



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

October 27, 2010

**via U.S. mail and facsimile**

T Riggs Eckelberry, Chief Executive Officer  
OriginOil, Inc.  
5645 West Adams Blvd  
Los Angeles, CA 90016

**RE:   OriginOil, Inc.**  
**Form 10-K for the Fiscal Year Ended December 30, 2009**  
**Filed March 31, 2010**  
**Form 10-Q for the Fiscal Quarter Ended June 30, 2010**  
**Filed August 13, 2010**  
**File No. 333-147980**

Dear Mr. Eckelberry:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended December 31, 2009

General

1. In future filings, please define each of the industry and scientific terms that you use in your report (e.g., the terms “shielded wave guide system” and “hydroponically”).

Item 1. Description of Business, page 1

2. Your business discussion currently implies that favorable outcomes are likely or will inevitably result from the production and use of your technology. However, we note your risk factor disclosure on page eight indicating that “[t]he technologies [you] will use to transform algae into a new form of oil have never been utilized on a commercial basis” and that “[a]ll of the tests conducted to date by [you] with respect to the technology have been performed in a limited scale environment and the same or similar results may not be obtainable at competitive costs on a large-scale commercial basis.” In future filings, please revise your disclosure to more accurately reflect the current stage of your development and provide a more balanced characterization of your business and prospects. In doing so, please provide clear disclosure regarding the status of your technology, whether proven or unproven and at what level, whether it has been subject to peer review and criticism and, if it has, provide a materially complete summary of that review and criticism, and the nature of the results from the tests you have already conducted. In this regard, we also note your disclosure on page six under the heading “Competitors” indicating that you have not yet completed a prototype of your technology.
3. In future filings, please disclose the basis or source for each of the factual assertions you make regarding your technology and industry.
4. We note that you repeat disclosure throughout this section. In future filings, please delete this repetitive text.
5. In future filings, please indicate whether you are required to obtain government approval for the production, distribution, and/or use of your technology. If so, please describe the steps in the applicable government approval process, including your estimate of the amount of time necessary to complete each step, and identify your status within this process. See Item 101(h)(4)(viii) of Regulation S-K.
6. In future filings, please expand your disclosure to address the direct and indirect costs associated with your process for producing oil from algae (e.g., the cost to produce one gallon of oil, the energy and raw materials required, etc.). In doing so, please address how your process compares economically to other biofuels, such as corn, soy or nut-based biofuels as well as traditional petroleum. To the extent you believe that they are material to your proposed business, please also address any environmental issues associated with your process (e.g., generation of waste products, water usage and contamination, production of greenhouse gases, etc.). Finally, please consider whether it would be appropriate to revise and expand your Management’s Discussion and Analysis disclosure to address the impact of these issues on your results of operations and liquidity.

Organizational History, page 1

7. We note your reference to a “Memorandum.” In future filings, please revise this reference to refer to the applicable periodic report that you are filing.

Overview of Business, page 1

8. Please provide us with the basis for your statement that your technology “can transform algae into oil in a matter of days.” In doing so, please clarify if such a transformation is currently viable on a commercial basis.

A Modular Oil Producing System, page 4

9. We note your disclosure that you “will commercialize [your] technology through an integrated system of global partners....” In future filings, please disclose whether you have entered into any definitive agreements in this regard and, if so, describe these agreements in material detail.

Benefits of Algae Oil Production, page 5

A Complete Solution to Produce a New Oil, page 5

10. We note your reference to “OriginOil’s complete, validated industrial process.” However, your disclosure elsewhere, including on page six, indicates that you have not yet completed a prototype of your technology and only afterward will you be in a position to determine whether your technology is valid. In future filings, please revise your disclosure accordingly.
11. In future filings, please disclose the methods of competition in your industry. See Item 101(h)(4)(iv) of Regulation S-K.

Government and Environmental Regulation, page 6

12. We note your disclosure under this heading that you “are not aware of any existing or probable government regulations that would negatively impact...[y]our operations.” However, we also note your risk factor disclosure on page nine to the effect that your “industry...is subject to economic and other regulations that may have an adverse affect on the entire industry and subsequently our business.” In future filings, please describe under this heading the regulations to which you refer in your risk factors section and discuss the potential effects of these and other probable regulations on your business. See Item 101(h)(4)(ix) of Regulation S-K.

Item 1A. Risk Factors, page 7

Risks Related to OriginOil's Business and Financial Condition, page 7

OriginOil Will Need to Increase the Size of Its Organization, and May Experience Difficulties in Managing Growth, page 8

13. In future filings, please disclose the basis for your disclosure that you "expect to experience a period of significant expansion in headcount, facilities, infrastructure and overhead and anticipate that further expansion will be required to address potential growth and market opportunities" or otherwise appropriately qualify or contextualize this disclosure. We note, for example, that you have not yet proven the validity of your technology, you have produced no revenues to date, and your auditor has expressed substantial doubt about your ability to continue as a going concern.

