BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
WATER QUALITY STANDARDS AND	)	
EFFLUENT LIMITATIONS FOR THE	)	
CHICAGO AREA WATERWAYS SYSTEM	)	R08-09 Subdocket D
(CAWS) AND THE LOWER DES PLAINES	)	(Rulemaking- Water)
RIVER: PROPOSED AMENDMENTS TO	)	
35 Ill. Adm. Code Parts 301, 302, 303 and 304	)	
(Aquatic Life Use Designations)	)	

NOTICE OF FILING

To:

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

Marie Tipsord, Hearing Officer
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Persons included on the attached
SERVICE LIST

PLEASE TAKE NOTICE that on November 21, 2014 I electronically filed with the Clerk of the Pollution Control Board of the State of Illinois, ENVIRONMENTAL GROUPS' FIRST NOTICE COMMENTS, a copy of which is attached hereto and herewith served upon you.

Respectfully Submitted,

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DATED: November 21, 2014

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ENVIRONMENTAL GROUPS' FIRST NOTICE COMMENTS

Environmental Groups (Sierra Club, Prairie Rivers Network, Natural Resource Defense Council, Openlands, Friends of the Chicago River, and Environmental Law & Policy Center) submit these comments on the Board's First Notice Opinion and Order in Subdocket D of this proceeding, issued on September 18, 2014. Important corrections must be made to the Board's temperature proposal, which does not currently propose the General Use temperature standards, although the Board's Order states that is does. Environmental Groups also address a number of issues and questions presented by the Board regarding the appropriate criteria for benzene, ammonia, mercury, selenium, copper, cyanide, and chloride.

I. Temperature Standards

A. Perhaps due to a drafting omission, the temperature standard proposed by the Board is extremely under-protective, does not in fact apply the General Use temperature standards to the CAWS and LDPR as the Board apparently intended, and could not be approved by U.S. EPA.

The Board at numerous places in its Opinion and Order of September 18, 2014, stated that it proposed to adopt the General Use temperature standards for the CAWS and LDPR. (Sept. 18, 2014 Opinion and Order, 1, 204, 211, 212), however, as drafted, proposed Section 302.408[1] does not include critical protections of aquatic life that are included in the General Use temperature standards. As drafted, Section 302.408 does not appear to incorporate existing General Use standards appearing at 302.211(b), (c) and (d) which state:

> (b) There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions.
>
> (c) The normal daily and seasonal temperature fluctuations which existed before the addition of heat due to other than natural causes shall be maintained.

[1] All section references are to 35 Ill. Admin. Code unless otherwise noted.

(d) The maximum temperature rise above natural temperature shall not exceed 2.8° C (5° F)

Because it seems likely that the language of 302.211(b), (c) and (d) was omitted unintentionally from proposed 302.408, the Environmental Groups do not wish to belabor the necessity of including this language. The Environmental Groups must note, however, that without this language the proposal is drastically weaker than the existing General Use standards. Without 302.211(b), (c) and (d), the rule would allow temperatures in off-summer months that are vastly higher than seasonal temperatures and that are far higher than 2.8° C above natural temperatures. Such temperatures could seriously harm aquatic life. There is no evidence in the record that supports using a truncated General Use standard and IEPA specifically testified when it was anticipated that the UDIP would be designated General Use that it planned to apply all of the 302.211 provisions to at least the Upper Dresden Island Pool. (Tr. 7/29/13 at 15.) Further, because the IEPA proposal for monthly average temperatures would have provided some of the protections afforded general use waters by 302.211 (b), (c) and (d), none of the parties to the proceeding or U.S. EPA even contemplated or offered testimony as to the standard now in the proposal.

It is clear, that:

A truncated General Use standard could not be approved by USEPA. USEPA was at best reluctant to accept even the IEPA proposal, (PC 286), but, according to IEPA, was persuaded that the monthly average limits would be protective. (Tr. 7/29/13 at 25-27; Ex. 4 (USEPA letter May 3, 2007).) IEPA expressed that these additional General Use provisions were necessary to obtain U.S. EPA approval (Tr. 9/23/13 at 19-22). Indeed, USEPA has not approved a truncated version of Illinois General Use standards (that removes many vital protections) for any water body.

Allowing unseasonal temperatures could drastically affect aquatic life. As stated by IEPA's expert Chris Yoder in support of the non-summer limits, "Non-summer criteria are derived to maintain seasonal norms and cycles of increasing and decreasing temperatures. Important physiological functions such as gametogenesis, spawning, and growth should be assured since these are products of each species long term adaptation to natural climatic and regional influences of which temperature is one controlling factor." ("Yoder Report," Ex. 15 at 15.) U.S. EPA criteria documents make clear that abnormal elevations of water temperatures can seriously affect the spawning and survival of aquatic life. (Ex. 328 at 11, 15-17, 37-42.)

The existing general use standards protect against cold shock but the truncated General Use standard does not. The Board has asked the parties whether a specific "cold shock" provision is needed. (Sept. 18, 2014 Opinion and Order, 213.) Such a provision is not needed if the Board includes the General Use language of 302.211(b), (c) and (d) in its final proposal for the CAWS and LDPR. A cold shock provision is needed if the additional provisions from the General Use standard are not included in the final rule, because the truncated standard would, for instance, allow temperatures at the plant discharge points to rise to 63°F in January and then fall back to freezing.

