

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

May 1, 2012

Via E-mail

Mr. James M. Sullivan
Executive Vice President and Chief Financial Officer
Solutia Inc.
575 Maryville Centre Drive
P.O. Box 66760
St. Louis, Missouri 63166-6760

Re: Solutia Inc.

Form 10-K for Fiscal Year Ended December 31, 2011

Filed February 24, 2012

Response dated April 17, 2012

File No. 1-13255

Dear Mr. Sullivan:

We have reviewed your response letter dated April 17, 2012, and have the following additional comment. 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 providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comment applies to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to this comment, we may have additional comments.

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- 1. We note your response to comment 2 in our letter dated April 6, 2012, and have the following additional comments regarding your legacy tort claims.
 - We note your statement that you have not recorded a loss contingency on any of the legal matters tendered to Monsanto and, in arriving at this accounting conclusion, you have not netted loss contingencies with gain contingencies, as defined by ASC 450-30. However, your conclusion that it is remote there will be an unfavorable outcome to you from the legacy tort claims is after consideration of the terms of the February 2008 Agreement. We further note your statement that if these legacy tort claims are not within the scope of the February 2008 Agreement, the amount you could be liable for could have

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a material adverse impact to your consolidated financial statements. Finally, you state that you are unable to estimate the amount or range of potential loss because Monsanto has accepted the tenders of defense and you are not actively involved. In this regard:

- Clarify whether you have been legally released from your obligations for the legacy tort claims tendered to Monsanto. If not, please explain what efforts you are undertaking to obtain relevant information from Monsanto to then reasonably estimate the amount and/or range of probable loss and the amount and/or range or reasonably possible loss in excess of the amount accrued. As noted in your disclosure, these amounts should be exclusive of any gain contingency associated with the February 2008 Agreement with Monsanto. If you are not making any efforts to obtain relevant information from Monsanto, please explain why. We recognize that there are a number of uncertainties and potential outcomes associated with loss contingencies. Nonetheless, an effort should be made to develop estimates for purposes of recognizing an appropriate liability and providing adequate disclosure regarding the determination of the potential reasonably possible outcomes and what the reasonably possible range of losses would be for those reasonably possible outcomes.
- Please tell us the process under which you tender a legacy tort claim to Monsanto, including whether Monsanto must formally accept such claims. If Monsanto must formally accept such claims, please tell us the number of claims tendered as of each balance sheet presented for which Monsanto has not yet formally accepted those claims.
- Address whether Monsanto has disputed any of the legacy tort claims that you have tendered under the February 2008 Agreement. If so, please provide us with the number of claims in which Monsanto has disputed along with an understanding of the significance of the claims disputed.
- Tell us whether Monsanto has made payments as a result of the legacy tort claims. If yes, please tell us and disclose for each period presented the amount paid and the number of claims the payments relate.
- Please revise your disclosures to provide the information required under ASC 450-20-S99-1 (SAB Topic 5:Y) for the legacy tort claims, including a rollforward of the claims for each period presented; the amount or range of amounts claimed for each claim for each period presented; and the aggregate costs and settlement amounts for each period presented, regardless of whether the claim is covered under the February 2008 Agreement with Monsanto.
- Please disclose the maximum amount Monsanto will indemnify you under the agreement, or clarify that there is no maximum amount or other limit on the indemnification agreement.

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You may contact Jenn Do at (202) 551-3743, Tracey Smith at (202) 551-3736, or me at (202) 551-3355 if you have questions regarding comments on the financial statements and related matters.

Sincerely,

/s/ Terence O'Brien

Terence O'Brien Accounting Branch Chief