Certificate of Designations, Powers, Preferences and Rights of the Series B Cumulative Convertible Preferred Stock filed with the Secretary of State of Delaware on March 26, 2008; (iii) Certificate of Amendment of Certificate of Incorporation filed with the Secretary of State of Delaware on June 3, 2010; (iv) Certificate of Amendment of Certificate of Incorporation filed with the Secretary of State of Delaware on June 6, 2011; (v) Certificate of Amendment of Certificate of Incorporation filed with the Secretary of State of Delaware on May 10, 2013; and (vi) Certificate of Amendment of Certificate of Incorporation filed with the Secretary of State of Delaware on July 1, 2015 (the Original Certificate, together with the subsequently filed certificates, shall be collectively referred to as the “**Certificate of Incorporation**”).

3. The Certificate of Incorporation of the Corporation is hereby amended by striking out Article FIRST thereof and by substituting in lieu of said Article the following new Article FIRST:

“FIRST: The name of the corporation is:

Alto Ingredients, Inc.”

4. The amendment of the Certificate of Incorporation herein certified has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, said Corporation has caused this Certificate to be signed as of the 12th day of January, 2021.

/s/ Christopher W. Wright

Christopher W. Wright

Vice President, General Counsel & Secretary

SECOND AMENDED AND RESTATED BYLAWS

OF

ALTO INGREDIENTS, INC.
(a Delaware corporation)

Preamble

These second amended and restated Bylaws (the “**Bylaws**”) are subject to, and governed by, the General Corporation Law of the State of Delaware (the “**Delaware General Corporation Law**”) and the Certificate of Incorporation (the “**Certificate of Incorporation**”), as it may be further amended from time to time, of Alto Ingredients, Inc., a Delaware corporation (the “**Corporation**”). In the event of a direct conflict between the provisions of these Bylaws and the mandatory provisions of the Delaware General Corporation Law or the provisions of the Certificate of Incorporation, such provisions of the Delaware General Corporation Law or the Certificate of Incorporation of the Corporation, as the case may be, will be controlling. These Bylaws amend and restate the Corporation’s prior bylaws dated July 23, 2014.

Article I
Corporate Offices

Section 1.1 Registered Office. The registered office of the Corporation shall be at Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, State of Delaware. The name of the registered agent of the Corporation at such location is The Corporation Trust Company. The registered office of the Corporation may be changed from time to time by the Board of Directors of the Corporation (the “**Board of Directors**”) in the manner provided by law and need not be identical to the principal place of business of the Corporation.

Section 1.2 Other Offices. The Corporation may also maintain or establish an office or offices at such other place or places, within or without the State of Delaware, as the Board of Directors may from time to time determine by resolution.

Article II
Meetings of Stockholders

Section 2.1 Place of Meetings. Meetings of stockholders shall be held at any place, within or outside the State of Delaware, designated by the Board of Directors. The Board of Directors may, in its sole discretion, determine that a meeting of stockholders shall not be held at any place, but may instead be held solely by means of remote communication as authorized by Section 211(a)(2) of the Delaware General Corporation Law. In the absence of any such designation, meetings of stockholders shall be held at the principal office of the Corporation.

Section 2.2 Annual Meeting The annual meeting of the stockholders shall be held each year at such place within or without the State of Delaware and on a date and at a time as may be designated from time to time by the Board of Directors, for the purpose of electing directors and for the transaction of any and all such other business as may properly be brought before the meeting. Any and all business of any nature or character whatsoever may be transacted, and action may be taken thereon, at any annual meeting, except as otherwise provided by law or by these Bylaws.

Section 2.3 Special Meetings. Special meetings of the stockholders for any purpose or purposes, unless otherwise prescribed by law shall be called pursuant to a resolution adopted by the Board of Directors and may not be called by any other person or persons. Each special meeting of stockholders shall be held at any place within or without the State of Delaware as determined by the Board of Directors. The secretary of the Corporation shall cause notice to be promptly given to the stockholders entitled to vote, in accordance with the provisions of Sections 2.4 and 2.5 of these Bylaws, that a special meeting will be held at the time designated by the Board of Directors. No business may be transacted at such special meeting other than the business specified in such notice to stockholders. Nothing contained in this Section 2.3 shall be construed as limiting, fixing or affecting the time when a meeting of stockholders called by action of the Board of Directors may be held.

Section 2.4 Notice of Meetings of Stockholders. All notices of meetings with stockholders shall be in writing and shall be sent or otherwise given in accordance with Section 2.5 or Section 9.1 of these Bylaws not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at such meeting. The notice shall specify the place, date, and hour of the meeting, the means of remote communication, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called.

Section 2.5 Manner of Giving Notice; Affidavit of Notice. Written notice of any meeting of stockholders, if mailed, is given when deposited in the United States mail, postage prepaid, directed to the stockholder at his address as it appears on the records of the Corporation or, if electronically transmitted, as provided in Article IX of these Bylaws. An affidavit of the secretary or an assistant secretary or of the transfer agent of the Corporation that the notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

Section 2.6 Quorum. The holders of a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business, except where otherwise provided by statute, the Certificate of Incorporation or these Bylaws. Any shares, the voting of which at such meeting has been enjoined, or which for any reason cannot be lawfully voted at such meeting, shall not be counted to determine a quorum at such meeting. Any meeting at which a quorum is present may continue to transact business until adjournment notwithstanding the withdrawal of enough stockholders to leave less than a quorum. Except as otherwise provided by law, the Certificate of Incorporation or these Bylaws, all action taken by holders of a majority of the voting power represented at any meeting at which a quorum is present shall be valid and binding upon the corporation.