B. The Agency Proposal and the Environmental Group proposal are not more stringent than the General Use standards if the entire General Use standard is considered

The Environmental Groups will not repeat arguments made in earlier filings that IEPA's proposal does not adequately protect the CAWS and the LDPR from thermal pollution and that the Environmental Groups' proposal should be adopted instead. Assuming the entire General Use temperature standards are applied to the CAWS and LDPR as discussed above, the Board's plan to adopt the General Use standards for the CAWS and LDPR now, and then begin reconsideration of those General Use standards (Sept. 18, 2014 Opinion and Order, 205), may be sound. If this is to be the procedure, IEPA should be asked to begin an update of the General Use standards immediately. It should be noted, however, that the IEPA's and Environmental Groups' proposals for the CAWS and LDPR are not more restrictive than the standards now applicable to General Use waters.

While the daily maximum temperatures allowed under both the IEPA's and the Environmental Groups' proposals may be lower than the daily maximum temperatures allowed under the General Use standards, the record does not demonstrate whether such proposals are more stringent than the General Use standards when the entire General Use temperature standard (including the necessary provisions in 302.211 (b), (c) and (d)) is applied.

We believe that application of those necessary provisions would result in restrictions at least as stringent as the Environmental Groups' proposal and note that the Commonwealth Edison Company obtained relief from 302.211 (b), (c) and (d) in the early 1990s precisely because of doubts that their thermal discharges could comply with those provisions at the I-55 Bridge.

C. It is unclear what thermal standard will apply to the North Shore Channel north of the O'Brien WRP and the Little Calumet East of the Calumet WRP

Because of reverse flows of warm effluent from the O'Brien and Calumet water reclamation plants, IEPA proposed to allow higher temperatures in those sections than would be expected under normal winter conditions so that MWRD may avoid having to cool its effluent. (Tr. 7/29/13 at 28-29). An MWRD consultant testified that the Upper North Shore Channel is warmed by the reverse flows, evidenced by the fact that the water in the North Shore Channel is not frozen at times when water closer to Lake Michigan is frozen. (Tr. 11/17/08 at 70-71.)

Given the U.S. EPA objection letter, (PC 1338), the Upper North Shore Channel is now subject to the General Use Standards. (Sept. 18, 2014 Opinion and Order, 218.)

The Environmental Groups agree that MWRD should not have to cool its effluent and ask that the Board allow the higher temperatures in the segments of the North Shore Channel and Little Calumet that directly receive MWRD effluent in the winter and spring.

D. Excursion hours above the maximum temperatures should not be allowed

For the reasons explained in their earlier filings, the Environmental Groups do not believe that excursion hours should be allowed over the summer maximums that are provided under either the IEPA proposal or the current General Use standards. Further, it is unclear whether excursion hours can be approved by U.S. EPA even if 302.211 (b), (c) and (d) are made applicable to the CAWS and LDPR. (Tr. 9/23/13 at 6.) Excursions certainly should not be approved if only a truncated version of the General Use standard is applied to the CAWS and LDPR.

E. It now appears that it may not be necessary for any discharger to seek relief from the temperature standards

The Board mentions in its Opinion and Order (Sept. 18, 2014 Opinion and Order, 209), that the Fisk and Crawford power stations have closed. Now, NRG Energy, which purchased the Will County and Joliet plants from Midwest Generation, announced last summer that it will close one of the remaining units at Will County and will convert the Joliet power station to natural gas. (Attach. 1 and 2 to these comments.) Based on information and belief, the Environmental Groups believe that these changes may result in the thermal loading to the CAWS and LDPR being sufficiently reduced such that NRG Energy will not need a variance. Under these circumstances, Exxon and Stepan, Inc. would no longer have any basis for a rational concern that their own compliance may be impacted by future variances that may be granted to the Will County and Joliet plants.

It is also possible that NRG Energy will seek a variance even with these plant changes. It is our understanding that gas-fired peaker plants may discharge substantial thermal loading during the hottest times of the summer when water temperatures are already causing stress to aquatic life. If that is a threat, NRG should be required to install appropriate cooling capacity in advance, rather than seeking "emergency" variances for situations that should have been foreseen.

In any event, the Board obviously cannot hesitate to adopt protective standards now based on sheer speculation as to what NRG might need. While 40 CFR 131.10(g)(6) allows relief from water quality standards upon the demonstration of very limited economic conditions (i.e. when "substantial and widespread economic and social impact make attainment of use infeasible"), no party to this proceeding has even purported to make such a demonstration. NRG Energy's announcement of major changes to the operations of the Joliet and Will County plants makes it still clearer that economic considerations should not be allowed to affect the adoption of fully protective standards.

II. Other Criteria

Questions remain regarding the benzene, ammonia, mercury, selenium, copper, cyanide, and chloride criteria. While anticipating that these topics will be further addressed in other proceedings, the Environmental Groups offer the following comments now:

A. Benzene (Human Health)

There is a serious problem with the human health criterion proposed in the first notice for benzene, in that the proposed criterion is more than thirteen times greater than the criteria supported by current science. Below, we attempt to straighten out some confusion in the record about the necessary criterion, but the upshot is that the criterion should be reduced from 310 ug/L to 23 ug/L in order to secure approval from USEPA.

