



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549-4631

September 17, 2009

By facsimile to (732) 577-1188 and U.S. Mail

Mr. Arnold R. Klann  
President and Chief Executive Officer  
BlueFire Ethanol Fuels, Inc.  
31 Musick  
Irvine, CA 92618

Re: BlueFire Ethanol Fuels, Inc.  
Registration Statement on Form S-1  
Filed September 8, 2009  
File No. 333-161772

Dear Mr. Klann:

We have limited our review of your filing to those issues that we have addressed in our comments. Where indicated, we think that you should revise your document in response to these comments. If you disagree, we will consider your explanation why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us information so that we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions that you may have about comments or any other aspect of our review. You may call us at the telephone numbers listed at the end of this letter.

General

1. Based on disclosure in BlueFire's Form 10-K for the fiscal year ended December 31, 2008, it appears that 6,250,000 shares of common stock are held by non-affiliates. Given the size of the offering of 3,500,000 shares of common stock by the selling stockholders relative to the number of shares of common stock held by non-affiliates and the fact that

the selling shareholders are executive officers of the company or their family members, it appears that the transaction may be a primary offering on behalf of the company rather than a true secondary offering. Since BlueFire is ineligible to conduct a primary offering on Form S-3, BlueFire would be ineligible to conduct an at the market primary offering under Rule 415(a)(4) of Regulation C under the Securities Act for these shares. Thus BlueFire should significantly reduce the size of the offering relative to the number of outstanding shares held by non-affiliates, or provide a supplemental analysis explaining why the transaction is not a primary offering on behalf of the company. Alternatively, BlueFire should:

- Identify the selling stockholders as underwriters in the registration statement.
- Include the fixed price at which the selling stockholders will sell the securities for the duration of the offering.

Security Ownership of Certain Beneficial Owners and Management, page 34

2. We note that footnote (1) refers only to subparagraph (a) of Exchange Act Rule 13d-3. Note that beneficial ownership should be determined in accordance with all of the provisions of Rule 13d-3, including, but not limited to, Rule 13e-3(d), which states that beneficial ownership includes any security which the person has the right to acquire within 60 days. See Rule 13d-3(d)(1) of Regulation 13D under the Exchange Act. Please revise footnote (1) and the table as necessary to include all shares as to which the persons named in the table have beneficial ownership, as described in Rule 13d-3.

Selling Stockholders, page 37

3. Explain briefly how each selling stockholder acquired the securities being offered for resale.
4. State any position, office, or other material relationship which each selling stockholder has had within the past three years with BlueFire or any of its predecessors or affiliates. See Item 507 of Regulation S-B.
5. Describe briefly any continuing relationship of BlueFire with each selling stockholder.

Plan of Distribution, page 38

6. If the offering is to be at the market and will include shares representing more than 10% of shares outstanding, please expand the disclosure to include information concerning contractual arrangements among the selling shareholders to comply with the anti-

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manipulation provisions of Regulation M under the Exchange Act relating to the offering.

Interests of Named Experts and Counsel, page 40

7. Include counsel's address as required by paragraph 23 of Schedule A of the Securities Act.

Additional Information, page 40

8. We note the "not necessarily complete" language. Clarify that BlueFire has disclosed in the prospectus all material provisions of any contract or any other document that is filed as an exhibit to the registration statement.

Exhibit Index

9. Include an exhibit index immediately before the exhibits as required by Rule 102(d) of Regulation S-T.

Closing

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us marked courtesy copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after review of your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosures in the filing to be certain that the filing includes all information required under the Securities Act of 1933 and that they have provided all information that investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosures, they are responsible for the adequacy and accuracy of the disclosures that they have made.

Notwithstanding our comments, when the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter at the time of the request, acknowledging that:

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- Should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing.
- The action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing.
- The company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Also, please be advised that the Division of Enforcement has access to all information that you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statements. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may direct questions on comments and disclosure issues to Edward M. Kelly, Senior Counsel, at (202) 551-3728 or me at (202) 551-3765.

Very truly yours,

Pamela A. Long  
Assistant Director

cc: X-Pedited Transfer Corporation

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