BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
WATER QUALITY STANDARDS AND	)	R08-9 Subdocket C
EFFLUENT LIMITATIONS FOR THE	)	(Rulemaking – Water)
CHICAGO AREA WATERWAY SYSTEM	)	
AND LOWER DES PLAINES RIVER	)	
PROPOSED AMENDMENTS TO 35 ILL.	)	
ADM. CODE 301, 302, 303, and 304	)	

NOTICE OF FILING

TO:

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Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph Street, Suite 11-500
Chicago, IL 60601

Marie Tipsord, Hearing Officer
Illinois Pollution Control Board
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Persons included on the attached Service List

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Pollution Control Board the RESPONSE OF STEPAN COMPANY TO POST-HEARING COMMENTS OF OTHER PARTICIPANTS, a copy of which is herewith served upon you.

STEPAN COMPANY

DATE: March 19, 2012

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Thomas W. Dimond

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CERTIFICATE OF SERVICE

I, the undersigned, certify that on this 19th day of March 2012, I have served electronically the attached RESPONSE OF STEPAN COMPANY TO POST-HEARING COMMENTS OF OTHER PARTICIPANTS, and NOTICE OF FILING upon the following person:

John Therriault, Clerk
Illinois Pollution Control Board
James R. Thompson Center
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Chicago, IL 60601

and by U.S. Mail, first class postage prepaid, to the following persons:

Marie Tipsord, Hearing Officer
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The participants listed on the attached
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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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WATER QUALITY STANDARDS AND	)	R08-9 Subdocket C
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PROPOSED AMENDMENTS TO 35 ILL.	)	
ADM. CODE 301, 302, 303, and 304	)	

RESPONSE OF STEPAN COMPANY
TO POST-HEARING COMMENTS OF OTHER PARTICIPANTS

Stepan Company ("Stepan") appreciates the opportunity to provide this Response to the Post-Hearing Comments of Other Participants to the Illinois Pollution Control Board ("Board") in connection with the proposed aquatic life water quality use designations for the Chicago Area Waterway System ("CAWS") and Lower Des Plaines River ("LDPR"). This submission may include responses to the following, all of which were filed with the Board on March 5, 2012: Midwest Generation's Final Comments ("MG Comments"), Post-Hearing Comments of the Illinois Environmental Protection Agency ("Agency Comments"), the Environmental Groups' Post-Hearing Comments Regarding Aquatic Life Use Designations for the Chicago Area Waterways System and Lower Des Plaines River ("EG Comments"), the Pre-First Notice Comments of ExxonMobil Oil Corporation on the Proposed Aquatic Life Use Designation for the Upper Dresden Island Pool ("EM Comments"), the Illinois Environmental Regulatory Group's Subdocket C Final Pre-First Notice Comment on Aquatic Life Use Designations ("IERG Comments"), the Final Pre-First Notice Comments on Subdocket C of Citgo Petroleum Corporation and PDV Midwest, LLC ("Citgo Comments"), and Pre-First Notice Comments of Corn Products International, Inc. ("CPI Comments").

I. No Presumption In Favor of the CWA Goals Applies To the Unique Circumstances of this Proceeding, and the Agency's Proposed "Burden" Is Incorrect as a Matter of Law.

The environmental groups ("EGs") argue that a legal presumption must be applied by the Board in this proceeding in favor of the aquatic life use goals of the Clean Water Act ("CWA") unless those goals are demonstrated to be infeasible. EG Comments, 4 (citing *Idaho Mining Assoc., Inc. v. Browner*, 90 F. Supp. 2d 1078 (D. Idaho 2000)). That case recognized that the EGs' asserted presumption did not arise from the CWA itself. *Id.*, 1088. If it arises from anything, it arises from U.S. EPA's regulations at 40 C.F.R. § 131.10(g). But, recognizing such a presumption is contrary to the scheme that Congress adopted giving the States – not U.S. EPA – primary responsibility for designating water quality uses and criteria. *See* Section IV., below.

In addition, *Idaho Mining Assoc.* appears to have recognized a presumption based on U.S. EPA's regulations in an entirely different context. There is no indication that the State of Idaho or U.S. EPA had previously determined the water segments at issue in that proceeding to be incapable of meeting CWA goals. The case simply says that Idaho proposed to designate certain segments for "uses less protective than fishable/swimmable." *Idaho Mining Assoc.*, 90 F. Supp. 2d at 1083. That is in stark contrast to the situation here, where both Illinois and U.S. EPA have previously recognized the degraded condition of the CAWS and the LDPR.