Section 2.7 Conduct of Meetings. The Board of Directors may adopt by resolution such rules and regulations for the conduct of a meeting of the stockholders as it shall deem appropriate. At every meeting of the stockholders, the Chairman of the Board of Directors, or in his or her absence or inability to act, the Chief Executive Officer, or, in his or her absence or inability to act, the person whom the Chief Executive Officer shall appoint, shall act as chairman of, and preside at, the meeting. The secretary or, in his or her absence or inability to act, the person whom the chairman of the meeting shall appoint secretary of the meeting, shall act as secretary of the meeting and keep the minutes thereof. Except to the extent inconsistent with such rules and regulations as adopted by the Board of Directors, the chairman of any meeting of the stockholders shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board of Directors or prescribed by the chairman of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) the determination of when the polls shall open and close for any given matter to be voted

on at the meeting; (iii) rules and procedures for maintaining order at the meeting and the safety of those present; (iv) limitations on attendance at or participation in the meeting to stockholders of record of the corporation, their duly authorized and constituted proxies or such other persons as the chairman of the meeting shall determine; (v) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (vi) limitations on the time allotted to questions or comments by participants.

Section 2.8 Adjourned Meeting; Notice. Any meeting of the stockholders, annual or special, may be adjourned by the chairperson of such meeting from time to time to reconvene at the same or some other place, if any. When a meeting is adjourned to another time or place, unless these Bylaws otherwise require, notice need not be given of the adjourned meeting if the time, place if any thereof, and the means of remote communications if any by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken. At the adjourned meeting the Corporation may transact any business that might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 2.9 Voting. The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.12 of these Bylaws, subject to the provisions of Section 217 of the Delaware General Corporation Law (relating to voting rights of fiduciaries, pledgors and joint owners of stock) and Section 218 of the Delaware General Corporation Law (relating to voting trusts and other voting agreements).

Except as may be otherwise provided in the Certificate of Incorporation or these Bylaws, each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder.

Section 2.10 Waiver of Notice. Whenever notice is required to be given under any provision of the Delaware General Corporation Law or of the Certificate of Incorporation or these Bylaws, a written waiver thereof, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the Certificate of Incorporation or these Bylaws.

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Section 2.11 Stockholder Action by Written Consent Without a Meeting Unless otherwise provided in the Certificate of Incorporation, any action required to be taken at any annual or special meeting of stockholders of the Corporation, or any action which may be taken at any annual or special meeting of such stockholders, may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken and bearing the dates of signature of the stockholders who signed the consent or consents, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted.

Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for such meeting had been the date that written consents signed by a sufficient number of holders to take the action were delivered to the Corporation as provided in Section 228 of the Delaware General Corporation Law. In the event that the action which is consented to is such as would have required the filing of a certificate under any provision of the Delaware General Corporation Law, if such action had been voted on by stockholders at a meeting thereof, the certificate filed under such provision shall state, in lieu of any statement required by such provision concerning any vote of stockholders, that written consent has been given in accordance with Section 228 of the Delaware General Corporation Law. Any action taken pursuant to such written consent or consents of the stockholders shall have the same force and effect as if taken by the stockholders at a meeting thereof.

Section 2.12 Record Date for Stockholder Notice; Voting; Giving Consents. In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or entitled to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and shall not be more than sixty (60) nor less than ten (10) days before the date of such meeting, nor more than ten (10) days after the date upon which the resolution fixing the record date for a written consent is adopted by the Board of Directors, nor more than sixty (60) days prior to any other action.

If the Board of Directors does not so fix a record date:

(i) The record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held.

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(ii) The record date for determining stockholders entitled to express consent to corporate action in writing without a meeting, when no prior action by the Board of Directors is necessary, shall be the day on which the first written consent is delivered to the Corporation as provided in Section 213(b) of the Delaware General Corporation Law.

(iii) The record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

Section 2.13 Proxies. Each stockholder entitled to vote at a meeting of stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for him by proxy authorized by an instrument in writing or by a transmission permitted by law filed in accordance with the procedure established for the meeting, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212 of the Delaware General Corporation Law.

Section 2.14 List of Stockholders Entitled to Vote. The officer who has charge of the stock ledger of the Corporation shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. The Corporation shall not be required to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten days prior to the meeting, either: (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting; or (ii) during ordinary business hours, at the Corporation's principal executive office; or (iii) if not so specified, at the place where the meeting is to be held. In the event the Corporation determines to make the list available on an electronic network, the Corporation may take reasonable steps to ensure that such

information is available only to stockholders of the Corporation. If the meeting is to be held at a place, then the list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting. Such list shall presumptively determine the identity of the stockholders entitled to vote at the meeting and the number of shares held by each of them.

Section 2.15 Advance Notice of Stockholder Nominations and Proposals

(a) At a meeting of the stockholders, only such nominations of persons for the election of directors and such other business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, nominations or such other business must be: (i) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the Board of Directors or any committee thereof, (ii) otherwise properly brought before the meeting by or at the direction of the Board of Directors or any committee thereof, or (iii) otherwise properly brought before an annual meeting by a stockholder who is a stockholder of record of the Corporation at the time such notice of meeting is delivered, who is entitled to vote at the meeting and who complies with the notice procedures set forth in this [Section 2.15](#). In addition, any proposal of business (other than the nomination of persons for election to the Board of Directors) must be a proper matter for stockholder action. For business (including, but not limited to, director nominations) to be properly brought before an annual meeting by a stockholder, the stockholder or stockholders of record intending to propose the business (the “**Proposing Stockholder**”) must have given timely notice thereof pursuant to this [Section 2.15\(a\)](#) or [Section 2.15\(c\)](#), as applicable, in writing to the secretary of the Corporation even if such matter is already the subject of any notice to the stockholders or Public Disclosure from the Board of Directors. To be timely, a Proposing Stockholder’s notice must be delivered to or mailed and received at the principal executive offices of the Corporation: (x) not later than the close of business on the 90th day, nor earlier than the close of business on the 120th day in advance of the anniversary of the previous year’s annual meeting if such meeting is to be held on a day which is not more than thirty (30) days in advance of the anniversary of the previous year’s annual meeting or not later than seventy (70) days after the anniversary of the previous year’s annual meeting; and (y) with respect to any other annual meeting of stockholders, the close of business on the 10th day following the date of Public Disclosure of the date of such meeting. In no event shall the Public Disclosure of an adjournment or postponement of an annual meeting commence a new notice time period (or extend any notice time period). For purposes of this [Section 2.15](#), the term “**Public Disclosure**” shall mean a disclosure made in a press release reported by Dow Jones News Services, The Associated Press or a comparable national news service or in a document filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”).