Before we explain the evolution of the benzene human health criteria chronologically, it may be useful to lay out the three operative benzene criteria at play here: the one proposed by IEPA, USEPA's 2002 criteria document, and USEPA's 2014 criteria document. Those criteria are as follows:

	Human Health Criterion
IEPA/First Notice	310 ug/L
USEPA 2002	51 ug/L
USEPA 2014 draft	23 ug/L

The justification given in the September 18 Opinion and Order for proposing a benzene human health criterion of 310 ug/L is IEPA's contention that " the benzene human health standard proposed is based on the existing General Use standards and is more up-to-date than the national criterion." (Sept. 18, 2014 Opinion and Order, 182.) That is simply not true.

According to IEPA, the current General Use standard for benzene (human health) was adopted during a water quality rulemaking process in IPCB R02-11. (PC 1401 at 26.) That rulemaking sought to increase the benzene human health standard of 12 ug/L to a less protective standard of 310 ug/L, reflecting a policy decision to tolerate a higher level of cancer risk. (IPCB R02-11 Tr. 1/29/02 at 55.) Specifically, the risk factor was increased from 10^{-6} (one in a million) to 10^{-5} (one in 100,000). (*Id*.) Testimony on this issue was presented to the Board on January 29, 2002 and March 6, 2002. The Board offered its First Notice Opinion and Order, which included the proposed benzene human health standard, on June 20, 2002. After subsequent comments on the rule, the Board issued its Second Notice Opinion and Order to JCAR on October 17, 2002.

In November 2002, USEPA issued a document called National Recommended Water Quality Criteria: 2002, which included benzene human health criteria. ("USEPA 2002 Criteria Document," EPA-822-R-02-047, available at http://water.epa.gov/scitech/swguidance/standards/upload/2008_04_29_criteria_wqctable_nrwqc-2002.pdf.) Based on fish consumption only and a risk factor of 10^{-6}, USEPA's new national criterion for benzene was established at 51 ug/L. (*Id*. at 13 and 20.)

Given the timing of the criteria document's release relative to the IPCB rulemaking, it does not appear that the USEPA 2002 Criteria Document was considered by IEPA or the Board before the rule in IPCB R02-11 was finalized on December 19, 2002. Nor does it appear that the Illinois General Use benzene human health standard has subsequently been reviewed in comparison to the USEPA 2002 Criteria Document.

To be clear, USEPA has not approved the General Use human health standard for benzene. IEPA states that the benzene (aquatic life) standard was approved on July 25, 2007, (PC 1401 at 5), but acknowledges that USEPA has still not approved the benzene human health standard from 2002. (PC 1401 at 26.)

To the contrary, USEPA has expressed that the proposed criterion of 310 ug/L is not consistent with the current national criteria, and is not justified by science. (*See*, Sept. 18, 2014 Opinion and Order, 97.) USEPA's concerns were detailed in a letter dated March 26, 2010, stating that 51 ug/L is the standard consistent with the USEPA 2002 Criteria Document and IEPA's approved human health procedure. (PC 286 at 11.) The procedure USEPA refers to is codified at 35 Ill. Admin. Code 302.651, which establishes an acceptable risk threshold of one in one million (10^{-6}) for a single toxic substance.

A subsequent letter from USEPA dated April 28, 2014 does not indicate that the benzene human health standard meets USEPA guidance. (*See*, PC 1404.) USEPA does not specifically mention the benzene human health standard at all. The letter does, however, specifically urge IPCB to consider the forthcoming May 2014 draft human health criteria. (PC 1404, Encl. 1 at 9.)

Indeed, in May 2014, USEPA released its "Draft Update of Human Health Ambient Water Quality Criteria: Benzene 71-43-2." ("USEPA 2014 Draft Benzene Criteria," EPA-822-R-02-047, available at http://water.epa.gov/scitech/swguidance/standards/criteria/current/upload/Draft-Update-of-Human-Health-Ambient-Water-Quality-Criteria-Benzene-71-43-2.pdf .) The purpose of the USEPA 2014 Draft Benzene Criteria is to "reflect the latest scientific knowledge." (*Id*. at 1.) The document incorporates "updated information regarding body weight, drinking water intake, fish consumption rate, and bioaccumulation." (*Id*.) Using the approved risk factor of 10^{-6}, the national criteria for benzene human health is proposed as a range from 6.2 ug/L to 23 ug/L. As noted above, the *high* end of that range is more than 13 times less than the standard proposed at first notice.

Ultimately, IEPA's assertion that "there are no national criteria documents for this parameter that are more up-to-date than what the Agency is proposing in this rulemaking," (PC 1401 at 27), is false. There are two USEPA criteria documents, both of which dictate a criterion that is an order of magnitude lower than what is proposed. In order for these standards to obtain USEPA approval, the Board must therefore amend the benzene human health standard before this rule is finalized.

