



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

Mail Stop 7010

February 20, 2007

By U.S. Mail and Facsimile

Mr. R. Michael McEntee  
Chief Financial Officer  
Fansteel Inc.  
570 Lake Cook Road, Suite 200  
Deerfield, Illinois, 60015

**Re: Fansteel Inc.**  
**Form 10-K for the Fiscal Year Ended December 31, 2005**  
**Form 10-Q for the Fiscal Quarter Ended March 31, 2006**  
**Form 10-Q for the Fiscal Quarter Ended June 30, 2006**  
**Form 10-Q for the Fiscal Quarter Ended September 30, 2006**  
**File No. 001-08676**

Dear Mr. McEntee:

We have reviewed your response letter dated October 10, 2006 and have the following additional comments. If you disagree, we will consider your explanation as to why our comments are inapplicable or a revision is unnecessary. After reviewing this information, we may or may not raise additional comments.

General

1. We understand from your response letter dated October 10, 2006 that you have requested confidential treatment of your entire response letter. You may want to reconsider your request to seek confidential treatment of the entire document since certain information may not warrant confidential treatment. Should you reconsider your request, we ask that you:
  - resubmit your paper response and limit your Rule 83 request to only those portions of the response letter which must truly remain confidential;
  - submit an electronic version of the response letter on EDGAR as correspondence and include all the non-confidential information in that letter; and
  - redact the information subject to the new Rule 83 request and mark the response letter using brackets or other clear markings to indicate the location of the omitted material.

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Additionally, if you have not previously done so, you must also send a copy of your written request for confidential treatment by mail to the Office of Freedom of Information and Privacy Act Operations. For guidance, please see Staff Legal Bulletin No. 1, Rule 24(b)-2 of the Exchange Act, and Rule 83 of the Freedom of Information Act.

Prior Comment Eight – Note 6 - Discontinued Operations including Certain Environmental Remediation, page 40

2. It is not clear to us why you believe it is appropriate to include payments to the PBGC under discontinued financing cash flows. Despite the fact that these payments will continue for several years, it does appear to us to be appropriate to classify the cash outflows as financing activities. Please advise or revise.

Prior Comment Thirteen – Note 14 - Business Segments, page 50

3. We note your response to prior comment thirteen and the supplemental information provided. However, in order for us to better understand your operating segments, please provide us with copies of internal reports with amounts included. In addition, please tell us if AST and Intericast are operating segments. If they are not operating segments, please explain why. If they are operating segments, please demonstrate how you determined it is appropriate to aggregate them under Industrial Metal Components.

\* \* \*

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 furnish your response on EDGAR as a correspondence file. Please understand that we may have additional comments after reviewing your responses to our comments.

If you have any questions regarding these comments, you may contact Dale Welcome, Staff Accountant, at (202) 551-3865, Anne McConnell, Senior Staff Accountant, at (202) 551-3709 or, in their absence, to the undersigned at (202) 551-3768.

Sincerely,

John Cash  
Accounting Branch Chief