(b) For the nomination of any person or persons for election to the Board of Directors, a Proposing Stockholder’s notice to the secretary of the Corporation shall set forth (i) the name, age, business address and residence address of each nominee proposed in such notice, (ii) the principal occupation or employment of each such nominee, (iii) the number of shares of capital stock of the Corporation which are owned of record and beneficially by each such nominee (if any), (iv) such other information concerning each such nominee as would be required to be disclosed in a proxy statement soliciting proxies for the election of such nominee as a director in an election contest (even if an election contest is not involved), or that is otherwise required to be disclosed, under Section 14(a) of the Exchange Act and the rules and regulations promulgated thereunder, (v) the consent of the nominee to being named in the proxy statement as a nominee and to serving as a director if elected, and (vi) as to the Proposing Stockholder: (A) the name and address of the Proposing Stockholder as they appear on the Corporation’s books and of the beneficial owner, if any, on whose behalf the nomination is being made, (B) the class and number of shares of the Corporation which are owned by the Proposing Stockholder (beneficially and of record) and owned by the beneficial owner, if any, on whose behalf the nomination is being made, as of the date of the Proposing Stockholder’s notice, and a representation that the Proposing Stockholder will notify the Corporation in writing of the class and number of such shares owned of record and beneficially as of the record date for the meeting promptly following the later of the record date or the date notice of the record date is first publicly disclosed, (C) a description of any agreement, arrangement or understanding with respect to such nomination between or among the Proposing Stockholder and any of its affiliates or associates, and any others (including their names) acting in concert with any of the foregoing, and a representation that the Proposing Stockholder will notify the Corporation in writing of any such agreement, arrangement or understanding in effect as of the record date for the meeting promptly following the later of the record date or the date notice of the record date is first publicly disclosed, (D) a description of any agreement, arrangement or understanding (including any derivative or short positions, profit interests, options, hedging transactions, and borrowed or loaned shares) that has been entered into as of the date of the Proposing Stockholder’s notice by, or on behalf of, the Proposing Stockholder or any of its affiliates or associates, the effect or intent of which is to mitigate loss to, manage risk or benefit of share price changes for, or increase or decrease the voting power of the Proposing Stockholder or any of its affiliates or associates with respect to shares of stock of the Corporation, and a representation that the Proposing Stockholder will notify the Corporation in writing of any such agreement, arrangement or understanding in effect as of the record date for the meeting promptly following the later of the record date or the date notice of the record date is first publicly disclosed, (E) a representation that the Proposing Stockholder is a holder of record of shares of the Corporation entitled to vote at the meeting and intends to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice, and (F) a representation whether the Proposing Stockholder intends to deliver a proxy statement and/or form of proxy to holders of at least the percentage of the Corporation’s outstanding capital stock required to approve the nomination and/or otherwise to solicit proxies from stockholders in support of the nomination. The Corporation may require any proposed nominee to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as an independent director of the Corporation or that could be material to a reasonable stockholder’s understanding of the independence, or lack thereof, of such nominee.

(c) For all business other than director nominations, a Proposing Stockholder’s notice to the secretary of the Corporation shall set forth as to each matter the Proposing Stockholder proposes to bring before the annual meeting: (i) a brief description of the business desired to be brought before the annual meeting and the reasons for conducting such business at the annual meeting, (ii) any other information relating to such stockholder and beneficial owner, if any, on whose behalf the proposal is being made, required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for the proposal and pursuant to and in accordance with Section 14(a) of the Exchange Act and the rules and regulations promulgated thereunder and (iii) the information required by [Section 2.15\(b\)\(vi\)](#) of these Bylaws.

(d) The foregoing notice requirements of [Sections 2.14\(b\) and 2.14\(c\)](#) shall be deemed satisfied by a stockholder with respect to business or a nomination if the stockholder has notified the Corporation of his, her or its intention to present a proposal or make a nomination at an annual meeting in compliance with the applicable rules and regulations promulgated under Section 14(a) of the Exchange Act and such stockholder’s proposal or nomination has been included in a proxy statement that has been prepared by the Corporation to solicit proxies for such annual meeting.

(e) Only such business shall be conducted at a special meeting of stockholders as shall have been brought before the meeting pursuant to the Corporation’s notice of meeting. Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected pursuant to the Corporation’s notice of meeting (x) by or at the direction of the Board of Directors or (y) provided that the Board of Directors has determined that directors shall be elected at such meeting, by any stockholder of the Corporation who is a stockholder of record at the time the notice provided for in this [Section 2.15](#) is delivered to the secretary of the Corporation, who is entitled to vote at the meeting and upon such election and who complies with the notice procedures set forth in this [Section 2.15](#). In the event the Corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board of Directors, any such stockholder entitled to vote in such election of directors may nominate a person or persons (as the case may be) for election to such position(s) as specified in the Corporation’s notice of meeting, if the stockholder’s notice required by this [Section 2.15](#) shall be delivered to the secretary at the principal executive offices of the Corporation not later than the close of business on the 90th day prior to such special meeting and not earlier than the close of business on the later of the 120th day prior to such special meeting or the 10th day following the date of Public Disclosure of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting. The foregoing notice requirements

of this [Section 2.15\(e\)](#) shall be deemed satisfied by a stockholder with respect to a nomination if the stockholder has notified the Corporation of his, her or its intention to present a nomination at such special meeting in compliance with Section 14(a) of the Exchange Act and the rules and regulations promulgated thereunder and such stockholder's nomination has been included in a proxy statement that has been prepared by the Corporation to solicit proxies for such special meeting. In no event shall the Public Disclosure of an adjournment or postponement of a special meeting commence a new time period (or extend any notice time period).