Risks Relate to OriginOil's Common Stock and Its Market Value, page 10

14. In future filings, please revise the risk factor under this heading to indicate whether trading in your common stock is presently subject to the penny stock rules.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operation, page 12

15. In future filings please include a discussion and a timeline of the milestones you must achieve before you are able to generate revenues. Provide a detailed analysis of the costs of each step and how you intend to finance these costs.

Liquidity and Capital Resources, page 13

16. We note that your auditor has expressed substantial doubt about your ability to continue as a going concern. In future filings, please disclose how you anticipate continuing as a going concern over the next twelve months, including whether you have already secured additional financing through the issuance of equity or debt, and indicate how long you anticipate continuing based on your cash on hand at the end of the applicable period.

Item 9A(T). Controls and Procedures, page 14

17. Please amend your Form 10-K to provide the disclosure required by Item 307 of Regulation S-K.

Management's Report on Internal Control over Financial Reporting, page 14

18. We note your description of the definition of internal control over financial reporting. The description appears to be based on the definition of internal control over financial reporting set forth in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. As described, however, the description does not fully conform to the definition set forth in those rules. In future filings, please revise your disclosure to include the full definition of internal control over financial reporting or simply state that your management concluded on the applicable date that your internal control over financial reporting was or was not effective.

Item 10. Directors, Executive Officers and Corporate Governance, page 14

19. In future filings, please disclose whether you have adopted a code of ethics, as defined in Item 406(b) of Regulation S-K, and if not, please explain your reasons for not doing so. If you have adopted a code of ethics, please tell us how you intend to satisfy your obligations to file as an exhibit, post on your website, or undertake to provide investors a copy of your code of ethics. See Item 406(c) of Regulation S-K.

Executive Officers, Directors, and Key Employees, page 14

20. In future filings, please discuss the specific experience, qualifications, attributes or skills that led you to the conclusion that each board member should serve as a director at this time, in light of your business and structure. See Item 401(e) of Regulation S-K.

Item 11. Executive Compensation, page 16

21. We note that you have not included any disclosure in response to Item 402(s) of Regulation S-K. Please advise us of the basis for your conclusion that disclosure is not necessary and describe the process you undertook to reach that conclusion.

Election and Compensation of Directors, page 16

22. We note that in 2009 you granted warrants to your independent directors. In future filings, please provide the tabular disclosure required by Item 402(r) of Regulation S-K regarding your directors' compensation for the last completed fiscal year.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters, page 17

23. We note from page 16 that on July 1, 2009, you adopted the OriginOil 2009 Incentive Stock Plan under which you had 15,000,000 shares of common stock available for issuance. In future filings, please provide the tabular disclosure required by Item 201(d) of Regulation S-K.

Item 15. Exhibits, page 17

24. Please file as an exhibit to your next Exchange Act report your 2009 Incentive Stock Plan described on page 16. See Item 601(b)(10)(iii)(A) of Regulation S-K.

Signatures, page 18

25. Please amend your Form 10-K to indicate the date(s) on which each individual signed your Form 10-K.

Form 10-Q for the Fiscal Quarter Ended June 30, 2010

Item 2. Management's Discussion and Analysis or Plan of Operation, page 9

Recent Developments, page 14

26. We note your disclosure under this heading that your "Single-Step Extraction™ System...is scheduled for delivery under a firm Purchase Order of 1 June 2010" and that "[t]he shipment of these products will generate [y]our first revenue in the third quarter." Please tell us what consideration you gave to filing a Form 8-K reporting the receipt of your first purchase order and the other agreements described under this heading and to filing such agreements as exhibits. Please note that we may have further comments upon reviewing your response.

Item 6. Exhibits, page 17

27. In future filings, please file the certifications as exactly set forth in Item 601(b)(31)(i) of Regulation, which should not include references to "small business issuer" or contain other variations from the required text in paragraphs 4, 4(a), 5, 5(a), and 5(b). Please also comply with this comment in your future Forms 10-K.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company

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OriginOil, Inc  
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and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Tracey McKoy, Staff Accountant, at (202) 551-3772 or, the undersigned Accounting Branch Chief at (202) 551-3355 if you have questions regarding comments on the financial statements and related matters. Please contact Hagen Ganem at (202) 551-3330 with any legal related questions.

Sincerely,

Terence O'Brien  
Accounting Branch Chief