B. Ammonia

The Board, IEPA, and USEPA have all acknowledged that the ammonia criteria proposed in the first notice rule are not consistent with USEPA's 2013 ammonia criteria. (Sept. 18, 2014 Opinion and Order, 178.) Even taking IEPA at its word that it intends to update the ammonia criteria statewide in a subsequent proceeding, (*Id*.), the fact remains that the proposed criteria are not justified by current science and cannot be approved by USEPA.

Accordingly, the Board must adopt the ammonia criteria identified by USEPA in its April 2013 document, Aquatic Life Ambient Water Quality Criteria for Ammonia Freshwater ("2013

Ammonia Criteria") EPA 822-R-13-001 *available at* (http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/ammonia/upload/AQUATIC-LIFE-AMBIENT-WATER-QUALITY-CRITERIA-FOR-AMMONIA-FRESHWATER-2013.pdf). Specifically, the Board must include an acute criterion of 17 mg TAN/L and a chronic criterion of 1.9 mg TAN/L (30-day rolling average). USEPA, 2013 Ammonia Criteria at 40.

In view of the length of this proceeding already and the need to get as much done as feasible, it may prove desirable to establish another subdocket to address ammonia and other pollutants for which current Illinois General Use standards are substantial weaker that the latest U.S. EPA criteria document.

C. Mercury (human health)

Environmental Groups agree with the Board's proposal to adopt IEPA's proposed 12 ng/L mercury standard. (Sept. 18, 2014 Opinion and Order, 183.) The Board invited comment about the appropriateness of regulatory relief from that standard in this proceeding. (*Id*.)

This is already a massive rulemaking, even as it is limited to water quality standards. Environmental Groups maintain that this is not the appropriate proceeding to seek either individual regulatory relief or to overhaul the Board's procedures for obtaining regulatory relief.

The relief that Exxon Mobil is seeking is a streamlined procedure to obtain an adjusted standard, which is adjudicative in nature. 35 Ill. Admin. Code 101.108 (c) (Identifying adjusted standards as adjudicative, as contrasted to rulemaking, proceedings). By asking the Board to change its procedural rules to make it easier for specific dischargers to obtain an adjusted standard, Exxon Mobil is essentially asking the Board to determine in advance that Exxon Mobil deserves such regulatory relief. We agree with the Board that the factual record has not been adequately developed to support a decision by the Board on such relief. Further, the Board's rules have specific procedural requirements that pertain to different types of Board actions, and it would not be appropriate to make an advance decision in this *rulemaking* proceeding about the appropriateness of site specific relief without following the Board's rules for *adjudicatory* proceedings at 35 Ill. Admin. Code Part 104.

D. Selenium

The Illinois selenium "not to be exceeded" standard of 1.0 mg/L of 35 Ill. Adm. Code 302.210 is 20 times higher than the latest finalized U.S. EPA chronic standard. See 40 CFR 131.36. The U.S. EPA standard, however, is currently under review and it is believed that a new U.S. EPA criteria will be published in late 2015. Under the circumstances, it would seem that the best thing to do is for IEPA to begin measuring selenium levels in water bodies throughout the state and plan on making a selenium proposal to the Board in early 2016.

In the meantime, any new proposed permits involving potential discharges of selenium should be considered very carefully under Illinois antidegradation standards, 35 Ill. Adm. Code 302.105.

E. Copper

As pointed out by U.S. EPA, (PC 1404), and recognized by the Board (Sept. 18, 2014 Opinion and Order, 180), the proposed standard does not appear to be consistent with the most recent U.S. EPA criteria. While we are eager to complete this proceeding regarding the issues which have most occupied the parties to this proceeding, we are also eager to hear a more detailed discussion of why the U.S. EPA criteria is not "workable" in the eyes of the IEPA.

We have reviewed the 2007 update of the national criteria that employs the Biotic Ligand Model (BLM). The BLM method requires inputs of measurements of pH, dissolved organic carbon, alkalinity, temperature, calcium, magnesium, sodium, potassium, sulfate, and chloride taken from a body of freshwater to generate an instantaneous criterion. We note that MWRD collects much of the information needed as inputs to the BLM model through their ambient monitoring program.[2] The use of this latest criterion may well be more easily workable in the waters of the CAWS where this abundance of water quality data exists.

F. Cyanide

Given that the Board has generally taken the position that current general use standards should be adopted in the absence of a showing that other standards are appropriate, there appears no reason to adopt other standards for cyanide in this proceeding. Certainly, there would seem to be no basis for weakening the cyanide standard as to the LDPR. We understand that the IEPA removed rainbow trout to calculate their proposed 10 µg/L chronic value for cyanide. We question whether IEPA in doing so followed the process outlined in the April 2013 USEPA guidance on the deletion process of the recalculation procedure. (USEPA, Revised Deletion Process for the Site-Specific Recalculation Procedure for Aquatic Life Criteria, EPA-823-R-13-001, *available at* http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/ammonia/upload/Revised-Deletion-Process-for-the-Site-Specific-Recalculation-Procedure-for-Aquatic-Life-Criteria.pdf.) This revision is designed to ensure that 1) each species, genus, family, order, class, and phylum that occurs both at the site and in the national toxicity dataset is retained in the site-specific toxicity dataset and 2) each species, genus, family, order, class, and phylum that occurs at the site but not in the national toxicity dataset is represented in the site-specific dataset by at least one species most closely related to it from the national dataset.