The Board has entered numerous previous findings that the CAWS and the LDPR cannot attain CWA aquatic life and recreational use goals. In the 1970's, this Board recognized that the location of the I-55 bridge corresponded to changes in the physical environment of the LDPR that made the support of a diverse aquatic population infeasible. *In the Matter of: Water Quality Standards Revisions*, PCB R72-4, Opinion and Order of the Board, 6 (Nov. 8, 1973) (record citations omitted). U.S. EPA approved this classification of the LDPR in the 1980's even though no use attainability analysis under 40 C.F.R. § 131.10 (g) and (j) had been performed. Agency

Statement of Reasons, Att. A, p. 1-22 (hereafter "Agency SOR"). In the 1990's, the Board found that the LDPR "is a very artificial and significantly modified waterway that is limited in terms of habitat" and has significant residual contamination of sediments due to historical practices. *In the Matter of: Petition of Commonwealth Edison Company for Adjusted Standard from 35 Ill. Adm. Code 302.211(d) and (e)*, PCB AS 96-10, 6 (Oct. 3, 1996). Most recently, this Board found that the LDPR, including the Upper Dresden Island Pool ("UDP"), was significantly impacted by human-caused conditions and sources of pollution, including the impacts of significant navigational barge traffic. *In the Matter of Water Quality Standards and Effluent Limitations for the Chicago Area Waterways System and Lower Des Plaines River: Proposed Amendments to 35 Ill. Adm. Code 301, 302, 303, and 304*, PCB R08-9, Subdocket A, Proposed Rule, Second Notice, Opinion and Order, 49-50 (June 16, 2011). The same factors that made the UDP unable to attain CWA recreational uses, and other reasons, also limit the ability of this water segment to achieve CWA aquatic life uses.

Whatever might justify the application of a legal presumption in the case of a waterway that has not previously been categorized as incapable of attaining CWA goals, those reasons fade when a waterway has previously been found incapable of attaining CWA goals.

The Agency does not expressly argue that a presumption applies. Rather, it forwards the radical proposition that opponents of its proposal have a burden that has no support in law and would be impossible to satisfy. The Agency says that uses below CWA goals may only be designated by "showing that the [CWA goal] use is not possibly attainable even if all reasonably reversible impacts were reversed within the foreseeable future." Agency Comments, 24 (emphasis supplied). This "burden" is not supported by the federal regulations. The phrase "not possibly attainable" is not present anywhere in Part 131. *See* 40 C.F.R. Part 131 (available at http://www.gpo.gov/fdsys/pkg/CFR-2011-title40-vol22/pdf/CFR-2011-title40-vol22-

part131.pdf, word searched and last visited March 19, 2012). Moreover, the words "possibly" or "possible" do not appear in 40 C.F.R. § 131.10(g) or (j), which directly addresses designating uses lower than CWA goals. In fact, the federal regulations use language that suggests a traditional preponderance of the evidence standard. A State "may remove a designated use . . . if the State can demonstrate that attaining the designated use is not feasible" for one of the six listed reasons. 40 C.F.R. § 131.10(g). The Agency's "not possibly attainable" burden is entirely inconsistent with the federal regulations.

The irony of the Agency's proposed "burden" was on full display in the Agency's Comments. Even though the Agency is the proponent of these regulatory changes, it put the burden entirely on the other participants to prove a negative. Essentially, the Agency would require that participants prove beyond a shadow of a doubt that a segment cannot attain CWA goals. For example, even though the Agency recognized the negative effects of siltation and contaminated sediment on aquatic communities, the Agency criticized opposing testimony because it did not prove that the UDP could not attain a "fish community similar to one that can occur in other low-gradient Midwest rivers that are able to attain" the CWA goal. Agency Comments, 29-30. The Agency makes essentially the same argument with regard to rivers in urban settings. *Id.*, 31-32. Where is the Agency's citation to even a single Illinois river of a size and urban impact with siltation and sediment issues similar to the UDP that actually attains[1] CWA aquatic life use goals? This is an impossible standard. In essence, the Agency is saying, do a use attainability analysis ("UAA") on other Midwest streams and prove that none can attain

[1] To be clear, by "attains CWA" goals, we mean not simply that the river is designated to attain such goals but that it actually does. There are hundreds of waterways in Illinois that are supposed to attain CWA goals but do not, *see Illinois Integrated Water Quality Report and Section 303(d) List – Volume I – Surface Water – 2010,* Appendix A-2 (available at http://www.epa.state.il.us/water/tmdl/303d-list.html#2010, last visited March 19, 2012) and Illinois does not list impairment due to habitat modifications on its 303(d) list. *Id.*, 7.

the CWA goal. Moreover, such a standard ignores that the Agency has repeatedly recognized the uniqueness of the CAWS and the LDPR.

The Agency's "not possibly attain" standard must be rejected as contrary to law. While no presumption should apply that CWA goals are attainable in the CAWS and the LDPR, even if a presumption applies, presumptions are rebuttable. Once opponents have put forth sufficient evidence to rebut the presumption, the proponent must carry its burden of persuasion. In this proceeding, the participants supporting less than CWA aquatic uses for the UDP have put forth more than enough evidence to rebut any presumption, and neither the Agency nor the EGs have carried their burden.

II. The Quality of the Evidence Presented by the Agency Was Weak and Did Not Stack Up to the Evidence Presented by Other Participants.

All of the participants to this proceeding (or at least their legal counsel) will be no stranger to the Board finding that all the witnesses were credible. Stepan has no quarrel with such a finding. That being said, there is another issue related to the depth and quality of the evidence put forth by the participants that should not be recognized. The federal regulations that the Agency purported to be attempting to satisfy define a UAA as "a structured scientific assessment" of the ability of a waterway to attain a designated use. 40 C.F.R. § 131.3. In that regard, the Board should reflect on the scientific quality of the evidence presented by various participants.

