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February 4, 2011

VIA EDGAR AND FACSIMILE

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. 5**

Dear Mr. Ingram and Ms. Malone:

On behalf of our client, Gevo, Inc. (the "**Company**"), we hereby inform you that Amendment No. 5 ("**Amendment No. 5**") 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**"), as amended by Amendment No. 1 on Form S-1/A filed with the Commission on October 1, 2010 ("**Amendment No. 1**"), Amendment No. 2 on Form S-1/A filed with the Commission on October 21, 2010 ("**Amendment No. 2**"), Amendment No. 3 on Form S-1/A filed with the Commission on November 4, 2010 ("**Amendment No. 3**") and Amendment No. 4 on Form S-1/A filed with the Commission on January 19, 2011 ("**Amendment No. 4**"), has been filed electronically via EDGAR pursuant to the Securities Act of 1933, as amended. The Initial Registration Statement, as amended by Amendment No. 1, Amendment No. 2, Amendment No. 3, Amendment No. 4, Amendment No. 5 and all future amendments, is referred to herein as the "**Registration Statement**."

Amendment No. 5 is being filed in response to comments received from the staff of the Commission (the "**Staff**") by letter dated January 28, 2011 with respect to Amendment No. 4. 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 convenience. Page references in the text of this response letter correspond to the page numbers of Amendment No. 5.

For your convenience, we have arranged for the Company's financial printer to overnight five copies of Amendment No. 5 to your attention, these copies will be marked to show the changes that have been made since the filing of Amendment No. 4.

Staff Comments and Company Responses

General

1. *In locations as appropriate, please describe the specific effects on your business should you not be able to successfully defend the patent infringement lawsuit filed by Butamax Advanced Biofuels LLC. Generic statements that your ability to compete may be impaired and that you will incur significant litigation-related costs are not sufficient.*

Because Butamax Advanced Biofuels LLC ("**Butamax**") has only filed a general, unsubstantiated complaint against the Company and the Company has only recently been served with that complaint, the course and therefore, the ultimate resolution of this lawsuit is uncertain at this time. On page 127 of Amendment No. 5, the Company has disclosed all information required to be disclosed pursuant to Item 103 of Regulation S-K with respect to the Butamax lawsuit. In addition, the Company has advised us that it has made an assessment of the possible effect(s) on the Company's business of an adverse outcome in this litigation (as well as any similar claims of patent infringement), taking into account all facts and circumstances currently known to the Company. As a result of that assessment, the Company has prominently disclosed on pages 16-17 of the Registration Statement that an adverse outcome in any current or potential intellectual property litigation, such as the Butamax lawsuit, could force the Company to (a) stop selling, incorporating, manufacturing or using its products that use the subject intellectual property; (b) obtain from a third party asserting its intellectual property rights, a license to sell or use the relevant technology, which license may not be available on reasonable terms, or at all; (c) redesign those products or processes, such as the Company's process for producing isobutanol, that use any allegedly infringing or misappropriated technology, which may result in significant cost or delay to the Company, or which redesign could be technically infeasible; or (d) pay damages, including the possibility of treble damages in a patent case if a court finds that the Company has willfully infringed certain intellectual property rights. This disclosure is in addition to the Company's disclosure on pages 31-33 of Amendment No. 5 which relates to the risks associated with the protection of intellectual property in general. The Company has advised us that no additional or more specific disclosure on the effects of an adverse outcome in the Butamax lawsuit is warranted at this early stage in the Butamax lawsuit. Rather, the Company believes that any further disclosure would be speculative given the current uncertainty in the course and therefore, the ultimate outcome of the Butamax litigation.

Given the early stage of the Butamax lawsuit, the Company cannot reasonably estimate the legal costs that will be incurred by the Company to defend against the Butamax lawsuit, or whether such costs will be significant. The Company respectfully

advises the Staff that it has revised its disclosure on pages 16 and 119 of Amendment No. 5 to clarify that it is possible that the costs of defending the Butamax lawsuit “may, over time, become significant.”

Use of proceeds, page 49

2. *In light of the fact that you have included litigation expenses in your Item 504 disclosure, please revisit the description of the use of proceeds and revise to quantify, to the extent practicable, the amounts you intend to attribute to each stated use.*

The Company advises the Staff that no “litigation expenses” have been billed by any litigation counsel to date. As disclosed on pages 11 and 49 of Amendment No. 5, the Company currently intends to use all or a portion of the net proceeds of this offering to acquire access to ethanol facilities and to retrofit such facilities to produce isobutanol. The Company has also disclosed that it “may also use a portion of the net proceeds to fund working capital and other general corporate purposes.” The Company only added “litigation expenses” to the list of the several, *possible* general corporate purposes that may be funded with a portion of the net offering proceeds. To clarify that litigation expenses are only a possible general corporate purpose that may be funded with a portion of the net proceeds, the Company has revised the disclosure on pages 11 and 49 to state that these general corporate purposes “may include ... expenses associated with litigation...”

20. Subsequent Events (Unaudited), page F-56

3. *Please revise your filing to correct the date of the lawsuit, if necessary, filed by Butamax Advanced Biofuels LLC, which is disclosed herein and on page 127 as January 14, 2010.*

The Company acknowledges the Staff’s comment and respectively advises the Staff that the Butamax lawsuit was filed on January 14, 2011. The Company has revised its disclosure on pages 127 and F-56 of Amendment No. 5 to correct this typographical error.

4. *Please revise your filing to address the disclosure requirements of ASC Topic 450-20-50-1 through 450-20-50-4 related to the lawsuit filed by Butamax Advanced Biofuels LLC for alleged patent infringement. We also note your disclosure on page 199 that you expect to incur significant litigation costs associated with your defense.*

The Company acknowledges the Staff’s comment and respectfully advises the Staff that the Butamax lawsuit was filed on January 14, 2011 and the Company has not made any accruals related to this matter that would need to be disclosed in its consolidated financial statements dated September 30, 2010. Additionally, the Company respectfully advises the Staff that it has revised its disclosure under the heading “Subsequent Events (Unaudited)” on page F-56 of Amendment No. 5 to disclose the

Company's inability, given the very early stage of the Butamax litigation, to reasonably estimate the possible loss or range of loss related to the Butamax lawsuit.

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The Company respectfully requests the Staff's assistance in completing its review of Amendment No. 5 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. 5 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, JANOFISKY & WALKER LLP

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