

**BEFORE THE ENVIRONMENTAL APPEALS BOARD  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C.**

\_\_\_\_\_)  
In re: ESSROC Cement Corporation )  
RCRA Permit No. 005 081 542 ) RCRA Appeal No. 13-03  
\_\_\_\_\_)

**PETITIONER'S REPLY BRIEF**

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## INTRODUCTION

ESSROC respectfully replies to the response of the U.S. Environmental Protection Agency, Region 5 (“the Region”) to the Petition that ESSROC filed regarding Resource Conservation and Recovery Act (“RCRA”) Permit No. IND 005 0581 542 (“Final Permit”). The Region errs in its response on several grounds:

1. The Region ignores the burden that it bears to show that a second site-specific risk assessment was necessary.
2. The Region’s argument regarding the language of the site-specific risk assessments is not supported by the language or rulemaking of 40 C.F.R. § 270.10(l).
3. The Region’s technical arguments regarding the calculation of the annual mercury feed rate limit are contradicted by the policies of the United States Environmental Protection Agency (“EPA”).

## ARGUMENT

### **I. The Region misconstrues the burden at issue in this petition.**

The Region correctly cites the applicable standard of review in 40 C.F.R. § 124.19(a)(4) Region’s Response (“Resp.”) at p. 8. However, the Region goes on to say that ESSROC’s burden is at “an even higher level . . . because the Board generally defers to the permit issuer on questions of technical judgment.” *Id.* This is contradicted squarely by EPA’s statements in the preamble regarding the Region’s exact task in this permitting action: determining whether the MACT standards were not sufficiently protective: “Moreover, the language of § 270.10(l) makes clear that the onus initially falls on the permitting authority to identify the basis for its conclusion that the MACT standards may not be sufficiently protective.” 70 Fed.Reg. 59,402,

59,514-59,515 (Oct. 12, 2005). “Until the permitting authority provides this further guidance,” the EPA stated, “the regulated entity incurs no obligation.” *Id.* at 59514.

Thus, the Region has it backwards: while ESSROC has the obligation to satisfy the standard of review in 40 C.F.R. § 124.19(a)(4), the Region also must have met its “onus” to explain why the MACT standards are not sufficiently protective. Given the fact that the Region had previously required a risk assessment, and given the technical shortcomings in the new risk assessment as described below, the Region clearly did not meet this high burden.

**II. The Region’s arguments regarding the prior risk assessment contradicts the plain language of the rule, its statements in the preamble, and the conclusions of the D.C. Circuit Court of Appeals.**

According to EPA’s rules, the agency may conclude that the MACT limits are not sufficiently protective of human health or the environment, but it may only do so “based on one or more of the factors listed in paragraph (l)(1)” of the rule. 40 C.F.R. § 270.10(l). As the D.C. Circuit explained, “[f]ar from being standardless, the listed categories [in § 270.10(l)(1)] are relatively specific and serve to cabin a permitting authority’s discretion with respect to the type of information it may seek.” *Cement Kiln Recycling Coalition v. EPA*, 493 F.3d 207, 221 (D.C. Cir. 2007). Section 270.10(l) (1) provides a “list of relatively detailed factors” that are appropriate for administrative and judicial review. *Id.* at 224 (“objection is more appropriately aimed at a particular application of the program, where it can be reviewed against the backdrop of its own particular circumstances”) (citations omitted). The two (of nine) factors possibly implicated here are the “[a]dequacy of any previously conducted risk assessment, given any subsequent changes in conditions likely to affect risk” and a “catchall” provision, “[s]uch other factors as may be appropriate.” 40 C.F.R. § 270.10(l)(1)(viii) and (ix).

EPA has acknowledged, and the D.C. Circuit has recognized, that the eighth is “the most important factor” in § 270.10(l)(1). *Cement Kiln Recycling Coalition*, 493 F.3d at 221. In its response, the Region downplays the significance of this factor, and argues that an “existing risk assessment may be relevant” in determining whether permit restrictions beyond the MACT may be necessary. Response of Region 5 (“Resp.”) at p. 10. However, this statement ignores half of the sentence at issue. An existing risk assessment is only relevant to the extent that there have been “any subsequent *changes in conditions* likely to affect risk” that has cast doubt on the “[a]dequacy” of that risk assessment. 40 C.F.R. § 270.10(l)(1)(viii) (emphasis added). The fact that a previous risk assessment has occurred is not enough to justify a second one—there must have been some actual change since the first risk assessment has occurred. *Id.* This begs the question - what is a “change[...] in conditions likely to affect risk?”

