

July 1, 2013

Marie Tipsord
Hearing Officer
Illinois Pollution Control Board
James R. Thompson Center
100 W. Randolph Street, Suite 11-500
Chicago, IL 60601

**Re: COMMENTS OF THE CHEMICAL INDUSTRY COUNCIL OF ILLINOIS ON
FIRST NOTICE OPINION AND ORDER OF THE BOARD**

Dear Ms. Tipsord,

The Chemical Industry Council of Illinois ("CICI") submits its comments on the First Notice Opinion and Order of the Illinois Pollution Control Board ("Board"), R08-9 (Subdocket C), dated February 21, 2013, regarding the Water Quality Standards and Effluent Limitations for the Chicago Area Waterway System ("CAWS") and the Lower Des Plaines River ("LDPR"): Proposed Amendments to 35 Ill. Adm. Code 301, 302, 302, and 304 ("First Notice").

The CICI is a statewide trade association representing the chemical industry in Illinois. CICI represents 211 member companies employing more than 45,000 workers at an average annual wage of \$80,748 in 726 manufacturing facilities and 877 wholesale and distribution facilities in Illinois. CICI has several member companies that will be affected by the proposed rulemaking, and because of the potential impact to our member companies, CICI believes that there are several aspects of the proposed rule that need to be clarified before moving on to second notice.

Background

In its First Notice, the Board indicated that it did not concur with the designated aquatic life use proposed by the Illinois Environmental Protection Agency ("Illinois EPA") in 35 Ill. Adm. Code Section 303.327 for the Upper Dresden Island Pool ("UDIP"), which was to be protected by the proposed water quality standard in 35 Ill. Adm. Code Part 302, Subpart D. Instead, the Board proposed that the UDIP be designated as General Use because the Board believes the UDIP can attain the goals of the Clean Water Act ("CWA"). Also, the Board indicated in its First Notice that "particularly in the area of temperature, water quality standards may need to be adapted for the UDIP." The Board also noted its determination that "the UDIP should be designated as General Use because the proposed standards are nearly identical except for more stringent standard for April to November temperatures and mercury and a less stringent temperature standard for December to March."

The goals of the CWA include achieving water quality that provides for the protection and propagation of fish and wildlife, and providing for recreation in and on the water body. Though existing General Use water quality standards (e.g., 35 IAC 302.208, 302.210, and 302.211)) provide for acute and chronic aquatic life protection, human health protection, and animal and plant life protection, the Board implied that these General Use standards may not be appropriate for the UDIP.

The Board outlined specific concerns with Illinois EPA's proposed aquatic life use of the UDIP and has invited comments on:

1. Determining the biologic intent of definitions of the proposed designated use;
2. Reconciling the relationship between proposed designated use and proposed water quality standards to protect designated use;
3. Defining the specific terms "tolerant, intermediately tolerant, and intolerant" species as relates to aquatic life use;
4. Applying aquatic habitat and water quality factors, or just one or the other, in supporting aquatic life use determinations; and
5. Considering the connectivity of larger aquatic systems in designated aquatic life use.

First Notice, R08-09(C) (Ill.Pol.Control.Bd. Feb. 21, 2013).

The Board has directly linked its proposed designated use of the UDIP to appropriate water quality standards for the UDIP, and expressed concern about the relationship of use and water quality standards. CICI respectfully asks the Board to carefully consider the same in evaluating the full implications of its determination to designate the UDIP as General Use. In that regard, CICI offers the following specific comments on the Board's concerns outlined above:

1) CWA aquatic life goals cannot be met in the UDIP

CICI supports an aquatic life use designation, whether as originally proposed by Illinois EPA or as currently designated, that recognizes the inherent limitations of the UDIP to fully attain the CWA goals, and that the designation is not as a General Use water. CICI disagrees with the Board's assertion that improvement in chemical water quality and reduction in temperature will result in the UDIP fully attaining the CWA goals. A review of discussion pertaining to Use Attainability Analysis ("UAA") factors presented at 40 C.F.R. § 131.10, that are relevant to a determination of a water body attaining CWA aquatic life goals, indicates these goals cannot be met in the UDIP. This conclusion is based on a review of available data and discussion presented in publically available Document 59249 (Hey and Associates December 2003), Document 67068 (Seegert November 9, 2009) and Document 67069 (Seegert November 10, 2009). Statement of Reasons, Attachment A – Lower Des Plaines River Use Attainability Analysis Final Report (Dec. 2003), R08-09 (Ill.Pol.Control.Bd. Oct 26, 2007) (hereafter