Consider, for example, the Agency witnesses on the quality of the habitat in the UDP. While the Agency did not call him as a witness, it put the habitat analysis of Edward Rankin in the record. Rankin's assessment of the habitat QHEI values for the UDP led him to recommend that the UDP be designated in the category of an Ohio Modified Warmwater Habitat Use for impounded rivers. Agency SOR, Att. R, p. 13. His paper described that category as being for

streams with "extensive and irretrievable physical habitat modifications" that do "not meet Clean Water Act goals." *Id.*, 15-16. Apparently dissatisfied with that conclusion, the Agency turned to Chris Yoder and the QHEI scores developed by the Midwest Biodiversity Institute under his supervision. The quality of that work was – well, in a charitable word – abysmal. In contrast, Midwest Generation put forth a veritable flood of QHEI data of good quality collected by Greg Seegert and his team at EA Engineering. Consider side-by-side the quality of the QHEI data provided:

	Seegert	Yoder
Number of areas sampled in UDP	50, selected in unbiased manner encompassing entire UDP.[1]	3, biased to Brandon tailwater.[2]
Prior experience doing QHEI on UDP	Yes. 1993-94 and 2003.[1]	First time.[3]
Scoring mistakes	None identified in Agency or EG Comments.	We lost count.[4]
Witness in the field for QHEI work?	Yes.[1]	No.

Table Notes:

1. Hearing Ex. 366, 8-9.
2. Hearing Transcript, 2/1/08, 117 (hereafter, "HT, [date], [AM or PM, as needed]") (it seems that Yoder's team followed directions from U.S. EPA in selecting the QHEI locations). Mr. Yoder even needed help from Agency witnesses to figure out where his QHEI scores were located on the waterways. *See* MG Comments, 71, fn. 337.
3. HT, 2/1/08, 117.
4. To review the details, *see* MG Comments, 71-72 and Hearing Ex. 366, attached Ex. 2 at pp. 22-24.

At hearing, the Agency witnesses touted Mr. Yoder's QHEI work and repeatedly testified about the "gap" that existed between the "good" habitat scores and the lower fish IBI scores. In their post-hearing comments, the Agency cited the pre-filed testimony of Rob Smulski, Agency Comments, 13, and totally ignored the QHEI data developed by Mr. Seegert and his team that completely undercut that pre-filed testimony. The Agency cannot simply stick its head in the sand and ignore that data.

A similar story emerges when one considers the testimony on the quality of the sediment and the level of siltation in the UDP. Agency witnesses persistently testified that the quality of

the sediment and siltation in the UDP was getting better. That testimony seems primarily to have been based on the study performed for the Agency by AquaNova and Hey and Associates. *See* Agency SOR, Att. A. It is telling that the Agency did not call the authors of this report to testify before the Board. Moreover, the general statements of the Agency witnesses were more than rebutted by the testimony of Dr. Allen Burton and the 2008 sample data developed by EA Engineering. Dr. Burton has participated in and analyzed the results of multiple studies of sediments in the UDP. Moreover, Dr. Burton explained in detail that comparisons of sediment contamination levels over time are difficult because contaminant levels tend to be location specific. But, when the data from sampling at different times is reviewed, there is no apparent overall improvement in sediment quality. All the sampling efforts document exceedances of sediment quality guidelines, and the comparison of sample results from the same locations in 1995 and 2008 showed no consistent improvement in results. For metals, the majority of detected concentrations in 2008 for these co-located samples were higher or within a factor of two of previous sample results. Hearing Ex. 369, Att. 1, p. 10. Similarly, the overall level of siltation of the UDP did not materially change from 2003 to 2008. *See* Hearing Ex. 366, 5 and attached Ex. 2, p. 10.

The general lack of quality in the Agency's presentation continued with its approach to compliance. For example, the Agency did no real studies of how facilities would comply with the proposed thermal standards for the UDP. They just assumed everyone could use cooling towers, even though they gave no consideration to the ability to permit such cooling towers under applicable air regulations and were not aware of any facilities in Illinois that have installed cooling towers following industrial wastewater treatment. *See* HT, 3/10/08, PM, 24 and 30; HT, 3/12/08, 156-57; HT, 4/23/08, 23-24. In contrast, multiple participants have shown how overly optimistic the Agency's assumptions were and how many negative environmental consequences

flow from massive cooling tower installations. As Dr. Adams and Robin Garibay estimated, the electrical demands associated with the additional treatment systems necessary to achieve the Agency's proposed water quality standards will generate annual incremental emissions of the following air pollutants from Stepan's plant alone: carbon dioxide, 128,530 tons; sulfur oxides, 3,037 tons; nitrogen oxides, 234 tons; and mercury, 24 pounds. Hearing Ex. 318, 9.

As the proponent of these regulations, the Agency has the burden to come forth with persuasive evidence supporting the proposal. The Agency's evidence was thin gruel to begin with, and it wilted in the face of close examination and the contrary evidence supplied by multiple participants.