The Region goes on to suggest that this language encompasses any type of “change,” including a change in “the science that supported the original risk assessment.” Resp. at p. 11. This is wrong for several reasons. First, even assuming *arguendo* that the Region is correct that the science underlying ESSROC’s initial SSRA has changed, a change “in conditions” by the rule clearly means a physical or circumstantial change, not a change in judgment. EPA stated in the preamble: “Also, we maintain our assumption that SSRAs generally represent a one-time cost *unless* a facility significantly *changes its operations* or if *receptors change* such that an increase in risk is anticipated as a result.” 70 Fed.Reg. 59,402, 59,507 (Oct. 12, 2005) (emphasis added). Such an interpretation was also adopted by the D.C. Circuit, when it construed the factor as a “change in *circumstances* since the previous permitting process.” *Cement Kiln Recycling Coalition*, 493 F.3d at 221 (emphasis added). In short, the Region’s

change in opinion cannot reasonably be characterized as a “subsequent change[...] in conditions likely to affect risk.”

The preamble to the SSRA rules is revealing because the Region is doing what EPA assured the regulated public that it would not do. At the time of the rulemaking, “all cement kilns subject to the SSRA program [had] permits,” which raised the possibility that EPA would use the new rule to reopen every permit. *Id.* However, EPA gave assurances that multiple risk assessments were exceptional and only appropriate when there had been an actual change in circumstances at the facility that affected risk, such as “a new housing development” nearby or the installation of a “mid-kiln sampling port.” *Id.*; 70 Fed.Reg. at 59,504-59,505; see also 64 Fed.Reg. 52,828, 52,842-52,843 (Sept. 30, 1999) (“For those *few* situations in which the MACT requirements might result in increased potential risk for a particular facility due to *unique site-specific considerations*, the RCRA permit writer, however, may determine that a risk check of the projected MACT emission rates is in order.”) (emphasis added). The Region dismisses the preamble in its response and argues a red herring that “the final rule preamble expressly contemplated that a subsequent SSRA may be necessary.” Resp. at 13-14. Again, ESSROC does not dispute that subsequent SSRAs may sometimes be necessary, but *only* when there has since been a change in conditions likely to affect risk. No such change in condition has occurred here, and accordingly the Region is contradicting the assurances that EPA made in the rulemaking.

The Region’s reliance on the catchall provision, that being “[s]uch other factors as may be appropriate,” fares no better. The Region argues that this provision allows it to sidestep any previous SSRA and assess any “relevant” information. Resp. at 12. The D.C. Circuit rejected such an interpretation, ironically in EPA’s favor, in the *Cement Kiln Recycling Coalition* case.

493 F.3d at 221. Responding to industry’s argument that the catchall provision was impermissibly broad and vague, the court applied the interpretive canon of *eiusdem generis* and found that “any information requested under the regulation’s ninth factor must be ‘similar in nature’ to that identified in the first eight.” *Id.* The court noted that “EPA agrees with this construction” and quoted EPA’s counsel that “the catchall has to be understood within the context of the limitations’ enumerated in the first eight factors.” *Id.* fn. 8. Thus, EPA cannot use the ninth factor to rely upon information that the other eight factors do not otherwise allow; namely, a new risk assessment when there has been no subsequent change in conditions likely to affect risk.

**III. The Region’s arguments regarding the development of the annual mercury feed rate limit are wrong.**

At the outset, it should be noted that the Region’s technical arguments in its response stem largely from its lack of communication with ESSROC during the critical part of the risk assessment process, once the Region decided to start the process anew. HHRAP itself states that “[i]t is important that risk characterization exhibit the core values of transparency, clarity, consistency, and reasonableness.” See HHRAP at p. 8-1. While now repeatedly deriding ESSROC’s data as “anecdotal,” the Region, as the ultimate risk assessor, had obligations to be transparent and forthright in the risk assessment process.

Here, however, the Region declined to take several steps that prevented ESSROC from providing the data that the Region now seeks: 1) it did not provide a draft risk plan for ESSROC’s review that would allow ESSROC to understand the Region’s reliance on default assumptions; 2) it did not inform ESSROC that it would consider only data of a certain type to determine a site-specific BAF or consumption rate; 3) it did not notify ESSROC that the risk assessment approach it was taking would lead to a much more restrictive annual mercury feed



rate limitation than initially discussed; and 4) it did not take a final action on the supposed inadequacy of the original risk assessment before proceeding with the permitting process. Any of these actions would have prompted ESSROC to initiate more significant studies and provide much more detailed information. However, the Region held all the cards, which left ESSROC minimal opportunity to provide the high level of data during the risk assessment process (and the subsequent narrow window of permit notice and comment), that the Region now demands.

