



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

Mail Stop 7010

December 26, 2006

via U.S. mail and facsimile

Jeffrey M. Lipton
Chief Executive Officer
Nova Chemicals Corporation
1550 Coraopolis Heights Road
Moon Township, Pennsylvania 15108

**RE: Nova Chemicals Corporation
Form 40-F for the Fiscal Year Ended December 31, 2005
File No. 1-13064**

Dear Mr. Lipton:

We have reviewed your response letter dated December 13, 2006 and have the following additional comment.

Form 40-F for the Fiscal Year Ended December 31, 2005

Note 21 – Segmented Information, page 31

We note your response to our letter dated November 28, 2006. In this letter, we expressed concerns regarding your basis for aggregating five of your operating segments (i.e. AST, LLDPE, LDPE, HDPE and SCLAIR) into a Polyethylene reportable segment, as it appeared that the financial results for these five operating segments over the past three years were too divergent to be considered economically similar. However, in your most recent letter dated December 13, 2006, you have provided additional information supporting your view that these five operating segments have demonstrated similar sales trends, gross margin percentages, and gross margin percentage trends over the past five years. We continue to have concerns regarding the dissimilarity of the operating profit margins as a percentage of sales, as well as the trends in this measure, amongst your five operating segments. However, you have stated that these differences are due to anomalies in transfer pricing, which you do not expect will be present in the future.

We also note your proposal to present seven reportable segments, in relation to the practical limits to the number of reportable segments that an enterprise separately

discloses, pursuant to paragraph 24 of SFAS 131. We further acknowledge that the application of SFAS 131 is subjective in nature and that you, as management, are in the best position to identify your segments. Accordingly, we have no further comment at this time.

However, we continue to urge you to consider the detailed guidance of SFAS 131, including whether your segments comply with the underlying objective of SFAS 131, as discussed in paragraph 3 of that standard, especially as your operations and reportable segments change. In particular, if you dispose of the three reportable segments currently under consideration, we urge you to reconsider the practical limits discussed in paragraph 24 of SFAS 131, as well as whether separate disclosure of the differences in performance of your AST, LLDPE, LDPE, HDPE and SCLAIR operating segments would be more important to an investor's understanding of your business, given your smaller size subsequent to the disposals. Accordingly, we may consider this issue in future periods.

In addition, we remind you that when you file your restated segment disclosures in your Form 40-F, you should appropriately address the following:

- an explanatory paragraph in the reissued audit opinion,
- full compliance with SFAS 154, paragraphs 25 and 26,
- fully update all affected portions of the document, including MD&A. Please be advised that your MD&A should discuss the results of operations of each reportable segment, as well as the individual operating segments within your Polyethylene reportable segment, to the extent that the results of the individual operating segments from each other.
- updated disclosures regarding disclosure controls and procedures should include the following:
 - o a discussion of the restatement and the facts and circumstances surrounding it,
 - o how the restatement impacted the CEO and CFO's original conclusions regarding the effectiveness of their disclosure controls and procedures,
 - o changes to internal controls over financial reporting, and
 - o anticipated changes to disclosure controls and procedures and/or internal controls over financial reporting to prevent future misstatements of a similar nature.
- updated reports from management and your independent auditors regarding your internal controls over financial reporting.
- updated certifications.

* * * *

As appropriate, respond to these comments within 10 business days or tell us when you will provide us with a response. Please file your response letter on EDGAR. Please understand that we may have additional comments after reviewing responses to our comments.

Mr. Lipton
Nova Chemicals Corporation
December 26, 2006
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You may contact Tracey McKoy, Staff Accountant, at (202) 551-3772 or, in her absence, Nili Shah at (202) 551-3255, or to the undersigned at (202) 551-3689 if you have questions regarding comments on the financial statements and related matters.

Sincerely,

John Hartz
Senior Assistant Chief Accountant