

Atlanta  
Beijing  
Brussels  
Chicago  
Frankfurt  
Hong Kong  
London  
Los Angeles  
Milan  
New York  
Orange County  
Palo Alto  
Paris  
San Diego  
San Francisco  
Shanghai  
Tokyo  
Washington, DC

(858) 458-3031  
teriobrien@paulhastings.com

October 21, 2010

**VIA EDGAR AND OVERNIGHT MAIL**

United States Securities and Exchange Commission  
Division of Corporation Finance  
100 F Street N.E.  
Washington, D.C. 20549  
Attention: Mr. Jay Ingram  
Ms. Chambre Malone

**Re: Gevo, Inc.  
Registration Statement on Form S-1 (File No. 333-168792)  
Amendment No. 2**

Dear Mr. Ingram and Ms. Malone:

Enclosed for electronic filing via EDGAR pursuant to the Securities Act of 1933, as amended (the “*Securities Act*”), on behalf of our client, Gevo, Inc. (the “*Company*”), is Amendment No. 2 (“*Amendment No. 2*”) to the Company’s Registration Statement on Form S-1 filed with the Securities and Exchange Commission (the “*Commission*”) on August 12, 2010 (the “*Initial Registration Statement*”). Amendment No. 2 is marked to show changes from Amendment No. 1 (“*Amendment No. 1*”) on Form S-1/A filed with the Commission on October 1, 2010. The Initial Registration Statement, as amended by Amendment No. 1, Amendment No. 2 and all future amendments, is referred to herein as the “*Registration Statement*.”

Amendment No. 2 is being filed in response to comments received from the staff of the Commission (the “*Staff*”) by letter dated October 18, 2010 with respect to Amendment No 1. The numbering of the paragraphs below corresponds to the numbering in the comment letter, the text of which we have incorporated into this response letter for your convenience. Page references in the text of this response letter correspond to the page numbers of Amendment No. 2.

**Staff Comments and Company Responses**

Conventions that apply to this prospectus, page i

1. *We note that you have presented market data derived from data generated by SRI, CMAI, the EIA, the IEA, the RFA, MPI and Nexant. Please advise to tell us whether you commissioned these publications, surveys and forecasts. If any of these publications, surveys and forecasts are not publicly available for no or nominal fee or if you commissioned them, either identify these parties as experts and file consents or explain to us why you are not required to do so under Rule 436 of Regulation C and Section 7 of the Securities Act.*

The Company acknowledges the Staff's comment and confirms that the Company did not commission any of the market data publications, surveys and forecasts listed above. All of these publications, surveys and forecasts are publicly available, some free of charge and some for a nominal fee.

Management's Discussion and Analysis, page 62

Critical Accounting Policies and Estimates, page 68

2. *We have read your response and revision to comment 19 in our letter dated September 8, 2010. You state that the results of your undiscounted cash flow analysis indicate that the sum of the undiscounted cash flows is substantially in excess of the book value of the property, plant and equipment. Please revise your disclosure to explain the unique nature of the property, plant and equipment, the related proprietary processes and/or techniques that utilize said property, plant or equipment, operating commitments or agreements entered into, or any other factor(s) you deem relevant such that a reader can better understand your conclusion that these assets will provide future cash flows in excess of their book values.*

The Company acknowledges the Staff's comment and respectfully advises the Staff that it has revised its disclosure under the heading "Impairment of Long-Lived Assets" on page 75 of Amendment No. 2 to explain the relevant factors supporting the Company's conclusion that these assets will provide future cash flows in excess of their book values.

Our Production Technology Platform, page 99

3. *We note your response to comment 27 in our letter dated September 8, 2010. Please identify these parties under the "Experts" section on page 187 and have ICM, Inc. and DNV Columbus, Inc. file new consents in which they also consent to the disclosure of their names under the "Experts" section of the prospectus.*

The Company acknowledges the Staff's comment and respectfully advises the Staff that it has revised the disclosure on page 187 of Amendment No. 2 to identify ICM, Inc. and DNV Columbus, Inc. as experts. In accordance with such disclosure, the new consents of ICM, Inc. and DNV Columbus, Inc. have been filed as Exhibit 23.4 and Exhibit 23.5, respectively, to Amendment No. 2.

Gevo, Inc. Consolidated Financial Statements

1. Nature of Business and Significant Accounting Policies, page F-9

4. *We have read your response to comment 31 in our letter dated September 8, 2010. Based on your response, it is not clear whom your R&D activities benefit, or to what they specifically relate. Please tell us the nature and results of these R&D activities performed pursuant to your government research grants and cooperative agreements and whether they are being performed for the benefit of any third parties. We may have further comment.*

The Company acknowledges the Staff's comment and respectfully advises the Staff that the research and development activities performed by the Company pursuant to U.S. government research grants and cooperative agreements relate primarily to the development of the Company's technology, including its biocatalysts. Although the granting agencies do receive certain benefits under the terms of the grants and cooperative agreements, all research performed under the grants and cooperative agreements is performed at the Company's direction for the Company's commercial benefit, and not the benefit of any third parties.

The research grants and cooperative agreements that the Company has entered into generally provide for cost reimbursement of certain types of expenditures in return for performance by the Company of research and development activities over contractually defined periods of time. The company has received grants from and/or entered into cooperative agreements with the U.S. Department of Energy ("**DOE**"), the National Science Foundation ("**NSF**"), the U.S. Environmental Protection Agency ("**EPA**"), the U.S. Department of Agriculture ("**USDA**"), the Army Research Laboratory and the U.S. Army.

The DOE, NSF and EPA grants are Small Business Innovation Research ("**SBIR**") grants. The goal of the SBIR grants is to promote research and development activities by small businesses. The USDA grant was provided under the Cooperative State Research, Education, and Extension Service ("**CSREES**") program. CSREES is an agency within the USDA. The mission of CSREES is to advance knowledge for agriculture, the environment, human health and well-being, and communities by funding research, education, and extension programs. The principal purpose of the cooperative agreement that we have entered into with the Army Research Laboratory is to provide our best research efforts in the support and stimulation of fundamental research.

Under each of its grants and cooperative agreements, the Company remains the primary beneficiary of all research activities while the granting agencies benefit through encouraging research, gaining access to research data and obtaining certain limited rights to use intellectual property developed under the grants and cooperative agreements for non-commercial purposes. The Company believes that it would have conducted these research and development activities even if it had never obtained the grants and cooperative agreements noted above.

\* \* \* \* \*

The Company respectfully requests the Staff's assistance in completing the review of Amendment No. 2 as soon as possible. Please advise us if we can provide any further information or assistance to facilitate your review. Please direct any further comments or questions regarding Amendment No. 2 or this response letter to Teri O'Brien at (858) 458-3031 or Deyan Spiridonov at (858) 458-3044.

Sincerely,

/s/ Teri O'Brien  
Teri O'Brien  
for PAUL, HASTINGS, JANOFSKY & WALKER LLP

Enclosures

cc: Patrick R. Gruber, Ph.D., Gevo, Inc.  
Brett Lund, Esq., Gevo, Inc.  
Mark Smith, Gevo, Inc.  
David J. Goldschmidt, Skadden, Arps, Slate, Meagher & Flom LLP  
Deyan Spiridonov, Paul, Hastings, Janofsky & Walker LLP