



FOR IMMEDIATE RELEASE

ZeaChem Begins Construction of Cellulosic Biorefinery

Fabrication of Front-End Fermentation Inaugurates Construction of 250,000 Gallon-per-Year Facility to Produce Advanced Biofuels and Bio-based Chemicals

Lakewood, Colo. – November 18, 2009 – ZeaChem Inc., a developer of biorefineries for the conversion of renewable biomass into fuels and chemicals, today announced it has begun construction of its semi-works scale facility. The company is working with Hazen Research, Inc. of Golden, Colorado to construct the critical first step of the biorefinery fermentation process.

“ZeaChem is meeting its deployment milestones and moving forward to advanced biofuels and bio-based chemicals production,” said Jim Imbler, president and chief executive officer of ZeaChem. “We have a dedicated energy feedstock supplier, we have raised necessary capital, we have completed the initial design package and are finalizing the detailed engineering and design package. Initiating construction of this front-end fermentation unit operation demonstrates that ZeaChem is accelerating deployment of its unique hybrid biorefining technology.”

The front-end fermentation unit scales up production of the naturally occurring bacteria, called an acetogen, which ZeaChem uses in its fermentation process. 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 produced acetogens at the lab scale for over 1,000 fermentation trials of sugars as well as hydrolyzate derived from cellulosic biomass. The facility will have capacity to produce 250,000 gallons of biofuel per year.

Hazen Research, an industrial research and development firm, will construct and host the initial process unit and provide infrastructure and operations support. ZeaChem is constructing the semi-works scale biorefinery utilizing skid mounted design, which allows construction of individual process units more quickly in fabrication shops. The skids act like modular building blocks, each approximately the size of a cargo shipping container, and will be integrated together at the final biorefinery site, proposed in Boardman, Oregon. Key advantages of skid mounted design include the ability to optimize unit operations earlier in the process and the flexibility to bolt on and phase in additional skids as the biorefinery is deployed in stages. These steps significantly reduce the risk of individual process operations and ultimate integration.

ZeaChem intends to scale to a commercial biorefinery upon successful operations at the semi-works scale facility. The core technology of such a facility will come online in 2010.



About ZeaChem Inc.

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

About Hazen Research, Inc.

Hazen Research, Inc. was organized in 1961 to provide process research and development services to the extractive metallurgy and chemical industries. Over the years, we have 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.hazenus.com for more information

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