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(Slip Opinion)

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**BEFORE THE ENVIRONMENTAL APPEALS BOARD  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C.**

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In re: )  
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ESSROC Cement Corporation ) RCRA Appeal No. 13-03  
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RCRA Permit No. IND 005 081 542 )  
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[Decided July 30, 2014]

**REMAND ORDER**

*Before Environmental Appeals Judges Leslye M. Fraser,  
Catherine R. McCabe, and Kathie A. Stein.*

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**IN RE ESSROC CEMENT CORPORATION**

RCRA Appeal No. 13-03

***REMAND ORDER***

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Decided July 30, 2014

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Syllabus

ESSROC Cement Corporation (“ESSROC”) petitions the Environmental Appeals Board (“Board”) to review the annual mercury feed rate limit in a Resource Conservation and Recovery Act (“RCRA”) permit the U.S. Environmental Protection Agency (“EPA”) Region 5 (“Region”) issued. The permit governs cement kiln operations at ESSROC’s Portland cement manufacturing facility in Logansport, Indiana (“Facility”), which burns hazardous waste as fuel. ESSROC also challenges the Region’s 2012 site-specific risk assessment (“SSRA”) that led to the permit limit, which was the second risk assessment conducted for the Facility. Because the Facility emits hazardous air pollutants, it is subject to both RCRA requirements and to the EPA’s regulations implementing the Clean Air Act’s maximum achievable control technology standards for hazardous waste combustors (“HWC-MACT Rule”).

RCRA’s omnibus provision requires permitting authorities to include any additional terms and controls in a permit that may be necessary to protect human health and the environment. See RCRA § 3005(c)(3), 42 U.S.C. § 6925(c)(3). In the 2012 SSRA, the Region determined that, in accordance with the RCRA omnibus provision, additional conditions in the permit more stringent than the HWC-MACT Rule’s mercury limit were necessary to ensure protection of human health and the environment.

Held: The Board concludes that ESSROC did not demonstrate that the Region clearly erred or abused its discretion in requiring a second SSRA to determine whether additional controls were necessary to ensure protection of human health and the environment. The Region relied on four of the factors in 40 C.F.R. § 270.10(l)(1) to conclude that a second SSRA was warranted. ESSROC challenged only one factor, section 270.10(l)(1)(viii). Moreover, the regulatory language of section 270.10(l)(1)(viii) and its intent as expressed in the rule’s preamble do not support ESSROC’s interpretation that the phrase “subsequent changes in conditions likely to affect risk” is limited only to changes in site-specific conditions.

The Board also concludes that the Region did not exercise its considered judgment in conducting the 2012 SSRA. The Region's 2012 SSRA relied on the methodology set forth in EPA guidance, which states that every final risk assessment should include a formal uncertainty discussion and a robust conclusion. Without explanation, the 2012 SSRA lacks an uncertainty discussion and the conclusion section appears incomplete. Because the Region relied on the 2012 SSRA to include additional controls on mercury emissions in the permit to protect human health and the environment, the Board cannot conclude that the Region exercised its considered judgment in establishing the mercury limit. Accordingly, the Board remands the permit.

*Before Environmental Appeals Judges Leslye M. Fraser,  
Catherine R. McCabe, and Kathie A. Stein.*

*Opinion of the Board by Judge Fraser:*

I. STATEMENT OF THE CASE

U.S. Environmental Protection Agency ("EPA" or "Agency") Region 5 ("Region") issued a Resource Conservation and Recovery Act ("RCRA") permit ("Permit") to ESSROC Cement Corporation ("ESSROC") governing cement kiln operations at its Portland cement manufacturing facility ("Facility") in Logansport, Indiana. ESSROC petitions the Environmental Appeals Board ("Board") to review both the annual mercury feed rate limit in the Permit, and the site-specific risk assessment ("SSRA") that the Region conducted, which led to the permit limit. For the reasons discussed below, the Board concludes that the Region had authority to conduct a second SSRA for the Facility but did not exercise its considered judgment in conducting that assessment. Accordingly, the Board remands the Permit to the Region.

II. ISSUES ON APPEAL

ESSROC's challenge to the annual mercury feed rate limit raises the following issues on appeal:

- (1) Has ESSROC demonstrated that the Region clearly erred or abused its discretion in requiring a second site-specific risk assessment to determine whether additional controls are necessary to ensure protection of human health and the environment?

- (2) Has ESSROC demonstrated that the Region did not properly exercise its considered judgment when conducting the 2012 site-specific risk assessment it subsequently used to establish the permit's mercury feed rate limit?

