



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

Mail Stop 7010

October 11, 2006

Stephen A. Romano, Chief Executive Officer
American Ecology Corporation
300 E. Mallard, Suite 300
Boise, Idaho 83706

**RE: Form 10-K for the Fiscal Year Ended December 31, 2005
File No. 0-11688**

Dear Mr. Romano:

We have limited our review of your filing to those issues we have addressed in our comment. Where indicated, we think you should revise your document in response to this comment. If you disagree, we will consider your explanation as to 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 with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process 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 you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Fiscal Year Ended December 31, 2005

Note 8 – Closure and Post Closure Obligation, page 45

1. We note that you early adopted SFAS 143 on January 1, 2002. When looking at the interest rates of your debt during this time, we note that you had a term loan at a variable rate of 3.7% and a fixed rate of 6.9% for notes payable and other. We assume that you used the expected cash flow approach to estimate the fair value

of the liability for your asset retirement obligation; as such, you are required to discount the estimated cash flows using a credit-adjusted risk-free rate. Please tell us how you determined that it was appropriate to use a discount rate of 9.3% in determining the fair value of your asset retirement obligation. Refer to paragraphs 8-10 of SFAS 143 for guidance.

Furthermore, you disclose that you adjusted your obligation due to a change in the expected timing of cash expenditures based upon actual and estimated cash expenditures. For upward and downward revisions in the amount of undiscounted estimated cash flows, please tell us the discount rate you used for each revision. Refer to paragraph 15 for of SFAS 143 for guidance.

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Please respond to these comments within 10 business days, or tell us when you will provide us with a response. Please provide us with a response letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please file your supplemental response on EDGAR as a correspondence file. Please understand that we may have additional comments after reviewing your responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed decision. Since the company 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 connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in their filings;
- 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.

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

Mr. Stephen A.Romano
American Ecology Corporation
October 2, 2006
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If you have any questions regarding these comments, please direct them to Tracey McKoy, Staff Accountant, at (202) 551-3772 or, in her absence, to the undersigned at (202) 551-3255.

Sincerely,

Nili Shah
Accounting Branch Chief