III. Several Arguments Raised by the Agency or the EGs Are Either Not Based on Properly Admitted Evidence or Lack a Sound Scientific Basis and Should Be Rejected.

A. The Agency Argument Regarding QHEI Substrate Component Scores Is Not Supported by Scientific Testimony and Should Be Rejected.

Apparently overwhelmed by the quantity and quality of Mr. Seegert's QHEI data, the Agency decided to fight back with an argument that was never presented in testimony at hearing. The Agency argued that the Board should look at a subcomponent of the QHEI related to substrate conditions, which according to the Agency shows that 40% of the UDP areas have substrate scores that should support attainment of CWA aquatic life use goals. Agency Comments, 30-31. The Board should reject this argument. No witness testified that there was any scientific basis to looking at one subcomponent of the QHEI to conclude that a water segment could attain CWA goals. All the witnesses testified on the basis of correlations between total QHEI scores and ability to attain CWA aquatic life use goals. Indeed, that seems to be the point of a multi-metric index – to bring together in one quantified data point a range of factors, all of which are relevant to supporting aquatic communities. Thus, there is no scientific

foundation for this argument by the Agency, and it should be rejected by the Board. To the extent that a UAA meeting U.S. EPA standards is required in this proceeding, such an analysis "is a structured scientific assessment," 40 C.F.R. § 131.3, not junk science that no witness has supported.

B. The Agency Argument That Seegert Relied Too Much on the General Effects of Impoundments Is Wrong and Improperly Relies on Matters Not in the Record.

The Agency argues that Mr. Seegert relied too heavily on the "generality that fish species . . . are negatively affected by the effects of impoundment in streams" and then criticizes his work for not documenting the pre-impoundment conditions of the LDPR. Agency Comments, 34-35. This argument seems a little ironic given the generalities that the Agency presented in support of its case, but putting that aside, the Agency's argument is not well-taken.

The effects of impoundment are not a generality. They are well-established fact, and the Agency admitted it. All the evidence introduced at hearing documents the negative effects of impoundment on fish communities. Mr. Smogor said "[I]f you put impoundment into a system by – almost by definition, you're going to reduce the biological integrity." HT, 1/28/08, 258. The Agency's UAA contractor report for the LDPR discussed in detail the negative effects of impoundments on aquatic communities and cited data showing significant decreases in fish index of biotic integrity scores in the impounded sections of the Fox River as compared to the free-flowing sections. Agency SOR, Att. A, p. 6-17 ("[T]he large and significant difference in [fish] IBI between the impounded and free-flowing stations of the Fox River make a strong case that the habitat modifications resulting from pooling of water behind dams results in major declines in biotic integrity, independent of other interacting watershed-related factors." Also noting that the IBI scores for the LDPR, both above and below the I-55 bridge, were similar to those for the

impounded reaches of the Fox River.) This is not a generality. It is an established fact that the Agency's witnesses recognized.

The Agency continues this line of attack by asserting that the LDPR was impounded before the installation of the locks and dams and therefore Mr. Seegert cannot prove that the UDP could not attain CWA goals without removal of the dams. Agency Comments, 35-36. This argument must be rejected on at least two grounds. First, the argument is based on the Agency's reading of a 1908 publication that apparently was not put into evidence or the subject of any testimony. The 1908 publication referenced in the Agency's argument, Agency Comments, 35, was merely listed in the appendix of a report that was put into the record. It is revealing that the Agency did not list the 1908 publication in its Attachment A of the documents relevant to Subdocket C. Beyond the fact that this publication is not in the record, the Agency's argument makes no sense. The Agency does not argue that the 1908 publication shows that the LDPR in its naturally impounded condition had enough species diversity to attain modern-day CWA goals. Moreover, criticizing Mr. Seegert's work and opinions because he was unable to travel back in time to collect fish samples before the locks and dams were installed seems a tad unreasonable.

C. The EGs' Arguments About Possible Fish Migration to the UDP Have No Basis in Sound Science and Should Be Rejected.

The EGs note that fish sampling on the DuPage River, which discharges to the LDPR below the I-55 bridge, has shown some good fish communities there, which should justify setting CWA aquatic life use goals for the UDP even if it lacks sufficient habitat to support a diverse aquatic community. EG Comment, 14. One problem with this argument is that it relies on a premise that the Board has repeatedly rejected. The EGs argue that the division of aquatic life uses at the I-55 bridge "has always been suspect." *Id.* The Board has not thought so, and has

repeatedly recognized the well-documented distinctions between the segments of the LDPR above and below the I-55 bridge. *See* Section I., above. Another problem is that this is a "heads we win; tails you lose" argument, which makes it inherently suspect. Even conceding that fish are mobile and that there are no physical barriers between the DuPage River and the UDP, the EGs did not cite any evidence that these fish have even entered the LDPR stretch below the I-55 bridge in sufficient numbers to improve its fish community – even though that segment currently is designated as a General Use water and by presumption has better water quality than the UDP. If the EGs can cite no such evidence, then maybe there is some factor other than water quality (habitat?) that is causing the fish to prefer the DuPage River to the LDPR. In any event, there is little point in adding further speculation to the matter. It is enough to observe that the EGs' argument lacks a sufficient scientific basis to qualify as a legitimate consideration.

