

FOR IMMEDIATE RELEASE

**ZeaChem Achieves Industrial-Level Fermentation Results
from Biorefining Process**

*Company Accomplishes Rate and Concentration Goals Soon After Starting Construction on
250,000 Gallon-per-Year Facility*

Lakewood, Colo. – February 2, 2010 – ZeaChem Inc., a developer of biorefineries for the conversion of renewable biomass into fuels and chemicals, today announced the first fermentation results of acetic acid, an intermediate in the ZeaChem process. The results demonstrated successful process scaling to a level that is 10,000 times greater than standard lab scale. Fermentation units were scaled from 0.5 liter to 5,000 liters.

The positive results are a direct outcome of ZeaChem's collaboration with Hazen Research, Inc., an industrial research and development firm in Golden, Colorado. Hazen has constructed and is hosting the initial front-end process unit and providing infrastructure and operations support. Start of construction at Hazen was announced on November 18, 2009 and the first fermentation runs exceeded commercially acceptable acetic acid concentration levels. The fermentation process also exceeded ZeaChem's time goals for achieving the concentration level. The results demonstrated successful fermentation of greater than 50 grams of acetic acid per liter in less than 100 hours. These results have been repeated and verified.

"ZeaChem has met and exceeded its concentration and rate fermentation targets," said Jim Imbler, president and chief executive officer of ZeaChem. "We now have sufficient evidence, based on mixed sugars, to indicate that our results are scalable to industrial production levels. Our process, using naturally-occurring acetogen bacteria and existing processes, exceeds the commercially viable threshold for fermentation. ZeaChem is meeting its milestones and continuing to move forward in deploying cellulosic biorefinery technology."

Acetogens have been shown to be powerful organisms in other industries such as wastewater treatment before ZeaChem began utilizing them for bio-based chemicals and fuels production. Naturally-occurring acetogens are highly robust and, unlike yeast, produce no carbon dioxide (CO₂) during the fermentation process, allowing ZeaChem to realize a significant efficiency and yield advantage. ZeaChem has successfully used acetogens to produce acetic acid at the lab scale in over 1,000 fermentation trials using mixed sugars as well as hydrolyzate derived from cellulosic biomass. ZeaChem is now seeking hydrolyzate supply to replicate these scale-up results.



“In our experience, these 10,000 times scale-up results verify the ability to scale to commercial fermentation,” said Geoff Stephenson, P.E., Principal Process Engineer at Burns & McDonnell Engineering Company, Inc.

Acetic acid, the product of ZeaChem’s front-end fermentation unit, is the first step in the hybrid biochemical and thermochemical process for creating cellulosic ethanol and bio-based chemicals. The next step will be to concentrate and purify the ZeaChem produced acetic acid into a salable product, using an energy efficient, non-distillation based process.

ZeaChem intends to scale to a commercial biorefinery upon successful operations at the 250,000 gallon-per-year facility, which is proposed to be built in Boardman, Oregon. The core technology of the facility will begin to come online in 2010.

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About Burns & McDonnell

Burns & McDonnell provides engineering, architecture, construction, environmental and consulting services to clients throughout North America and abroad. More than 3,000 engineers, architects, scientists, planners, estimators, economists, technicians and other professionals work in 20 offices located throughout the U.S. Founded in 1898, Burns & McDonnell is 100 percent employee-owned. In 2009, FORTUNE magazine named Burns & McDonnell one of America’s “100 Best Companies to Work For,” and Texas Monthly named Burns & McDonnell one of the “Best Companies to Work for in Texas.”

For more information about Burns & McDonnell, visit www.burnsmcd.com.

About Hazen Research, Inc.

Hazen Research, Inc. was organized in 1961 to provide process research and development services to the extractive metallurgy, energy and chemical industries. Over the years, the company has assembled an experienced and competent staff supported by the laboratory and pilot plant facilities necessary to apply the most appropriate technology to the industrial, commercial, and environmental goals of our clients.

Please visit www.hazenusa.com for more information.

About ZeaChem Inc.

ZeaChem Inc. has developed a cellulose-based biorefinery platform capable of producing advanced fuels and intermediate chemicals. ZeaChem's indirect approach leapfrogs the yield and carbon dioxide (CO₂) problems associated with traditional and cellulosic based biorefinery

The logo for ZeaChem, featuring the company name in white text on a green rectangular background with a grey horizontal bar below it.

ZeaChem

processes. In addition, ZeaChem has a significant capital cost advantage compared to other cellulosic technologies. By efficiently extracting the most energy possible from biomass feedstocks, ZeaChem significantly increases output while reducing both production costs and environmental impacts. Incorporated in 2002, ZeaChem is headquartered in Lakewood, Colo. and operates a research and development laboratory facility in Menlo Park, Calif.

Please visit www.zeachem.com for more information.

Press Contact:

Joey Marquart
A&R Edelman
650-762-2987
joey.marquart@edelman.com