“UAA”), Prefiled Testimony of G. Allen Burton, R08-09 (Ill.Pol.Control.Bd. Sept. 8, 2008) (hereafter “Burton Testimony”), Transcript of Nov. 9, 2009 Hearing (Ill.Pol.Control.Bd. Nov. 9, 2009) (hereafter “Nov. 9, 2009 Transcript”), Transcript of Nov. 10, 2009 Hearing (Ill.Pol.Control.Bd. Nov. 10, 2009) (hereafter “Nov. 10, 2009 Transcript”).

Primary to the conclusion that CWA aquatic life goals cannot be met are several physical and associated biological conditions that exist within the CAWS and UDIP that are irreversible with respect to mitigation, are independent from potential impacts from water quality conditions, and were previously not appropriately considered as natural factors of the water body (CAWS and UDIP) system dynamics.

Key to the inability of the UDIP to meet CWA aquatic life goals is the presence and established operation of dams and navigation within the waterway (Nov. 9, 2009 Transcript and Nov. 10, 2009 Transcript), and the continued urban development and influx of sediment and contaminants (Burton Testimony) which directly and indirectly preclude irreversible hydrologic, physical, and biological attributes within the system. Ohio Habitat QHEI scores for the study area have been independently assessed by various entities over a period from 1993 to 2008 and were shown to be consistent, with poor individual metric scores associated with sedimentation, riffle habitat, hard substrate occurrence and frequency, and in-stream cover as example key variables exhibiting less than desirable status for attaining CWA aquatic life goals. These same key variables were shown to be directly and indirectly influenced by the physical and hydrologic effects of irreversible dam operation, navigational barge traffic, and sediment influx, and thus, also became irreversible QHEI habitat features of the waterway system (Nov. 9, 2009 Transcript, Nov. 10, 2009 Transcript, and UAA).

Similarly, the record in this proceeding includes a discussion on the artifact of sediment influx to the system as an irreversible condition based on consistent source loading, which is due to irreversible watershed development and resuspension/redistribution of existing within-channel sediments. Burton Testimony. Moreover, such source loading does not meet sediment quality guideline (“SQGs”) thresholds expected to meet CWA aquatic life goals. The resuspension/redistribution of poor quality sediments and other sediment material to critical habitats along the shoreline and limited riffle and hard substrate features is a direct physical response to irreversible dam operation (high rate water level fluctuation) and navigational barge traffic (Nov. 9, 2009 Transcript and Nov. 10, 2009 Transcript). Finally, these hydrologic and habitat features that are in direct response to the irreversible presence of the dams and navigational practices directly influence the biological attributes in terms of limiting fish spawning, rearing, and foraging potential for several species that may otherwise occur as a sustainable population, but cannot under the existing dam operation and navigational practices.

The above factors are appropriate factors for consideration of: 1) UAA Factor 3 (Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place); 2) UAA Factor 4 (Dams, diversions or other hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original conditions or to operate such modifications in a way that would result in the attainment of the use); and 3) UAA Factor 5 (Physical conditions associated with the natural features of the water body, such as the lack of proper substrate, cover,

flow, depth, pools, riffles and hard substrate that are unrelated to water quality preclude attainment of aquatic life protection uses).

2) **Consideration of both habitat and water quality factors is not required by CWA**

There is no requirement under the CWA for consideration of both habitat and water quality factors for aquatic life use designations. Moreover, there are water bodies where one factor will be more limiting than the other, but this is not atypical. However, in the UDIP, where the physical habitat conditions are more limiting than water quality factors, these limitations prevent the attainment of aquatic life protection uses, rather than reduce the ability to maintain aquatic life protection uses.