**A. The Region did not properly consider EPA guidance and information provided by ESSROC concerning the fish bioaccumulation factors that are appropriate for the France Park lakes.**

It remains true that the Region ignored EPA's most recent and thorough guidance regarding the calculation of methylmercury concentrations, the 2010 "Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion" ("National BAF"). Although this document is guidance and not a regulatory requirement, it does represent current EPA recommendations in the determination of fish tissue methylmercury concentration and meets the guidance offered by the Agency towards using the best available science. This resulted in an overly conservative figure in determining the mercury feed rate limit.

The Region first disputes the Water Quality Criterion and its Guidance by stating that they and the HHRAP "serve different purposes." Resp. at 16. This is not true – both are designed to "protect human health," both address the same pollutants, and both use the same types of methodologies (modeling and bioaccumulation factors) to assess risk. See *Water Quality Criterion for the Protection of Human Health: Methylmercury*, EPA-823-R-01-001 (Jan. 2001) ("Water Quality Criterion") at p. xvi and p. 1-1 (emphasis added); see HHRAP at p. ii. The only difference between the Water Quality Criterion and the HHRAP is a programmatic

one: the HHRAP was issued under RCRA, while EPA issued the Water Quality Criterion under the Clean Water Act. HHRAP at Section 1.1; Water Quality Criterion at p. ix.

Second, and more importantly, the bioaccumulation factors in the HHRAP are not more representative of the conditions at ESSROC's facility. The Region states that "the HHRAP default BAF was specifically calculated for lakes, whereas the Draft National BAF was developed to apply to a combination of rivers and lakes." Resp. at 17. While technically true, the National BAF reflects an updated conclusion that EPA has reached:

Although differences in mercury bioaccumulation between lentic and lotic ecosystems could be expected due to differences in mercury loading characteristics, bioavailability, food web dynamics, and methylation processes, among other factors, no significant statistical differences ( $p > 0.05$ ) were found between the lentic and lotic BAFs and BCFs. Furthermore, a closer inspection of the converted lentic BAF<sub>4</sub> data for several Minnesota Lakes (Glass et al., 1999) suggests that, given a larger sample size, the lower range of field-measured lentic BAF<sub>4</sub> values could be similar to the lower range of values observed for lotic ecosystems.

Page A-8. In other words, EPA's Office of Water Quality used a statistical technique to determine that *there was no significant difference* in the bioaccumulation factors between rivers ("lotic") and lakes ("lentic"). *Id.* As shown in the above paragraph, EPA noted further that the spread of the BAF values for lake systems may be wider than is shown by the data (i.e. the lower range of the lake values could be more similar to the river values) due to the small sample size of the lake studies.

Thus, the Region's broad generalization that the National BAFs are inappropriate because the range of the two data sets (lake and river) do not significantly overlap may have more to do with the size of the lake study data set rather than an actual technical difference between the two types of ecological systems (see page 10 of the Region's response to comments.) Based on its analysis of the BAF data, EPA recommended in the National BAF for

methylmercury to be 2,700,000 L/kg for Trophic Level 4 fish, and 680,000 L/kg for Trophic Level 3 fish – the values proposed by ESSROC and rejected by Region 5. National BAF at p. 32. The National BAFs provide a value that is 2.5 times lower than the 1997 values used in the Region’s risk assessment of the Logansport facility. *Mercury Study Report to Congress*, Volume III: Fate and Transport of Mercury in the Environment, EPA-452/R-97-005, December 1997, page 1-5. Thus, the Region clings to a distinction between lakes and rivers to apply a higher bioaccumulation factor, which is simply wrong.

**B. ESSROC provided sufficient site-specific information regarding fish consumption that should have precluded the use of the HHRAP default consumption rate.**

The Region holds ESSROC to an unreasonably high standard when it states that ESSROC should have provided an exact number of fish consumed from the nearby waters. As a result, the Region presumes that the default values apply, which results in a completely calculation of the fish consumption rate.

While the Region is correct that HHRAP states that in general a “parameter value” should be provided to suggest a change from default parameters, in the more specific context of fish consumption, HHRAP says only that a default value is recommended “if site-specific *information is not* available.” HHRAP at Table C-1-4 (emphasis added). HHRAP specifically notes that “...if the assessment shows that the primary pollutant and exposure pathway is mercury in fish, then you could target site-specific *data gathering efforts* on values related to mercury emissions, surface water concentrations and/or fish consumption.” HHRAP at p. 1-9 (emphasis added). In addition, the HHRAP also states that “[y]ou should generally make every effort to reduce limitations and uncertainties in the risk assessment process, since they can affect the confidence in the risk assessment results.” *Id.* Here, the Region clearly had the

responsibility to assess the non-default information, and ESSROC clearly provided such information, yet EPA declined to reduce limitations and uncertainties accordingly.