(f) Notwithstanding anything in these Bylaws to the contrary: (i) no nominations shall be made or business shall be conducted at any annual meeting except in accordance with the procedures set forth in this [Section 2.15](#), and (ii) except as otherwise required by law, if a Proposing Stockholder intending to propose business or make nominations at an annual meeting pursuant to this [Section 2.15](#) does not provide the information required under this [Section 2.15](#) to the Corporation promptly following the later of the record date or the date notice of the record date is first publicly disclosed, or the Proposing Stockholder (or a qualified representative of the Proposing Stockholder) does not appear at the meeting to present the proposed business or nominations, such business or nominations shall not be considered, notwithstanding that proxies in respect of such business or nominations may have been received by the Corporation. The requirements of this [Section 2.15](#) shall apply to any business or nominations to be brought before an annual meeting by a stockholder whether such business or nominations are to be included in the Corporation's proxy statement pursuant to Rule 14a-8 of the Exchange Act or presented to stockholders by means of an independently financed proxy solicitation. The requirements of this [Section 2.15](#) are included to provide the Corporation notice of a stockholder's intention to bring business or nominations before an annual meeting and shall in no event be construed as imposing upon any stockholder the requirement to seek approval from the Corporation as a condition precedent to bringing any such business or make such nominations before an annual meeting.

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Article III Board of Directors

Section 3.1 Powers. Subject to the provisions of the Delaware General Corporation Law and any limitations in the Certificate of Incorporation or these Bylaws relating to action required to be approved by the stockholders or by the outstanding shares, the business and affairs of the Corporation shall be managed and all corporate powers shall be exercised by or under the direction of the Board of Directors.

Section 3.2 Number of Directors. The authorized number of directors of the Corporation shall be seven (7) until changed by resolution of the Board of Directors. No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

Section 3.3 Election, Qualification and Term Office of Directors All elections of directors shall be by written ballot, unless otherwise provided in the Certificate of Incorporation. If authorized by the Board of Directors, such requirement of a written ballot shall be satisfied by a ballot submitted by electronic transmission, provided that any such electronic transmission must be either set forth or be submitted with information from which it can be determined that the electronic transmission was authorized by the stockholder or proxy holder.

Notwithstanding the foregoing provisions of this [Section 3.3](#), each director shall serve until his or her successor is duly elected and qualified or until his or her death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

Section 3.4 Resignation and Vacancies. Any director may resign at any time upon notice given in writing or by electronic transmission to the secretary of the Corporation. When one or more directors so resigns and the resignation is effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each director so chosen shall hold office as provided in this Section in the filling of other vacancies.

Any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal, newly created directorships or other causes shall, except as otherwise provided by the Delaware General Corporation Law or by the Certificate of Incorporation, be filled only by the affirmative vote of a majority of the remaining directors then in office, even though less than a quorum of the Board of Directors, or by a sole remaining director, and not by the stockholders. Whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the Certificate of Incorporation, vacancies and newly created directorships of such class or classes or series may be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the class of directors in which the new directorship was created or the vacancy occurred and until such director's successor shall have been elected and qualified.

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Section 3.5 Place of Meetings; Meetings by Telephone. The Board of Directors of the Corporation may hold meetings, both regular and special, either within or outside the State of Delaware.

Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, members of the Board of Directors, or any committee designated by the Board of Directors, may participate in a meeting of the Board of Directors, or any committee, by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

Section 3.6 Regular Meetings. Regular meetings of the Board of Directors may be held without notice at such time and at such place as shall from time to time be determined by resolution of the board.

Section 3.7 Special Meetings; Notice. Special meetings of the Board of Directors may be called by the chairman of the board or the chief executive officer or the president or the secretary or by any two directors. Notice of the time and place of special meetings shall be delivered either personally by hand, by courier or by telephone, sent by United States first-class mail, postage prepaid, sent by facsimile or sent by electronic mail, directed to each director at that director's address, telephone number, facsimile number or electronic mail address, as the case may be, as shown on the Corporation's records.

If the notice is (i) delivered personally by hand, by courier or by telephone, (ii) sent by facsimile or (iii) sent by electronic mail, it shall be delivered or sent at least twenty-four (24) hours before the time of the holding of the meeting. If the notice is sent by United States mail, it shall be deposited in the United States mail at least four (4) days before the time of the holding of the meeting. Any oral notice may be communicated to the director. The notice need not specify the place or the meeting (if the meeting is to be held at the Corporation's principal executive office) nor the purpose of the meeting. It shall not be necessary that the same method of giving notice be employed in respect of all directors, but one permissible method may be employed in respect of any one or more, and any other permissible method or methods may be employed in respect of any other or others.

Section 3.8 Quorum. At all meetings of the Board of Directors, a majority of the authorized number of directors shall constitute a quorum for the transaction of business and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except as may be otherwise specifically provided by statute or by the Certificate of Incorporation. If a quorum is not present at any meeting of the Board of Directors, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present. A meeting at which a quorum is initially present may

continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for that meeting.

Section 3.9 Waiver of Notice. Whenever notice is required to be given under any provision of the Delaware General Corporation Law or of the Certificate of Incorporation or these Bylaws, a written waiver thereof, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the Certificate of Incorporation or these Bylaws.