As discussed above, chemical water quality is not related to habitat. Similarly, chemical water quality will not predict habitat quality or improve habitat quality. A water body typically needs both the physical and chemical conditions to be aligned to support a diverse and abundant ecosystem. For example, if there is a reduction in ambient temperature or in ambient levels of dissolved copper, there would be no change in the frequency of riffles or a change or expansion in the hard substrate availability, or a reduction in the resuspension of sediments.

3) **Consideration of connectivity of larger aquatic system is not required in designation of aquatic life use**

While connectivity of the UDIP to the larger aquatic systems is important, the protection of the downstream water body is considered in the implementation of water quality standards/criteria or wasteload allocations, and not in the designation of use of a water body. Additionally, the interconnectivity of watersheds and protecting a different downstream designated use can (and should) be dealt with during the process of implementing water quality standards/criteria into NPDES permits. Use designations for downstream or upstream reaches that may be different does not change the process of determining and assigning the appropriate designated use for the water body under consideration.

For example, during the implementation of water quality criteria for a discharge to a tributary to a downstream water body, permitting of the discharge considers downstream uses. Even though the tributary itself does not have to meet lower criteria, when one models the load from the point source to the tributary, the load cannot result in the downstream water not meeting water quality standards or criteria. This is done through the waste load allocation process, which considers downstream uses. In addition, use designations for downstream or upstream reaches that may be different do not change the process of determining and assigning the appropriate designated use for the water body under consideration. The implementation decisions for permitting a discharge do not alter the evaluation process for determining use designations. CICI understands that USEPA Region 5 is familiar with this process and interconnectivity of watersheds with different designated uses in Michigan and Indiana (at a minimum).

The UDIP's designated aquatic life use should be established independently of considerations for downstream water bodies and should consider the unique characteristics that differentiate it from any other General Use water.

4) **Implications of reconciling the relationship between proposed designated use and proposed water quality standards (to protect designated use)**

The relationship between proposed designated use and water quality criteria to protect designated use does shed light on the implications of the designated use. For example, if the derivation of the generally applied water quality criteria are based on sensitive species not resident to the newly redesignated water body or pathways of exposure (or consumption rates) for humans or wildlife will not occur for the newly redesignated water body, then one could either invest resources to re-derive all the criteria to be appropriate, or reconsider the redesignation. The scientific data to do either is similar – identification of species and establishment of limitations for species to be resident (e.g., physical barriers and permanent habitat limitations).

For example, if there is a lack of resident Trophic Level 4 fish (e.g., trout, bass) due to habitat limitations, then that data and information could support revisiting the use designation (i.e., not capable of fully supporting all aquatic life), or rederiving water quality criteria by removing the aquatic toxicity data for those Trophic Level 4 fish species.

Additional Comments

The Board clarified in its Opinion and Order, dated May 16, 2013, ruling on IERG's Motion for Clarification that it does not intend for the General Use standards to apply to the UDIP until the conclusion of Subdocket D. However, CICI urges the Board to carefully consider all of the implications of its proposed determination that the UDIP be designated as General Use before moving forward to Second Notice in this proceeding.

CICI understands that the Board intends to possibly "adapt" the applicability of the proposed General Use water quality standards for temperature in the UDIP during deliberations in Subdocket D. CICI strongly supports the Board's intent, and looks forward to the opportunity to participate in Subdocket D and, in fact, requests that the Board delay its final aquatic use designation for the UDIP in this Subdocket C until the record is more fully developed in Subdocket D on the consequences of General Use designation, especially for temperature.

Similarly, it appears that in making its determination that the Illinois EPA's proposal is "nearly identical" to the General Use standards, the Board failed to recognize that General Use waters are also subject to the derived toxics criteria in Subpart F. Subpart F applicability adds numerous water quality criteria for which compliance must be assessed. Subpart F water quality criteria do not apply to facilities currently discharging into existing Secondary Contact and Indigenous Aquatic Life Standards. CICI urges the Board to carefully evaluate the application of Subpart F requirements to the UDIP, especially given its unique nature, and delay its final aquatic use designation for the UDIP in this Subdocket C until the record is more fully developed in Subdocket D on the on the consequences of General Use designation.

Finally, CICI supports the Illinois Environmental Regulatory Group's ("IERG") comments submitted in this proceeding as well.

CICI appreciates the opportunity to offer these comments.

Sincerely,

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