[2] See, for example, *2012 Annual Summary Report Water Quality Within the Waterways System of the Metropolitan Water Reclamation District of Greater Chicago* at https://www.mwrd.org/pv_obj_cache/pv_obj_id_3C9D5E7C81892D0CD962A490F80622F04E511F00/filename/13-40_2012_Annual_Summary_Report_Water_Quality_Within_the_Waterways.pdf

G. Chloride

i. The 500 mg/L Chloride Standard is Protective as an acute limit but not as a chronic limit

As mentioned by the Board (Sept. 18, 2014 Opinion and Order, 197), the U.S. EPA is reconsidering its standards for chloride but urges Illinois to go forward with a proposal for chloride standards with a 500 mg/L "never to be exceeded" standard. (PC 1404). It must be noted that U.S. EPA's chronic criteria for chloride is 230 mg/L. (PC 286 at 4.)

ii. No case has been presented for a special chloride standard outside of the special navigation area of the CSSC.

We are dubious of Citgo's case for a winter standard for the reach of the CSSC into which it discharges because it appears in large part to rely on a differentiation between winter conditions and conditions in other seasons that have not been shown to exist as to all of the species at issue.

However, even accepting for the sake of argument that Citgo has made its case for the area immediately below its discharge in the area of the invasive species barrier, evidence has not been presented that would justify a broad site-specific standard for the whole of the CSSC. Indeed, it does not appear that any party has even proposed such special relief as to the large portion of the CSSC above the Citgo discharge, and the parties have not been given an opportunity to offer evidence regarding the potential effect of chloride on aquatic life outside the area covered by the Citgo proposal. Accordingly, at a minimum, the Board should amend the language appearing in proposed Section 303.449 to correspond to the geographic reach of the Citgo proposal.

iii. The Board was correct in rejecting changes to the mixing zone standards

While the Citgo/PDV proposals for a relaxed standard for a small reach of the CSSC are probably harmless, the Citgo mixing zone proposal is fraught with serious risks. It is possible a variance could be shown to be appropriate that would address for a time some of whatever problem it has remaining given the relaxed chloride standard, but that should be something that is fully considered in the context of addressing the issue of chloride pollution in the CAWS and downstream.

Citgo/PDV has proposed amending the mixing zone rules at 35 Ill. Adm. Code 302.102 to allow dischargers like Citgo who intake water from Aquatic Life Use B waters for processing to use mixing zones for chemicals listed as causes of impairment or whose concentrations exceed water quality standards. Citgo/PDV has proposed the amendment because it fears it will be unable to meet its NPDES permit limits when the new Aquatic Life Use B chloride water quality standards for the CSSC go into effect. The proposed amendments to the mixing zone rules, however, are not limited to chloride.

Illinois water quality standards prohibit mixing where the water quality standard for the pollutant in question is already violated in the receiving water. 35 Ill. Adm. Code 302.102 (b)(9). This

basic statewide rule certainly should not be changed just to address Citgo's possible problems in the CSSC.

Amending the mixing zone rules to address the high chloride concentrations in Citgo's discharge should not be allowed, because the chloride in Citgo's discharges is even more concentrated than the chloride in the CSSC. Chloride concentrates in the processing water during cooling and evaporation. Allowing mixing zones in the CSSC, could result in chloride hot spots and threats to designated uses. As proposed in first notice, Citgo need only meet chloride concentrations of 620 mg/L (chronic) and 990 mg/L (acute) from December through April, water quality standards that are more than 50% higher than the default acute (629 mg/L) and chronic (389 mg/L) chloride water quality standards in Iowa. 567 Iowa Adm. Code 61.3(3)(b). Indeed, it is entirely likely that allowing Citgo/PDV to discharge high concentrations of chloride would cause or contribute to violation of what would be appropriate standards for the Lower Des Plaines River that historically provided habitat for fingernail clams and other important species know to be sensitive to chloride.

In exchange for the mixing zone, Citgo/PDV proposed some vague provisions regarding the employment of best management practices (BMP) (e.g. a BMP plan with the "objective" of reducing pollutants of concern, but no requirement to actually adopt a BMP plan) and a provision regarding compliance that is difficult to understand. However, allowing a mixing zone in already impaired waters would allow dischargers a pass on the chronic water quality standards, in effect substituting BMPs for chronic (monthly) effluent limits.

While best management practices to reduce chloride loadings to the CSSC are a good idea and clearly needed, neither Illinois nor federal regulations regarding NPDES permitting allow BMPs to be substituted for numeric effluent limits, but for limited circumstances where numeric effluent limits are shown to be "infeasible." 40 CFR 122.44(k).

According to US EPA's NPDES Permit Writer's Manual, numeric effluent limits are infeasible in the following circumstances: 1) Regulating a pollutant for which limited treatability or aquatic impact data are available to allow development of numeric TBELs or WQBELs, and 2) Regulating discharges when the types of pollutants vary greatly over time. (USEPA, NPDES Permit Writer's Manual, EPA-833-K-10-001, at 9-4, *available at* http://water.epa.gov/polwaste/npdes/basics/upload/pwm_2010.pdf.) Neither of these circumstances is applicable here.