The information provided by ESSROC was widely available and reliable, and it should have called into question the adequacy of the default consumption rate. ESSROC provided not just “anecdotal” evidence but documented information justifying a consumption rate lower than the default rate: 1) the previous risk assessment already established a more appropriate rate for this area of Indiana, 2) the nearby park has a daily entrance fee for fishing; 2) the lakes are small and are not stocked to maintain the available levels of fish for catch over the study timeframe; 3) one of the two lakes is closed to fishing in the summer months (i.e., typically the most productive period of the year for catching fish); 4) the lakes are known to freeze over in the winter months, thereby requiring ice fishing techniques that are less productive in terms of catch; 5) testimonials by park and regional fisheries officials that fish from the lakes are unlikely to be used as a primary food source; and 6) testimonials from those same officials that the lakes are unlikely to be able to support sustained high levels of fishing for food over the study period.

The default value is effectively a “starting point” that the Region applied. It is not uncommon for risk assessors to use a variety of information to determine a site-specific factor; and the HHRAP does not strictly limit what information is acceptable. For example, one of the types of information that may be considered in the development of a site-specific parameter is “a description of other risk assessments or projects that used the site-specific parameter value, and how such risk assessments or projects are similar to the current risk assessment.” HHRAP at p. 5-88. To the extent that the Region seeks a precise number now, ESSROC repeats its

statements above that EPA's manner of conducting the risk assessment precluded it from providing a much more robust level of information that the Region now claims was necessary.

The Region provides an illuminating statement that it "was the technical judgment of EPA environmental scientists that the anecdotal information provided by Petitioner . . . did not rise to the level of site-specific information that could support an estimate of a site-specific value." Resp. at p. 25. Again, the Region flips the burden at issue in this appeal. HHRAP prescribes a risk assessment process that occurs "iteratively," with "the first iteration employing protective (conservative) assumptions to identify possible risks. Only if potential risks are identified in a screening level assessment is it necessary to pursue a more refined, data-intensive risk assessment." HHRAP at p. 1-11. This establishes a mandatory, not discretionary, duty on the risk assessor, in this case, the permitting authority to replace default values with site specific data to see if the risk (e.g., HQ) still presents an unacceptable risk. Thus, here, once the Region determined the potential risks in the screening level assessment, it had the duty to consider "more refined, data-intensive" information. However, it declined to do so, despite the information that ESSROC provided.

The Region states that "ESSROC chose not to evaluate the France Park lakes for fish ingestion in the 2003 SSRA." Resp. at p. 11. On the contrary, the 2003 SSRA accounted for the France Park lakes with site-specific information. See, e.g., 2003 SSRA, Table 5-6 (assessing the values for fish concentration); p. 123, Section 9.4 ("[A]lthough all populations may not be represented in the analysis, the range of exposures that have been evaluated were selected to constitute such a wide range, that exposures by a particular sub-group are likely to be represented with the exposure range evaluated.") The 2003 SSRA assessment concluded that a lower consumption rate than the default value was appropriate. See 2003 Risk Assessment

(concluding that lower consumption rates [7.15 g/day (1.4 meals / month)] were typical). There was simply no basis for the Region to ignore this information for the sake of a default value instead.

### **REQUEST FOR ORAL ARGUMENT**

Petitioner ESSROC respectfully requests that the Board allow oral argument on these issues. The potential participation by amicus curiae in this proceeding indicates the national significance of the issues involved in this appeal, and oral argument will allow for a thorough discussion of the legal and technical issues involved.

### **CONCLUSION AND RELIEF REQUESTED**

For the foregoing reasons, ESSROC respectfully requests that the Board review the annual mercury feed rate limitation in its Permit and remand the Permit back to EPA.

Dated: August 22, 2013

Respectfully submitted,



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**STATEMENT OF COMPLIANCE WITH WORD LIMITATION**

I hereby certify that this Reply, including all relevant portions, contains less than 7,000 words and 15 pages.

Dated: August 22, 2013



Philip J. Schworer

## CERTIFICATE OF SERVICE

I hereby certify, pursuant to the Rules of the Environmental Appeals Board of the U.S. Environmental Protection Agency, that I caused to be electronically filed the foregoing Reply with the Environmental Appeals Board via Central Data Exchange, and caused to be mailed a true and accurate copy to the following:

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