Section 3.10 Board Action by Written Consent Without a Meeting. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors, or of any committee thereof, may be taken without a meeting if all members of the board or committee, as the case may be, consent thereto in writing or by electronic transmission and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the board or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

Section 3.11 Fees and Compensation of Directors. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, the Board of Directors, or a committee thereof, shall have the authority to fix the compensation of directors.

Section 3.12 Removal of Directors. Notwithstanding any other provisions of the Corporation's Certificate of Incorporation, or these Bylaws, any director, or the entire Board of Directors of the Corporation may be removed at any time, with or without cause. The removal shall be accomplished by the affirmative vote, at a special meeting of stockholders called for that purpose in the manner provided in these Bylaws, of the holders of at least a majority of the outstanding shares entitled to vote at an election for directors.

Article IV Committees of the Board of Directors

Section 4.1 Committees of Directors. The Board of Directors may, by resolution passed by a majority of the whole board, designate one or more committees, with each committee to consist of one or more of the directors of the Corporation. The board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors or in the Bylaws of the Corporation, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority to (i) amend the Certificate of Incorporation (except that a committee may, to the extent authorized in the resolution or resolutions providing for the issuance of shares of stock adopted by the Board of Directors as provided in Section 151(a) of the Delaware General Corporation Law, fix any of the preferences or rights of such shares relating to dividends, redemption, dissolution, any distribution of assets of the Corporation or the conversion into, or the exchange of such shares for, shares of any other class or classes or any other series of the same or any other class or classes of stock of the Corporation), (ii) approve or adopt, or recommend to the stockholders, any matter expressly required by the Delaware General Corporation Law to be submitted to stockholders for approval, (iii) adopt, amend or repeal any bylaw of the Corporation or (iv) declare any dividend.

The Board of Directors may at any time increase or decrease the number of members of a committee or terminate the existence of a committee. The Board of Directors may at any time and for any reason remove any individual committee member or fill any committee vacancy created by death, resignation, removal or increase in the number of members of a committee.

Section 4.2 Committee Minutes. Each committee shall keep regular minutes of its meetings and report the same to the Board of Directors when required.

Section 4.3 Meetings and Action of Committees. Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of [Article III](#) of these Bylaws, [Section 3.5](#) (place of meetings and meetings by telephone), [Section 3.6](#) (regular meetings), [Section 3.7](#) (special meetings and notice), [Section 3.8](#) (quorum), [Section 3.9](#) (waiver of notice), and [Section 3.10](#) (action without a meeting), with such changes in the context of those Bylaws as are necessary to substitute the committee and its members for the Board of Directors and its members; provided, however, that the time of regular meetings of committees and special meetings of committees may also be called by resolution of the Board of Directors and that notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The Board of Directors may adopt rules for the government of any committee not inconsistent with the provisions of these Bylaws.

Section 4.4 Advisory Committees. The Board of Directors may, by resolution passed by a majority of the whole board, designate one or more advisory committees, with each committee to consist of one or more of the directors of the Corporation or any other such persons as the board may appoint. The board may designate one or more persons as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. Members who are not board members shall not have the responsibilities or obligations of board members nor be deemed directors of the Corporation for any other purpose.

Article V Officers

Section 5.1 Officers. The officers of the Corporation shall be a chief executive officer, a secretary, and a chief financial officer. The Corporation may also have, at the discretion of the Board of Directors, a chairman of the board, a vice chairman of the board, a treasurer, one or more presidents, one or more vice presidents, one or more assistant vice presidents, assistant secretaries, assistant treasurers, and any such other officers as may be appointed in accordance with the provisions of these Bylaws. Any number of offices may be held by the same person.

Section 5.2 Appointment of Officers. The Board of Directors shall appoint the officers of the Corporation, except such officers as may be appointed in accordance with the provisions of [Sections 5.3 or 5.5](#) of these Bylaws, subject to the rights, if any, of an officer under any contract of employment.

Section 5.3 Subordinate Officers. The Board of Directors may appoint, or empower the chief executive officer or, in the absence of a chief executive officer, one or more presidents, to appoint, such other officers and agents as the business of the Corporation may require, each of whom shall hold office for such period, have such authority, and perform such duties as are provided in these Bylaws or as the Board of Directors may from time to time determine.

Section 5.4 Removal and Resignation of Officers. Subject to the rights, if any, of an officer under any contract of employment, any officer may be removed, either with or without cause, by an affirmative vote of the majority of the Board of Directors at any regular or special meeting of the board or, except in the case of an officer chosen by the board, by any officer upon whom such power of removal may be conferred by the Board of Directors.

Any officer may resign at any time by giving written notice to the Board of Directors or secretary of the Corporation. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice; and, unless otherwise specified in that notice, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the Corporation under any contract to which the officer is a party.

Section 5.5 Vacancies in Offices. Any vacancy occurring in any office of the Corporation shall be filled by the Board of Directors or as provided in Section 5.2 of these Bylaws.

Section 5.6 Chairman of the Board. The chairman of the board, if such an officer be elected, shall, if present, preside at meetings of the stockholders and meetings of the Board of Directors and exercise and perform such other powers and duties as may from time to time be assigned to him by the Board of Directors or as may be prescribed by these Bylaws. If there is no chief executive officer or president, then the chairman of the board shall also be the chief executive officer of the Corporation and shall have the powers and duties prescribed in Section 5.7 of these Bylaws.

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Section 5.7 Chief Executive Officer. Subject to such supervisory powers, if any, as may be given by the Board of Directors to the chairman of the board, if there be such an officer, the chief executive officer of the Corporation shall, subject to the control of the Board of Directors, have general supervision, direction, and control of the business and affairs of the Corporation and shall report directly to the Board of Directors. All other officers, officials, employees and agents shall report directly or indirectly to the chief executive officer. The chief executive officer shall see that all orders and resolutions of the Board of Directors are carried into effect. In the absence or nonexistence of a chairman of the board, he shall serve as the chairperson and preside at meetings of the stockholders and meetings of the Board of Directors. He shall have the general powers and duties of management usually vested in the chief executive officer of a corporation, and shall have such other powers and duties as may be prescribed by the Board of Directors or these Bylaws.