IV. The Agency's Arguments That UAA Factor 2 Is Not Adequately Supported Are Wrong on the Law and the Facts.

The Agency makes several errors in concluding that UAA factor 2, 40 C.F.R. § 131.10(g)(2), has not been adequately supported. The first error is legal. The Agency assumes that the State of Illinois is limited to the factors listed in 40 C.F.R. § 131.10(g) in deciding whether waters can attain the CWA aquatic life use goal. That is a misunderstanding of the appropriate roles of the States and the federal government in establishing water quality standards. Congress gave the States – not federal regulations adopted by the U.S. EPA – the lead role in designating the uses of waters. *Florida Wildlife Federation, Inc. v. Jackson*, 2012 WL 537529, *3 (N.D. Fla. Feb. 18, 2012).

While U.S. EPA also has a role in approving the water quality standards adopted by the States, it is contrary to Congress's carefully prescribed roles for U.S. EPA to prejudge matters by restricting what Illinois (or any other state) may consider in designating water quality uses and

corresponding criteria. There is nothing in Section 303 of the CWA that gives EPA specific authority to adopt rules restricting the facts or policy considerations that States may take into account in setting water quality standards. *See* 33 U.S.C. § 1313(c). Thus, Congress did not authorize U.S. EPA to adopt regulations restricting the facts that a State can consider in adopting water quality standards, and the regulations at 40 C.F.R. § 131.10(g) may be invalid to that extent. *See e.g. Kelley v. Environmental Protection Agency*, 15 F.3d 1100 (D.C. Cir. 1994) (invalidating regulation adopted by EPA even though it was designated as the administering agency for CERCLA because Congress had delegated liability determinations to the courts not EPA).

What if the heavily managed and variable flow regime in the UDP does negatively impact its ability to attain the CWA aquatic life use goal? What if a natural event occurs that drastically changes climactic conditions and prevents a water from attaining the CWA aquatic life goal? Should Illinois be prohibited from taking such facts into consideration just because they do not neatly fit into one of the UAA factors? The answer should clearly be no. If Congress's admonition that the States have the primary role in setting water quality uses and criteria is to be given meaning, then U.S. EPA must remain open to hearing any explanation given by a State for adopting a particular use for a particular water body – regardless of whether it fits into some category that U.S. EPA preconceived nearly 30 years ago.

The Agency further errs by arguing that evidence of changing and artificially controlled flows that affect the aquatic community in the UDP is not a "natural . . . flow condition." Agency Comments, 25. The UDP is an effluent-dominated waterway with "unique flow conditions necessary to maintain navigational use and upstream flood control . . .." *See* Section VII.B. below (quoting Agency's proposed use designation). In this waterway, the managed control regime associated with the locks and dams is the natural flow condition. And, even if the

negative effects of the variable flow regime are not relevant to 131.10(g)(2), it would clearly be relevant to 131.10(g)(3) (human caused conditions that cannot be remedied and would cause more damage to correct than leave in place). The Agency has repeatedly admitted that the locks and dams cannot be removed in the foreseeable future.

The Agency also argues that testimony did not indicate that "future flows in [UDP] cannot be managed in new ways that may help alleviate potential detrimental effects of insufficient flow on aquatic life." Agency Comments, 26. This is nonsensical. Nothing in the Agency's proposed use designations or water quality criteria require any changes to be made in the manner in which flow in the CAWS or UDP are managed. If the water level in a lock needs to be lowered so that a barge can smoothly transition between the water above Brandon Road lock and dam and the water in the UDP, there is going to be a slug of water pulsing through the UDP. Likewise, if the MWRD anticipates a storm event and orders the locks open to reduce water levels so that the CAWS can accommodate possible combined sewer overflows and urban runoff from the storm, there is going to be a slug of water come through the UDP. What is the Agency suggesting? That massive lakes be built in the Chicagoland area to hold the water so that it can be released in a slower, "less disruptive" manner? Which Chicago neighborhood or which suburb is going to be sacrificed for the Agency's flow control project? The Agency cannot admit in one breath that navigational and flood-prevention uses that are protected under the CWA must be maintained and then in the next breath say the highly variable flow regime that comes with those protected uses is something that can be changed.

Moreover, the Board has already acknowledged that these aspects of the CAWS are irreversible in the foreseeable future. *In the Matter of Water Quality Standards and Effluent Limitations for the Chicago Area Waterways System and Lower Des Plaines River: Proposed Amendments to 35 Ill. Adm. Code 301, 302, 303, and 304*, PCB R08-9, Subdocket A, Proposed

Rule, Second Notice, Opinion and Order, 42 (June 16, 2011). These arguments by the Agency are simply make-weight because they cannot rebut the evidence that the variable flow regime associated with the irreversible locks and dams negatively impacts the ability of the UDP to attain CWA aquatic life uses.