In addition, 40 CFR 122.44(k) requires BMP conditions in NPDES permits when the BMPs are reasonably necessary *to achieve effluent limits and standards* (emphasis added). As such, it would appear that a BMP special condition requiring implementation of practices to reduce chloride loadings to the CSSC, *in addition to chloride effluent limits*, would be warranted for the CITGO/PDV NPDES permit. A mixing zone amendment that in effect eliminates a requirement to meet water quality standards is contrary to law.

Citgo/PDV points to the MS-4 general permit as an example of a NPDES permit that allows compliance to be achieved through implementation of BMPs. Yet, the MS-4 permit regulates only stormwater discharges, where BMPs are the only method of treatment available. CITGO/PDV's NPDES permit discharges include treated refinery wastewater in addition to

stormwater and other discharges. BMP implementation should not be the measure of compliance under these circumstances.

In its comments, CITGO/PDV makes much of the claim that by implementing stormwater BMPs, it will no longer be causing or contributing to violations of water quality standards in the CSSC and should therefore get a mixing zone. It is difficult to understand this claim given the fact that a mixing zone would allow the facility to discharge above the water quality standards. If, in fact, implementation of BMPs reduces chloride concentrations to such a degree that water quality standards are no longer exceeded in the CSSC, then no mixing zone or other relief would be needed.

Again, we support implementation of BMPs by CITGO/PDV and other dischargers and recognize that the predominance of the chloride loading to the CSSC is from road salt use. We note, however, that by using the intake water for cooling, CITGO PDV is increasing the concentration of chlorides above that found in the intake water. It is possible that a variance might be designed that incorporated BMPs could be adopted and be put in place while a comprehensive approach to the chloride pollution problem in Northeast Illinois is developed. Allowing a mixing zone to one or more dischargers, particularly without a plan for how overall chloride loadings will be brought down to a protective level, is an approach that may cause the watershed-wide problem to never be addressed properly.

Finally we support the Board's amendments to 35 Ill. Adm. Code 309.141 to clarify IEPA's authority to require BMPs in NPDES permits to control or abate the discharge of chloride.

No case has been presented for changing the mixing zone rules in this proceeding and no general proposal has been made for such changes. (Sept. 18, 2014 Opinion and Order, 200.) At least based on the current record, this then would appear to be a case of "it ain't broke, so don't fix it" and it would be unfair to make changes to statewide rules based on comments in a protracted and already very complex proceedings regarding waters of a limited reach.

III. USEPA Disapproval of Use Designations

The end of the September 18 Opinion and Order contains a recitation of several comments USEPA has made regarding use designations the Board has adopted in other Subdockets of this proceeding. These comments were not suggestions, but disapprovals of the Board's earlier actions. If these matters are not addressed, USEPA is required to use its authority under 40 CFR 131.5 (b) to promulgate its own use designations to replace the ones it has disapproved. We encourage the Board to take these issues up and make the necessary corrections.

CONCLUSION

We appreciate the Board's thoughtful consideration of our comments.

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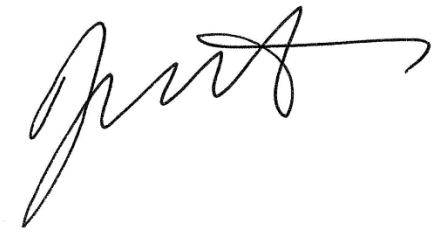
CERTIFICATE OF SERVICE

I, Jessica Dexter, hereby certify that I have served the attached ENVIRONMENTAL GROUPS' FIRST NOTICE COMMENTS upon the below service list via the United States Mail, postage prepaid, in Chicago, Illinois on November 21, 2014.



