

December 9, 2011

Mr. David R. Humphrey
Accounting Branch Chief
United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street N.E.
Washington, D.C. 20549

Re: Kirby Corporation
Form 10-K for the Fiscal Year ended December 31, 2010
Filed February 25, 2011
File No. 001-07615

Dear Mr. Humphrey:

We have received your comment letter dated November 28, 2011 on our 2010 Form 10-K and below is our response to your comment. Set forth below in italics is the comment made by the staff in your letter followed by our response.

Form 10-K for the Fiscal Year Ended December 31, 2010

*Note 1 – Summary of Significant Accounting Policies
Impairment of Long-Lived Assets, page 62*

- 1. Based upon the disclosures in this footnote, we note that you have historically assessed the recoverability on marine transportation assets based upon vessel classes. We also understand that barge classes were determined based upon similar capacities, hull type and type of product, and that boat classes were determined based upon horsepower. In view of the significance of the July 2011 K-Sea acquisition, please tell us whether and how your methodology and/or these classifications have changed as of the most recent practicable date. In this regard, we note the K-Sea fleet operates along the East Coast, West Coast and Gulf Coast of the United States as well as in Alaska and Hawaii. You state that nominations of vessels for specific jobs are determined on a day-to-day basis, and are a function of the equipment class required and the geographic position of vessels within such class at that particular time. Please tell us more about the consideration given to the geographic location of the vessels within a class when grouping assets to test for recoverability. In your response, address the extent to which your vessels are generally transferred between geographic locations in the conduct of your business.*
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Response:

Our tank barges and towboats are mobile assets and equipped to operate in geographic regions throughout the United States and the Company has in the past and expects to continue to move vessels from one region to another when it is necessary due to changing markets and it is economical to do so. As these vessels within classes are considered to be interchangeable and provide the same service, we believe the asset groupings based on our defined vessel classes is appropriate. The geographic location of a vessel is a factor in deciding which vessels to use for a particular job, but is not a factor in the designation of a vessel's asset class.

Our vessel classes have been expanded to include additional classes for the ocean-going coastwise vessels acquired in the K-Sea acquisition. The barge classes will continue to be determined based upon similar capacities, hull type and type of product but boat classes have been expanded to include hull type in addition to horsepower.

For example, some of the ocean-going tugboats and tank barges have a different hull configuration which utilizes a notching system or coupling system that connects the tugboat and the barge and allows it to operate in certain sea and weather conditions in which conventional tug-barge combinations cannot. This necessitates the need for additional asset groupings for testing for recoverability.

We plan to expand our Summary of Significant Accounting Policies in our 2011 Form 10-K to incorporate the additional information above.

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In connection with responding to the staff's comments, we acknowledge 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.

Please call me at 713-435-1000 if you have any questions.

Sincerely,

/s/ David W. Grzebinski

David W. Grzebinski
Executive Vice President and Chief Financial Officer

cc: Joseph H. Pyne – Chairman and Chief Executive Officer