V. The Economic Costs of Complying With New Use Designations for the UDP Are Not Irrelevant in this Proceeding.

Both the Agency and the EGs suggest that economic cost issues are irrelevant to the water quality use designations because "no additional technology requirements result directly from the adoption of aquatic life uses." Agency Comments, 52; *see also* EG Comments, 10. Stepan acknowledged the difficulty of directly correlating compliance costs with use designations because engineers who can project compliance alternatives and provide cost estimates need to have some idea of the numeric standards that are the compliance target. *See* Post-Hearing Comments of Stepan Company, 11. That difficulty here is an artifact of the manner in which the Board has separated use designations into a separate subdocket from the consideration of numeric criteria, even though the CWA clearly contemplates that States will propose use designations and numeric criteria together. *See* 33 U.S.C. § 1313(c)(2)(A).

The separation that the Board made for its efficient handling of this massive rulemaking should not obscure the fact that use designations do have cost impacts and that the Illinois Environmental Protection Act (the "Act") requires the Board to consider the economic reasonableness of its regulations. 415 ILCS 5/27(a). If the Board considers it impractical to consider economic reasonableness issues at this stage of Subdocket C, it might reasonably proceed by entering an order notifying the participants of the tentative use designations for purposes of considering numeric criteria in Subdocket D. Then, after taking additional testimony in Subdocket D, including testimony on the economic reasonableness of compliance, the Board

could revisit the tentative use designations, as needed, and issue first notice proposals in Subdockets C and D together. That manner of proceeding would show fidelity to both the structure of the CWA and the requirements of the Act.

VI. The Relevant Time Period for Considering Potential Improvements Is Three Years.

The EGs suggest that the Board should consider changes that might occur that might improve habitat conditions over the next 10-20 years in setting water quality use designations now. EG Comments, 9-10. This makes no sense for a number of reasons. First, as the EGs admit, the CWA requires States to review water quality standards every three years. 33 U.S.C. § 1313(c)(1). Stepan sees no reason to believe that the Agency will not comply with that requirement of federal law or that the length of the studies that were necessary to support this proceeding will always need to be repeated in full. Nothing in 40 C.F.R. Part 131 suggests that a UAA must ignore all the information that was gathered for a previous UAA for the same water segment. So, a review of water quality standards in the CAWS and the UDP need not start from scratch each time. To the extent habitat improvement projects have been completed, or are close to completion, and/or there are other reasons to reasonably believe that conditions have changed, those factors can legitimately be added to the existing base of studies for a particular water segment to consider its appropriate designation at that time. Moreover, just because the Agency took on the entire CAWS and LDPR in this proceeding does not mean they must or will follow that course in the future. Future water quality standard proceedings are more likely to consider particular stream segments in connection with the unique changes to those segments. Thus, contrary to the NGO's unreasonable fears, neither the CAWS nor the LDPR will be doomed to the "status quo in perpetuity." EG Comments, 10.

Second, unlike the CAWS, there has been no significant discussion in this proceeding of habitat improvements for the LDPR, much less concrete actions by public agencies to consider

and implement such improvements. Moreover, the improvement that would really mean the most to improving the habitat for the LDPR – the removal of the locks and dams and the consequent reduction in the impoundment of the waters – is an event that everyone has indicated cannot be foreseen at this juncture.

Third, and most fundamentally, asking the Board to predict conditions 10-20 years from now is asking the Board for more prescience than any mortal should ask of another. What the NGO lawyers are up to here is pretty apparent. They want the State to mandate water quality improvements in advance of any showing that the waters can sustain CWA aquatic life uses. Given the desires of their constituencies, one can hardly fault them for trying. That does not make their proposal good law, good science or good policy. If habitat and other conditions improve in the future, there will be time enough then for the State of Illinois to consider those changes and how they impact the ability of different water segments to attain CWA aquatic life use goals.

VII. Suggested Modifications to the Agency's Proposed Regulatory Language for Sections 303.204 and 303.237.

A. The Agency's Proposed Modifications to Section 303.204 Are Inconsistent With Equivalent Sections of the Existing Regulations and are Inappropriate.

The Agency asks the Board to modify Section 303.204, as follows[2]:

Section 303.204 Chicago Area Waterway System and Lower Des Plaines River

The Chicago Area Waterway System and Lower Des Plaines River Waters are designated to protect for incidental contact or non-contact recreational uses (except where designated as non-recreational waters) and commercial activity (including navigation and industrial water supply uses) and the highest quality aquatic life and wildlife that is attainable, limited only by the physical condition of these waters and hydrologic modifications to these waters. These waters are required to meet the secondary contact and indigenous aquatic life standards contained in 35 Ill. Adm. Code 302, Subpart D, but are not required to meet the

[2] Unless otherwise noted, throughout this Response, changes to existing regulatory language will be shown with additions double-underscored and deletions in strikeout.

> general use standards or the public and food processing water supply standards of 35 Ill. Adm. Code 302, Subpart B and C. Designated recreational uses and aquatic life uses for each segment of the Chicago Area Waterway System and Lower Des Plaines River are identified in this Subpart.