Section 5.8 President. The president may assume and perform the duties of the chief executive officer in the absence or disability of the chief executive officer or whenever the office of the chief executive officer is vacant. When acting as the chief executive officer, a president shall have all the powers of, and be subject to all the restrictions upon, the chief executive officer. The president of the Corporation shall exercise and perform such powers and duties as may from time to time be assigned to him by the Board of Directors, the chairman of the board, the chief executive officer or as may be prescribed by these Bylaws. The president shall have authority to execute in the name of the Corporation bonds, contracts, deeds, leases and other written instruments to be executed by the Corporation. In the absence or nonexistence of the chairman of the board and chief executive officer, he shall preside at all meetings of the stockholders and, in the absence or nonexistence of a Chairman of the Board of Directors and chief executive officer, at all meetings of the Board of Directors and shall perform such other duties as the Board of Directors may from time to time determine.

Section 5.9 Vice Presidents. In the absence or disability of the chief executive officer and any president, the vice presidents, if any, in order of their rank as fixed by the Board of Directors or, if not ranked, a vice president designated by the Board of Directors, shall perform all the duties of a president and when so acting shall have all the powers of, and be subject to all the restrictions upon, a president. The vice presidents shall have such other powers and perform such other duties as from time to time may be prescribed for them respectively by the Board of Directors, these Bylaws, the chairman of the board, the chief executive officer or, in the absence of a chief executive officer, one or more of the presidents.

Section 5.10 Secretary. The secretary shall keep or cause to be kept, at the principal executive office of the Corporation or such other place as the Board of Directors may direct, a book of minutes of all meetings and actions of directors, committees of directors, and stockholders. The minutes shall show the time and place of each meeting, whether regular or special (and, if special, how authorized and the notice given), the names of those present at meetings of the Board of Directors or committees, the number of shares present or represented at meetings of stockholders, and the proceedings thereof.

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The secretary shall keep, or cause to be kept, at the principal executive office of the Corporation or at the office of the Corporation's transfer agent or registrar, as determined by resolution of the Board of Directors, a share register, or a duplicate share register, showing the names of all stockholders and their addresses, the number and classes of shares held by each, the number and date of certificates evidencing such shares, and the number and date of cancellation of every certificate surrendered for cancellation.

The secretary shall give, or cause to be given, notice of all meetings of the stockholders and of the Board of Directors required to be given by law or by these Bylaws. He or she shall keep the seal of the Corporation, if one be adopted, in safe custody and shall have such other powers and perform such other duties as may be prescribed by the Board of Directors or by these Bylaws.

Section 5.11 Chief Financial Officer. The chief financial officer shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and business transactions of the Corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, retained earnings, and shares. The books of account shall at all reasonable times be open to inspection by any director.

The chief financial officer shall deposit all monies and other valuables in the name and to the credit of the Corporation with such depositories as the Board of Directors may designate. The chief financial officer shall disburse the funds of the Corporation as may be ordered by the Board of Directors, shall render to the chief executive officer or, in the absence of a chief executive officer, any president and directors, whenever they request it, an account of all his or her transactions as chief financial officer and of the financial condition of the Corporation, and shall have such other powers and perform such other duties as may be prescribed by the Board of Directors or these Bylaws. The chief financial officer may be the treasurer of the Corporation.

Section 5.12 Treasurer. The treasurer shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and business transactions of the Corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital, retained earnings, and shares. The books of account shall at all reasonable times be open to inspection by any director.

The treasurer shall deposit all monies and other valuables in the name and to the credit of the Corporation with such depositories as the Board of Directors may designate. The treasurer shall disburse the funds of the Corporation as may be ordered by the Board of Directors, shall render to the chief executive officer or, in the absence of a

chief executive officer, any president and directors, whenever they request it, an account of all his or her transactions as treasurer and of the financial condition of the Corporation, and shall have such other powers and perform such other duties as may be prescribed by the Board of Directors or these Bylaws.

Section 5.13 Assistant Secretary. The assistant secretary, or, if there is more than one, the assistant secretaries in the order determined by the stockholders or Board of Directors (or if there be no such determination, then in the order of their election) shall, in the absence of the secretary or in the event of his or her inability or refusal to act, perform the duties and exercise the powers of the secretary and shall perform such other duties and have such other powers as the Board of Directors or the stockholders may from time to time prescribe.

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Section 5.14 Assistant Treasurer. The assistant treasurer, or, if there is more than one, the assistant treasurers, in the order determined by the stockholders or Board of Directors (or if there be no such determination, then in the order of their election), shall, in the absence of the treasurer or in the event of his or her inability or refusal to act, perform the duties and exercise the powers of the treasurer and shall perform such other duties and have such other powers as the Board of Directors or the stockholders may from time to time prescribe.

Section 5.15 Authority and Duties of Officers. In addition to the foregoing authority and duties, all officers of the Corporation shall respectively have such authority and perform such duties in the management of the business of the Corporation as may be designated from time to time by the Board of Directors or the stockholders.

Article VI Indemnity

Section 6.1 Indemnification of Directors and Officers. The Corporation shall, to the fullest extent and in the manner permitted by the Delaware Corporation General Law as it presently exists or may hereafter be amended, indemnify and hold harmless each of its directors and officers who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal or administrative or investigative (a "proceeding") by reason of the fact that he or she, or a person for whom he or she is the legal representative, is or was a director, officer, employee or agent of the Corporation or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, non-profit entity or other enterprise, including service with respect to employee benefit plans, against all liability and loss suffered and expenses reasonably incurred by such person in connection with any such action, suit, or proceeding. The Corporation shall be required to indemnify a person in connection with a proceeding initiated by such person only if the proceeding was authorized by the Board of Directors.

