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Attorneys and Counselors

December 6, 2010

Ms. Stephanie Sanzone
Designated Federal Officer (DFO)
EPA Science Advisory Board Staff Office (1400R)
U.S. Environmental Protection Agency
200 Pennsylvania Avenue, NW.
Washington, DC 20460

Re: Science Advisory Board Review of *Methods and Approaches for Deriving Numeric Criteria for Nitrogen/Phosphorus Pollution in Florida's Estuaries, Coastal Waters, and Southern Inland Flowing Waters*

Dear Ms. Sanzone,

This correspondence is submitted on behalf of CF Industries, Inc. (CF) for consideration by the members of Science Advisory Board (SAB) as the board reviews EPA's *Methods and Approaches for Deriving Numeric Criteria for Nitrogen/Phosphorus Pollution in Florida's Estuaries. Coastal Waters, and Southern Inland Flowing Waters* dated November 17, 2010.

While CF has not had an opportunity to perform a complete analysis of all aspects of the EPA document, EPA's proposed Downstream Protective Values or "DPVs" deserve specific comment.

The DPV concept is misplaced and misapplied. As a preliminary matter, there is no legal basis for a second set or second tier of criteria the sole purpose of which is to account for deficiencies in the initial for first tier of criteria. 40 C.F.R § 131.10(b) states:

> In designating uses of a water body and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provided for the attainment and maintenance of the water quality standards of downstream waters.

EPA interprets this provision to mean that any criterion developed that would not be protective of downstream waters would be inconsistent with federal regulations and the Clean Water Act.

However, EPA's instream criteria developed for rivers and streams flowing into estuaries fail to protect downstream waters otherwise the proposed DPVs would not be necessary.

In other words, had EPA derived the stream criteria consistent with its own regulation, 40 C.F.R. § 131.10(b), there would be no need to develop DPVs. So one of two alternatives is true: 1) EPA's instream criteria are not protective of downstream waters in violation of 40 C.F.R § 131.10(b); or, 2) EPA's instream criteria are protective of downstream waters consistent with 40 C.F.R § 131.10(b) and therefore the DPVs are not needed.

There is no legal basis for EPA establishing an initial set of criteria or first tier of criteria that fail to comply with 40 C.F.R § 131.10(b) and then establish a second tier of criteria designed to account for deficiencies in the first tier. In this case, the deficiency in the first tier criteria would be their failing to be protective of downstream waters in violation of 40 C.F.R § 131.10(b).[1]

As applied, EPA's calculation of second tier downstream protective values would provide absurd results. The DPVs result in ambient target concentrations for TN and TP that are more stringent than natural conditions.

EPA provides example DPV calculations for Escambia Bay, Pensacola Bay, Blackwater-East Bay and Santa Rosa Sound. The DPVs for TN ranged from .39 to 0.47 mg/L with an average of 0.41 mg/l. The DPVs for TP ranged from 0.14 to 0.16 mg/L with an average of 0.015 mg/L.

The target concentrations proposed by EPA are at or below concentrations of TN an TP associated with Event Mean Concentrations (EMCs) for watersheds that are 75% to 90% forest as the principal land use.[2] Comparing watershed land use with mean nutrient concentration of TN and TP in streams in the Western, Central and Eastern United States, a mean TP of 0.015 was associated with a watershed comprised of 75% forest in the Eastern United States. EPA's example of 0.015 mg/L TP for Florida waters is less than the EMC for areas that are 90% forest in the Western (0.022 mg/L) and Central (0.020 mg/L) United States.

A TN concentration of 0.41 mg/L, as a DPV for Florida panhandle bays, is significantly lower than the EMCs estimated for watersheds that are 90% forested across the United States: Western (0.601 mg/L); Central (0.501 mg/L); and, Eastern (0.658 mg/L). Note that the EMC for the Eastern United States, assuming a watershed where forest comprise

[1] CF is not suggesting that EPA should go back and make its instream protective values significantly more stringent to assure the protection of downstream waters. CF has detailed the many weaknesses underlying EPA's stream criteria in its comments filed in response to EPA's proposed numeric nutrient criteria for Florida fresh waters. The Florida Department of Environmental Protection has also asserted that DPVs are unnecessary and legally suspect noting that its use of benchmark waters and biological verification of its draft stream criteria assure that its draft criteria are protective of downstream waters. CF asserts that a plain reading of 40 C.F.R § 131.10(b) prohibits the two tier IPV/DPV approach proposed by EPA.

[2] Lin, J. P. (2004). *Review of Published Export Coefficient and Event Mean Concentration (EMC) Data.* WRAP Technical Notes Collection (ERDC TN-WRAP-04-3), U. S. Army Engineer Research and Development Center, Vicksburg, MS.

90% of the watershed land uses, results in a target TN concentration 60% greater that the example DPV calculated by EPA for Florida panhandle bays and sounds.

In sum, EPA's downstream protection values or DPVs are not legally or technically defensible and CF requests that the Science Advisory Board pay particular attention to this aspect of EPA's proposed methods.[3]

CF thanks you and the Science Advisory Board members for your time and attention to this matter.

Winston K. Borkowski

cc: Craig Kovach, CF Industries, Inc.

[3] CF provided detailed comments in opposition to the DPV concept for estuaries and lakes as proposed by EPA in January 2010 and in its Notice of Data Availability (NODA) released in August of 2010. *See* EPA Docket No. EPA-HQ-OW-2009-0596, Items 2046, 2046.1 – 2046.3; 2333, 2333.1 – 2333.2; 2423, 2423.1 – 2423.9; 2503, 2503.1 – 2503.8.