Agency Comments, 6. The regulatory text that the Agency seeks to add suffers from several deficiencies. The phrase "highest quality aquatic life and wildlife that is attainable" is a new phrase that appears in no other section of Part 303. In fact, a word search of Part 303 indicates that the words "highest" and "attainable" are not even currently used in the part. *See* 35 Ill. Adm. Code Part 303 (downloaded from Board's website and searched on March 11, 2012). Using these terms for the first time with regard to waters that are so degraded and without developing a more comprehensive terminology is inappropriate. Even the Agency acknowledges that most of the CAWS waters cannot presently attain CWA goals for aquatic life use. *See* Agency Comments, 7. The phrase might also be misinterpreted to suggest that the aquatic life uses of the CAWS and LDPR must be continually modified to be the "highest quality . . . attainable" even if there is no modification to the implementing Sections 303.230, 303.235, 303.237. Such an implication would clearly be improper. Also, there is no reason to keep the phrase "limited only by the physical condition of these waters and hydrologic modification to these waters" since there might be other factors limiting the uses of the waters.

Proposed Section 303.204 is essentially an introductory statement that is intended to point the public to later sections that actually describe the designated uses in detail. For example, the similar introductory statement for General Use Waters simply states, "Except as otherwise specifically provided, all waters of the State must meet the general use standards of Subpart B of Part 302." 35 Ill. Adm. Code § 303.201. For recreational uses, the Board has adopted some fairly simple phrases that capture the essence of different recreational use categories. So, the regulations use phrases such as "primary contact recreation," "incidental

contact recreation," and "non-contact recreation." *See* Agency Comments, 55. The same cannot be said for the aquatic life uses. While some other states have adopted aquatic life use categories with similarly compact phrases for aquatic life uses[3], Illinois has not yet taken that step. The aquatic life use designations proposed in this proceeding are the first detailed ones for Illinois and do not presently fit into neat or simple phrases that can easily be incorporated into Section 303.204. This is evident from the non-descriptive aquatic life use terms proposed by the Agency, such as "Aquatic Life Use A Waters" and "Aquatic Life Use B Waters." Given where Illinois is with respective to adopting comprehensive, descriptive aquatic life uses, the preferable approach in drafting Section 303.204 is to simply refer the public to the later section of the regulations where the uses can be adequately specified. Accordingly, Stepan suggests Section 303.204 should be modified as follows[4]:

> **Section 303.204 Chicago Area Waterway System and Lower Des Plaines River**
>
> The Chicago Area Waterway System and Lower Des Plaines River Waters are designated to protect for incidental contact or non-contact recreational uses (except where designated as non-recreational waters) and commercial activity (including navigation and industrial water supply uses) and aquatic life uses as specified below ~~limited only by the physical condition of these waters and hydrologic modifications to these waters~~. These waters are required to meet the secondary contact and indigenous aquatic life standards contained in 35 Ill. Adm. Code 302, Subpart D, but are not required to meet the general use standards or the public and food processing water supply standards of 35 Ill. Adm. Code 302, Subpart B and C. Designated recreational uses and aquatic life uses for each segment of the Chicago Area Waterway System and Lower Des Plaines River are identified in this Subpart.

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[3] For example, Ohio has adopted a variety of aquatic life use categories with short phrase names such as "Warmwater," "Limited warmwater," "Exceptional warmwater," and "Modified warmwater," among others, *see* Ohio Adm. Code § 3745-1-07(B)(1) (available at codes.ohio.gov/oac/3745, last visited March 16, 2012).

[4] The Agency suggests additional modifications to Section 303.204 related to primary contact recreational uses. *See* Agency Comments, 55-56. Stepan has no objection to those modifications, and excluded them from the proposed language in the text solely to maintain the focus of these comments on aquatic life uses.

This will accomplish the essential function of Section 303.204, that is directing the public to the substantive use designation sections, without introducing unnecessary language that has no clear meaning and could be inadvertently misinterpreted.

B. Midwest Generation's Proposed Language for Section 303.207 More Accurately Reflects the Current Condition and Clean Water Act Potential of the Upper Dresden Island Pool.

The Agency proposes an entirely new Section 303.237 to designate aquatic life uses for the Upper Dresden Island Pool, as follows:

> 303.237 Upper Dresden Island Pool Aquatic Life Use Waters
>
> Lower Des Plaines River from the Brandon Road Lock and Dam to the Interstate 55 bridge is designated for the Upper Dresden Island Pool Aquatic Life Use. These waters are capable of maintaining aquatic-life populations consisting of individuals of tolerant, intermediately tolerant and intolerant types that are adaptive to the unique flow conditions necessary to maintain navigational use and upstream flood control functions of the waterway system. These waters must meet the water quality standards of 35 Ill. Adm. Code 302, Subpart D.

Agency Comments, 10 (omitting highlighting of minor corrections from the Agency's initial proposal).

Midwest Generation proposes alternate language for new Section 303.237, as follows:

> 303.237 Upper Dresden Island Pool Aquatic Life Use Waters
>
> Lower Des Plaines River from the Brandon Road Lock and Dam to the Interstate 55 bridge shall be designated for the Upper Dresden Island Pool Aquatic Life Use. These effluent-dominated, urban-impacted waters are capable of maintaining warm water aquatic-life populations consisting primarily of lentic species of tolerant and intermediately tolerant types that are adaptive to the impounded, channelized and artificially-controlled flow and widespread siltation conditions created by the operation of the locks and dams that are necessary to maintain the existing navigational use and upstream flood control functions of the waterway system.