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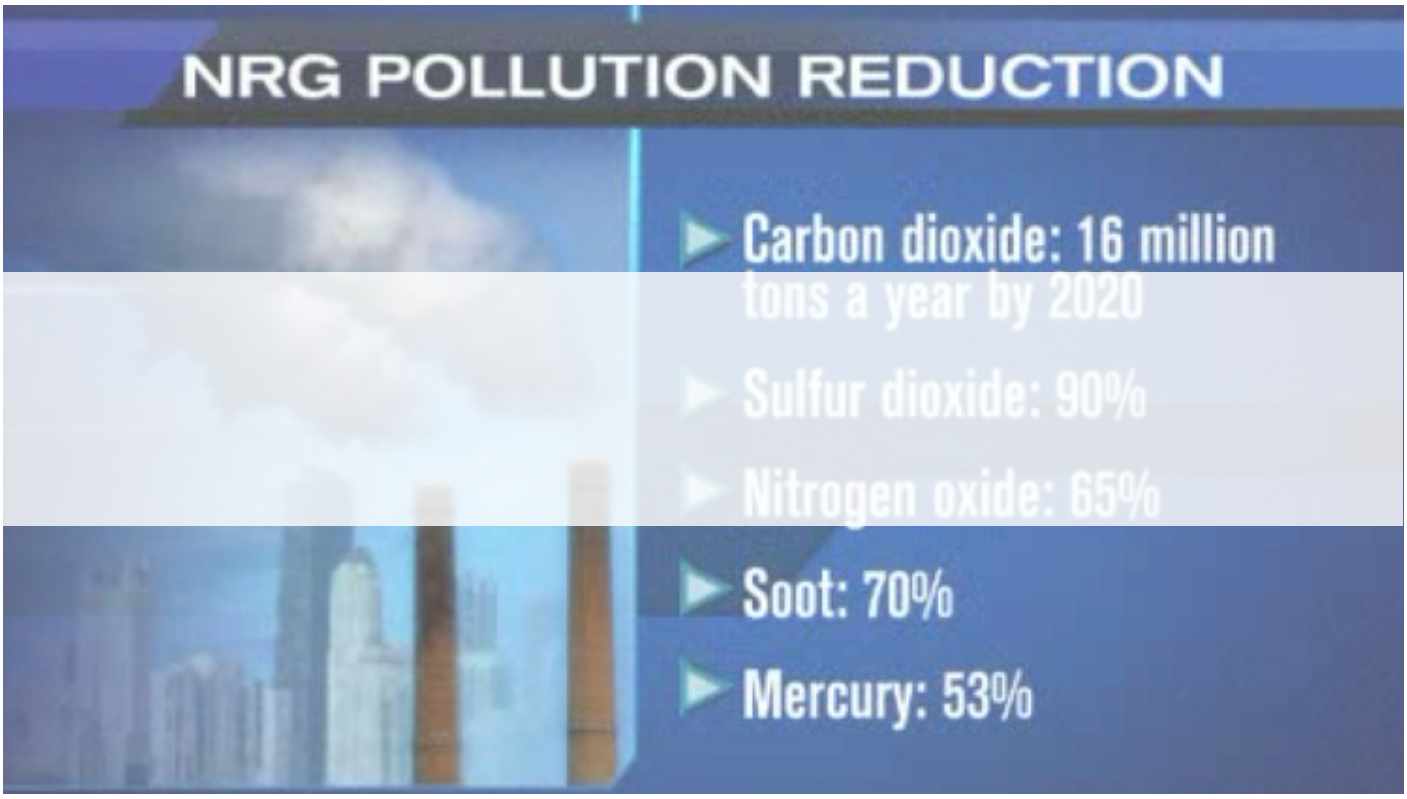
Power firm NRG to close plant, cut jobs, as part of pollution reduction plan



NRG announced Thursday a pollution reduction plan for its four Illinois coal-fired generating plants.

By Julie Wernau, Tribune reporter

AUGUST 7, 2014, 10:15 AM

NRG Energy Inc. announced Thursday a pollution reduction plan for its four Illinois coal-fired generating plants that pushed the state more than halfway toward meeting new proposed federal limits for reducing carbon dioxide pollution.

NRG Energy officials told the Tribune on Wednesday that it will cease coal operations at one generating unit in Romeoville (the Will County plant), convert its Joliet plant to burn natural gas and upgrade its two other coal plants in Pekin and Waukegan to comply with environmental regulations.

The jobs of about 250 people will be eliminated, the company said.

The largest job reductions are expected in Romeoville and Joliet. Coal plants converted to natural gas typically need less than half the staffing levels because a large part of coal plant operations consists of handling, transporting and cleaning up coal.

NRG said its environmental actions will remove 16 million tons of carbon dioxide from the air yearly by 2020 when compared with 2013. The figure is equivalent to what 4 million cars would produce yearly. The company added that its efforts also would slash lung-damaging sulfur dioxide emissions by 90 percent and nitrogen oxide

emissions by 65 percent from 2013 levels.

The plan also means a 70 percent reduction in soot or "particulate matter" and a 53 percent reduction in mercury emissions.

The company said its expenditures will total $567 million, adding that those outlays would not be offset by ratepayers or government subsidies.

Environmentalists had fought for more than a decade to deal with the plants' pollution when they were owned by Midwest Generation. NRG took over the plants this year.

David Crane, chief executive of NRG, has moved the company from its legacy as a coal plant operator into the solar power and electric-vehicle charging businesses, telling investors that coal power is the past and that rooftop solar is the company's future.

Still, environmental activists are pressing power producers for an even speedier shift to clean energy such as wind and solar, and for coal to be eliminated as a fuel. In particular, they want NRG to shut its Waukegan plant along Lake Michigan. About 130,000 people live within five miles of the plant.

"I'm not saying shut it down tomorrow," said Bruce Nilles, director of the Sierra Club's Beyond Coal campaign. "We're saying, 'Come up with an orderly plan that takes care of the workers, then invest in solar.'"

Nilles described the fight to shut coal plants in Waukegan and Joliet as "one of the longest struggles of this kind" in the country.

After years of legal battles with environmental groups, Midwest Generation agreed in 2006 to upgrade all its plants and to meet stringent reductions in overall pollution rates by 2019.

The decision to close its Fisk and Crawford plants in Chicago gave Midwest Generation an extra year to decide the fate of Waukegan. Now the environmentalists are pressuring NRG.

"One of the things that we do know is that we must as an industry reduce the emissions we have in our fleet," said Lee Davis, executive vice president and regional president of NRG's east fleet. "We need to prepare for a cleaner future. But if we mess this up, this transition period, we may never get where we need to go."

The abundance of natural gas, a cheaper fuel than coal, has cut into profits of coal plant operators just as states and the federal government have pushed for expensive pollution upgrades.