Section 6.2 Indemnification of Others. The Corporation shall have the power, to the fullest extent and in the manner permitted by the Delaware General Corporation Law as it presently exists or may hereafter be amended, to indemnify and hold harmless, each of its employees and agents who was or is made or is threatened to be made a party or is otherwise involved in any proceeding by reason of the fact that he or she, or a person for whom he or she is the legal representative, is or was an employee or agent of the Corporation or is or was serving at the request of the Corporation as an employee or agent of another corporation, partnership, joint venture, trust, non-profit entity or other enterprise, including service with respect to employee benefit plans, against all liability and loss suffered and expenses reasonably incurred by such person in connection with any such action, suit, or proceeding.

Section 6.3 Insurance. The Corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation or its subsidiaries as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not the Corporation would have the power to indemnify him against such liability under the provisions of the Delaware General Corporation Law.

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Section 6.4 Expenses. The Corporation shall pay the expenses incurred by any officer or director of the Corporation, and may pay the expenses incurred by any employee or agent of the Corporation, in defending any proceeding in advance of its final disposition; provided, however, that the payment of expenses incurred by a person in advance of the final disposition of the proceeding shall be made only upon receipt of an undertaking by the person to repay all amounts advanced if it should ultimately be determined that he is not entitled to be indemnified by the Corporation under this [Article VI](#) or otherwise. Such expenses incurred by other employees and agents described in [Section 6.2](#) of this [Article VI](#) may be so paid upon such terms and conditions, if any, as the Board of Directors deems appropriate.

Section 6.5 Other Indemnification. The indemnification and advancement of expenses provided by, or granted pursuant to, this Article VI shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under any bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office. However, the Corporation's obligation, if any, to indemnify a person who was or is serving at its request as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, non-profit entity or other enterprise shall be reduced by any amount such person may collect as indemnification from such other corporation, partnership, joint venture, trust, non-profit entity or other enterprise.

Section 6.6 Amendment or Repeal Any repeal or modification of the foregoing provisions of this [Article VI](#) shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification.

Section 6.7 Merger or Consolidation. For purposes of this [Article VI](#), references to "the Corporation" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust, non-profit entity or other enterprise, shall stand in the same position under this [Article VI](#) with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued.

Section 6.8 Severability. The invalidity or unenforceability of any provision of this [Article VI](#) shall not affect the validity or enforceability of the remaining provisions of this [Article VI](#).

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Article VII Records and Reports

Section 7.1 Maintenance and Inspection of Records The Corporation shall, either at its principal executive office or at such place or places as designated by the Board of Directors, keep a record of its stockholders listing their names and addresses and the number and class of shares held by each shareholder, a copy of these Bylaws as amended to date, accounting books, and other records.

Any stockholder of record, in person or by attorney or other agent, shall, upon written demand under oath stating the purpose thereof, have the right during the usual hours for business to inspect for any proper purpose the Corporation's stock ledger, a list of its stockholders, and its other books and records and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to such person's interest as a stockholder. In every instance where an attorney or other agent is the person who seeks the right to inspection, the demand under oath shall be accompanied by a power of attorney or such other writing that authorizes the attorney or other agent to so act on behalf of the stockholder. The demand under oath shall be directed to the Corporation at its registered office in Delaware or at its principal executive office.

Section 7.2 Inspection by Directors. Any director shall have the right to examine the Corporation's stock ledger, a list of its stockholders, and its other books and records for a purpose reasonably related to his position as a director. The Court of Chancery of the State of Delaware is hereby vested with the exclusive jurisdiction to determine whether a director is entitled to the inspection sought. The Court of Chancery may summarily order the Corporation to permit the director to inspect any and all books and records, the stock ledger, and the stock list and to make copies or extracts therefrom. The Court of Chancery may, in its discretion, prescribe any limitations or conditions with reference to the inspection, or award such other and further relief as the Court may deem just and proper.

Section 7.3 Representation of Shares of Other Corporations The chairman of the board, the chief executive officer, the chief financial officer or any other person authorized by the Board of Directors or the chief executive officer, is authorized to vote, represent, and exercise on behalf of the Corporation all rights incident to any and all shares of any other corporation or corporations standing in the name of the Corporation. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

Article VIII General Matters

Section 8.1 Checks. From time to time, the Board of Directors shall determine by resolution which person or persons may sign or endorse all checks, drafts, other orders for payment of money, notes or other evidences of indebtedness that are issued in the name of or payable to the Corporation, and only the persons so authorized shall sign or endorse those instruments.

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Section 8.2 Execution of Corporate Contracts and Instruments. The Board of Directors, except as otherwise provided in these Bylaws, may authorize any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the Corporation; such authority may be general or confined to specific instances. Unless so authorized or ratified by the Board of Directors or within the agency power of an officer, agent or employee, no officer, agent or employee shall have any power or authority to bind the Corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

Section 8.3 Stock Certificates; Partly Paid Shares. The shares of the Corporation shall be represented by certificates, provided that the Board of Directors of the Corporation may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation. Notwithstanding the adoption of such a resolution by the Board of Directors, every holder of stock represented by certificates and upon request every holder of uncertificated shares shall be entitled to have a certificate signed by, or in the name of the Corporation by the chairman or vice-chairman of the Board of Directors, or a president or vice-president, and by the treasurer or an assistant treasurer, or the secretary or an assistant secretary of the Corporation representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if he were such officer, transfer agent or registrar at the date of issue.

The Corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, upon the books and records of the Corporation in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the Corporation shall declare a dividend upon partly paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

Section 8.4 Special Designation on Certificates. If the Corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the Corporation shall issue to represent such class or series of stock; provided, however, that, except as otherwise provided in Section 202 of the Delaware General Corporation Law, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the Corporation shall issue to represent such class or series of stock a statement that the Corporation will furnish without charge to each stockholder who so requests the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

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Section 8.5 Lost Certificates. Except as provided in this [Section 8.5](#), no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the Corporation and canceled at the same time. The Corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the Corporation may require the owner of the lost, stolen or destroyed certificate, or his legal representative, to give the Corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

Section 8.6 Construction; Definitions. Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the Delaware General Corporation Law shall govern the construction of these Bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term "person" includes both a corporation and a natural person.

Section 8.7 Dividends. The directors of the Corporation, subject to any restrictions contained in either the Delaware General Corporation Law or the Certificate of Incorporation, may declare and pay dividends upon the shares of its capital stock. Dividends may be paid in cash, in property, or in shares of the Corporation's capital stock.

The directors of the Corporation may set apart out of any of the funds of the Corporation available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve. Such purposes shall include but not be limited to equalizing dividends, repairing or maintaining any property of the Corporation, and meeting contingencies.

Section 8.8 Fiscal Year. The fiscal year of the Corporation shall end on December 31 of each year until changed by the Board of Directors.

Section 8.9 Seal. The Corporation may adopt a corporate seal, which shall be adopted and which may be altered by the Board of Directors. The Corporation may use the corporate seal by causing it or a facsimile thereof to be impressed or affixed or in any other manner reproduced.

Section 8.10 Transfer of Stock. Upon surrender to the Corporation or the transfer agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, it shall be the duty of the Corporation to issue a new certificate to the person entitled thereto, cancel the old certificate, and record the transaction in its books.

Section 8.11 Stock Transfer Agreements. The Corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the Corporation to restrict the transfer of shares of stock of the Corporation of any one or more classes owned by such stockholders in any manner not prohibited by the Delaware General Corporation Law.

Section 8.12 Registered Stockholders. The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends and to vote as such owner, shall be entitled to hold liable for calls and assessments the person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

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Section 8.13 Forum for Adjudication of Disputes. Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, or (iv) any action asserting a claim governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the corporation shall be deemed to have notice of and consented to the provisions of this Section 8.13.

Article IX Notice by Electronic Transmission

Section 9.1 Notice by Electronic Transmission

Without limiting the manner by which notice otherwise may be given effectively to stockholders pursuant to the Delaware General Corporation Law, the Certificate of Incorporation or these Bylaws, any notice to stockholders given by the Corporation under any provision of the Delaware General Corporation Law, the Certificate of Incorporation or these Bylaws shall be effective if given by a form of electronic transmission consented to by the stockholder to whom the notice is given. Any such consent shall be revocable by the stockholder by written notice to the Corporation. Any such consent shall be deemed revoked if: (i) the Corporation is unable to deliver by electronic transmission two consecutive notices given by the Corporation in accordance with such consent; and (ii) such inability becomes known to the secretary or an assistant secretary of the Corporation or to the transfer agent, or other person responsible for the giving of notice. However, the inadvertent failure to treat such inability as a revocation shall not invalidate any meeting or other action.

Any notice given pursuant to the preceding paragraph shall be deemed given: (i) if by facsimile telecommunication, when directed to a number at which the stockholder has consent to receive notice; (ii) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice; (iii) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (A) such posting and (B) the giving of such separate notice; and (iv) if by any other form of electronic transmission, when directed to the stockholder. An affidavit of the secretary or an assistant secretary or of the transfer agent or other agent of the Corporation that the notice has been given by a form of electronic transmission shall, in the absence of fraud, be prima facie evidence of the facts stated therein. Notice by a form of electronic transmission shall not apply to Sections 164, 296, 311, 312 or 324 of the Delaware General Corporation Law.

An "electronic transmission" means any form of communication, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved, and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process.

Article X Amendments

These Bylaws may be amended, altered or repealed, and new Bylaws may be adopted, by the stockholders entitled to vote. However, the Corporation may, in its Certificate of Incorporation, confer the power to adopt, amend or repeal Bylaws upon the Board of Directors. The fact that such power has been so conferred upon the directors shall not divest the stockholders of the power, nor limit their power to adopt, amend, alter or repeal Bylaws.

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CERTIFICATE OF SECRETARY

OF

ALTO INGREDIENTS, INC.
(a Delaware corporation)

I hereby certify that I am the duly elected and acting secretary of Alto Ingredients, Inc., a Delaware corporation, and that the foregoing Bylaws, comprising 23 pages, including this page, constitute the Bylaws of the Corporation as duly adopted by the Board of Directors thereof by action taken at a meeting of the Board of Directors held on January 7, 2021.

IN WITNESS WHEREOF, the undersigned has hereunto set his hand this 12th day of January, 2021.

/s/ CHRISTOPHER W. WRIGHT
Christopher W. Wright, Secretary

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**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Michael D. Kandris, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Alto Ingredients, 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: May 17, 2021

/S/ MICHAEL D. KANDRIS

Michael D. Kandris
President and Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Bryon T. McGregor, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Alto Ingredients, 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: May 17, 2021

/S/ BRYON T. MCGREGOR
Bryon T. McGregor
Chief Financial Officer
(Principal Financial Officer)

**CERTIFICATION OF
CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
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 on Form 10-Q of Alto Ingredients, Inc. (the "Company") for the period ended March 31, 2021 (the "Report"), the undersigned hereby certify in their capacities as Chief Executive Officer and Chief Financial Officer of the Company, respectively, 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, as amended; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: May 17, 2021

By: /S/ MICHAEL D. KANDRIS
Michael D. Kandris
President and Chief Executive Officer
(Principal Executive Officer)

Dated: May 17, 2021

By: /S/ BRYON T. MCGREGOR
Bryon T. McGregor
Chief Financial Officer
(Principal Financial Officer)

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signatures that appear in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.