MG Comments, 101.

It is not clear that the evidence supports a conclusion that the UDP waters should have their own aquatic life use category. Like the Brandon Pool waters (100% impounded), the UDP

is nearly entirely impounded (93% impounded), Hearing Ex. 366, attached Ex. 2, pp. 5-6, which significantly impacts its aquatic community and aquatic community potential. It should also be a matter of concern that the proposals essentially use undefined terms such as tolerant, intermediately tolerant and intolerant species. An approach that describes the aquatic life use with reference to some understood measure of the health of the aquatic community (e.g., the macroinvertebrate and/or fish indices of biotic integrity) might be superior. Still, if some separate designation is to be made and in the absence of better defined terms, the proposal advocated by Midwest Generation comes closer to accurately describing the UDP and the type of aquatic life community it can support. There really has been no dispute that the UDP waters are:

- Effluent dominated
- Urban impacted
- Impounded
- Channelized
- Have an artificially-controlled flow; and
- Have widespread siltation and sediment.

Agency SOR, 94; Agency SOR, Att. A, pp. 1-7 and 7-1; Hearing Ex. 366, attached Ex. 2, 5-7; and Hearing Ex. 369. The Midwest Generation proposal captures all those undisputed attributes of the UDP waters. There really should be little disagreement that those phrases accurately describe the UDP waters.

The major difference, of course, between the Agency proposal and Midwest Generation's proposal is related to whether "intolerant species" are included in the designation. Based on the testimony at hearing, it is clear that the Agency does not suggest the inclusion of intolerant species as an "existing use." The fish index of biotic integrity scores for the UDP were consistently low (in the 20's). Agency SOR, Att. A, pp. 6-7 to 6-12. The Agency's UAA contractor found that intolerant species "were very rare or absent in all samples," *id.*, p. 6-13, and Greg Seegert testified that the UDP is dominated by a "few highly tolerant fish" that have

elevated levels of DELT and with intolerant species being "essentially absent." HT, 11/9/09, PM, 34-35.

More importantly, the Agency's argument that the UDP can attain better fish populations has no real support. Essentially, the Agency makes the bare assertion that because there is a very small amount of good habitat for some intolerant species that must be enough. Agency Comments, 39-40. But, the Agency produced no expert and no testimony as to how much "good habitat" would be enough to sustain viable populations of these intolerant species. The environmental groups do no better. They simply put on witnesses to speculate about what fish might be able to migrate to the UDP. In contrast, the most qualified and experienced expert to appear before the Board, Mr. Seegert, testified that a system needs at least 50% good habitat to sustain viable populations of intolerant species whereas the UDP has less than 10% good habitat. HT, 11/9/09, PM, 147-48. Inclusion of intolerant species in the aquatic life use designation for the UDP is not warranted by the testimony presented to the Board.[5]

The other significant difference between the proposals put forth by the Agency and Midwest Generation is that the Agency's proposal included the final sentence, "These waters must meet the water quality standards of 35 Ill. Adm. Code 302, Subpart D." Stepan believes that inclusion of this sentence at the end of the Midwest Generation proposed language for Section 303.237 would be appropriate. While the criteria in Part 302, Subpart D may be changed as a result of Subdocket D of this proceeding, if Section 303.237 is adopted, it should contain a reference to the numeric criteria presently applicable to the uses designated in the new Section 303.237.

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[5] ExxonMobil proposed a more limited revision to the Agency's proposal for Section 303.237 that would simply strike the phrase "and intolerant" and make corresponding grammatical changes. EM Comments, 10-11. Stepan believes the Midwest Generation draft is superior for the reasons stated in this Response, however, ExxonMobil's proposal would also be appropriate.

VIII. Conclusion

No legal presumption in favor of, or against, the proposed water quality use designations should be applied in this proceeding. The question is simply whether the evidence presented demonstrates that the proposed uses are not feasible. Regardless of whether a presumption is applied, the Agency's proposed aquatic life use designations for the LDPR, and particularly the UDP, are not supported by the preponderance of the evidence presented at hearing. In previous proceedings, the Board has determined that the industrial character of the LDPR above the I-55 bridge distinguished it from the areas below the bridge. The Board has already found in this proceeding that the LDPR satisfies one or more of the UAA factors for designating uses lower than the CWA goals. Nothing has changed that alters those conclusions. The LDPR is still an effluent-dominated, impounded, channelized waterway that is heavily impacted by siltation and sediment impacts, all of which are the direct result of its use for navigational barge traffic and flood control and prevention. Short of removing the locks and dams that impound the LDPR and facilitate the navigation and flood control uses, which the Agency has admitted cannot be accomplished in the foreseeable future, nothing can be done to remediate those aspects of the LDPR. While some improvements to the system may have occurred, the balance of the evidence in the record does not justify the Agency's attempt to effectively move the CWA aquatic life attainment line from the I-55 bridge to Brandon Road lock and dam. For those reasons, the Board should either make no changes to the existing designated uses or adopt the modifications of Sections 303.204 and 303.237 suggested by Stepan, above.

Respectfully submitted,
STEPAN COMPANY

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