"The purpose of having old coal plants, to be frank, is keeping the lights on for the next three, five, 10 years," Crane told business leaders in Chicago this year.

In an unpublished editorial, Crane said the future he envisions is "a better energy and environmental future than what we have now."

"Imagine being given the power to be free to control your own energy destiny — to decide who you buy your electricity and other forms of energy from; to decide how the energy you consume is produced; to determine the environmental footprint of your own consumption," he wrote. "Imagine being free to make your own energy; to harness the energy potential of your own home with residential solar."

Four months ago, when NRG took over the assets and operating companies of Edison Mission Energy — parent of Illinois coal plant owner Midwest Generation — for $2.6 billion, the acquisition made NRG the largest competitive

U.S. power company, with about 53,600 megawatts of generating capacity, as well as the third-largest U.S. owner of renewable energy.

Four Illinois coal plants, Powerton (in Pekin), Joliet, Waukegan and Will County (in Romeoville) transferred to NRG as part of the transaction. Edison Mission filed for Chapter 11 in December 2012.

Until now, NRG had not detailed its plans for the coal plants, which require costly upgrades to comply with environmental cleanup deadlines at the end of this year.

In its most recent quarterly filing, Edison Mission estimated that it would cost $837 million to upgrade the plants for compliance.

Combined, NRG's four coal plants employ about 600 people. The company told the Tribune it will cease operating its 251-megawatt coal unit in Romeoville in April and continue to operate the other unit as long as it meets environmental regulations.

The natural gas conversion at Joliet will be completed in 2016. One unit at Waukegan will be updated with environmental controls by year-end, and the second one by May 2015. One unit at Pekin also will have its controls completed by year-end, and the second one by April 2016, NRG said.

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NRG to Shutter, Repower Illinois Coal Units in Modernization Bid

08/12/2014 | Sonal Patel

NRG Energy is the latest company in a string of generators choosing to cease burning coal at generating units to comply with environmental rules.

An environmental action plan to reduce air pollution in Illinois released by the New Jersey–based company on Aug. 7 proposes to retire the 251-MW coal-fired Unit 3 at the 761-MW Will County plant by April 2015, as well as to cease burning coal at two units (Joliet 29 and 9) at the 1.3-GW Joliet facility.

NRG, however, plans to convert the Joliet facility to natural gas by 2016. It also plans to continue burning powder river basin coal at its 681-MW Waukegan plant north of Chicago and at its 1.5-GW Powerton plant in central Illinois, choosing instead to implement dry sorbent injection and electrostatic precipitator upgrades at both plants.

The company acquired the plants with its purchase of Edison Mission Energy (http://www.powermag.com/court-greenlights-nrg-acquisition-of-edison-mission-energy/) in April 2014. “Beyond employing a substantial number of people and contributing to the Illinois economy, these plants provide local reliability to the electric grid,” said NRG Executive Vice President Lee Davis in a blog entry on the company’s website (http://www.nrg.com/news/executive-blog/post/illinois-plant-transformations-mark-transition-to-cleaner-energy).

“As we witnessed last winter, local generation is vital during periods of peak demand. Until now, the reliability services these four coal plants provide have come at a cost of higher than desired emissions—in short, they have not yet been updated to meet environmental standards.”

Under its new Illinois pollution plan, NRG will invest more than $500 million dollars by 2016 to “make improvements that single-handedly achieve 56% of Illinois’ state-wide carbon dioxide … reductions called for under President Obama’s proposed carbon pollution standards,” Davis wrote.

Chief Operating Officer Mauricio Gutierrez in an Aug. 7 earnings call said the measures, also outlined in an optimization and enhancement plan for the company's Midwest Generation portfolio, would expand fuel diversity in the region while enabling NRG to comply with more stringent air regulations under the federal Mercury and Air Toxics Standards and Carbon Pollution Standards.

The decision to retire Will County Unit 3 was made after "careful consideration" of all the plants, including an analysis of which ones could be converted to a different fuel, said Gutierrez. "We looked at which of these assets have better access to natural gas supply, and Joliet was the one that had the best location for that."

"The closure of Will County is a difficult decision for us, but the economics simply do not work in the current price environment, given the back-end capital investment that would be required," he said. NRG, however, plans to keep the second unit at the plant, Unit 4, in operation as long as it can comply with all applicable environmental requirements, he added.

NRG's proposed retirements come on the heels of more announced coal retirements across the nation.

Mississippi Power last week said it will repower, convert to natural gas, or shutter several coal units (http://www.powermag.com/kemper-igcc-plant-settlement-requires-mississippi-power-coal-fleet-changes/) in Mississippi or Alabama to comply with a landmark settlement with the Sierra Club that will end legal challenges to the utility's Kemper County integrated gasification combined cycle project. And American Electric Power last week separately announced (http://www.powermag.com/settlement-requires-changes-at-three-aep-coal-plants-in-w-va/) it would close a coal plant and make changes at two others to resolve alleged Clean Water Act violations.

The Sierra Club's Beyond Coal campaign notes that the Joliet 9 and 29 plants are the 173rd and 174th coal-fired units announced to cease burning coal since 2010.

—Sonal Patel, associate editor *(@POWERmagazine, @sonalcpatel)*

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