### III. PRINCIPLES GUIDING BOARD REVIEW

Section 124.19 of Title 40 of the Code of Federal Regulations governs Board review of a RCRA permit. In any appeal from a permit decision issued under part 124, the petitioner bears the burden of demonstrating that review is warranted, and the Board has discretion to grant or deny review of a permit decision. 40 C.F.R. § 124.19(a)(4); *In re Avenal Power Ctr., LLC*, PSD Appeal Nos. 11-02 through 11-05, slip op. at 14-15 (EAB Aug. 18, 2011), 15 E.A.D. \_\_\_ (citing Consolidated Permit Regulations, 45 Fed. Reg. 33,290, 33,412 (May 19, 1980)), *appeal docketed sub nom. Sierra Club v. EPA*, No. 11-73342 (9th Cir. Nov. 3, 2011). Ordinarily, the Board will deny review of a permit decision and thus not remand it unless the permit decision either is based on a clearly erroneous finding of fact or conclusion of law, or involves a matter of policy or exercise of discretion that warrants review. 40 C.F.R. § 124.19(a)(4)(i)(A)-(B); *accord, e.g., In re Prairie State Generating Co.*, 13 E.A.D. 1, 10 (EAB 2006), *aff'd sub. nom. Sierra Club v. EPA*, 499 F.3d 653 (7th Cir. 2007); *see also* Revisions to Procedural Rules Applicable in Permit Appeals, 78 Fed. Reg. 5,280, 5,281 (Jan. 25, 2013). In considering whether to grant or deny review of a permit decision, the Board is guided by the preamble to the regulations authorizing appeal under part 124, in which the Agency stated that the Board's power to grant review "should be only sparingly exercised," and that "most permit conditions should be finally determined at the [permit issuer's] level." 45 Fed. Reg. at 33,412; *see also* 78 Fed. Reg. at 5,281.

### IV. STATUTORY AND REGULATORY FRAMEWORK

RCRA section 3005(a) provides for the permitting of new and existing facilities "for the treatment, storage, or disposal of hazardous waste," known as TSD facilities. RCRA also requires the permitting agency to include in each permit for a TSD facility any terms and

conditions necessary to protect human health and the environment. RCRA § 3005(c)(3), 42 U.S.C. § 6925(c)(3). EPA has interpreted and applied this statutory provision, known as the RCRA “omnibus authority,” as authorizing permit conditions that are more stringent than those specified in other regulations that may apply to the TSD facility. *In re Ash Grove Cement Co.*, 7 E.A.D. 387, 396 (EAB 1997). TSD facilities that burn hazardous waste as fuel, such as cement kilns, are further regulated under RCRA section 3004(q), 42 U.S.C. § 6924(q). Section 3004(q)(1) directs the Agency to promulgate such standards “as may be necessary to protect human health and the environment.” RCRA § 3004(q)(1), 42 U.S.C. § 6924(q)(1).

TSD facilities that emit air pollutants also are subject to regulation under the Clean Air Act (“CAA”), 42 U.S.C. §§ 7401-7671q. Clean Air Act section 112, 42 U.S.C. § 7412, requires EPA to regulate hazardous air pollutants emitted from hazardous waste combustion (“HWC”) units based on the maximum achievable control technology (“MACT”) for sources in each category. Accordingly, where the source of hazardous air pollutants is, as here, a TSD facility, the cement kiln-specific standards of RCRA section 3004(q), the permitting requirements of RCRA section 3005(a), and the MACT standards in CAA section 112 all apply to the source.

In 2005, EPA promulgated the final rule integrating the RCRA permitting provisions of section 3005 and the national emissions standards for HWC units under CAA section 112. National Emission Standards for Hazardous Air Pollutants: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors, 70 Fed. Reg. 59,402 (Oct. 12, 2005) (codified at 40 C.F.R. pt. 63, subpt. EEE) (“HWC-MACT Rule”). The HWC-MACT Rule authorizes the permitting authority to consider on a case-by-case basis during the initial RCRA permit application or renewal process whether to conduct an SSRA. *See* 40 C.F.R. § 270.10(l)(1) (setting forth factors for permitting authorities to consider when determining the need for an SSRA). A companion regulation provides, pursuant to the omnibus authority, that if the permitting authority determines as a result of an SSRA or other information that additional conditions are needed beyond those required under the HWC-MACT Rule to ensure protection of human health and the environment, the permitting authority shall

include those terms and conditions in the facility's permit. 40 C.F.R. § 270.32(b)(3).

#### V. FACTS AND PROCEDURAL HISTORY

In September 2003, the Region issued a RCRA permit for the Facility to burn hazardous waste in two cement kilns. As part of the 2003 permitting process, ESSROC retained risk assessors to conduct an SSRA for the cement kiln operations at the Facility using EPA-agreed-upon parameters and protocol. Petition at 7; *see generally* Horizon Env'tl. Corp., *Comprehensive Risk Assessment for the Cement Kiln Operations at the ESSROC Cement Corporation* (Mar. 2003) (A.R. 48d) ("2003 SSRA"). On May 9 and August 29, 2008, ESSROC submitted its permit renewal application and revised permit application, respectively, to the Region. These permit applications included updates to the 2003 SSRA.

In a letter dated January 22, 2009, the Region informed ESSROC that the 2003 SSRA and its updates did not adequately respond to changes in EPA guidance relating to the transport of mercury in the environment. Letter from Jae Lee, RCRA Branch, Region 5, U.S. EPA, to Corey Conn, ESSROC Cement Co., *Risk Assessment Update Request, ESSROC Cement Co. IND 005 081 542*, at 1 (Jan. 22, 2009) (A.R. 10a) ("2009 Lee Letter"); *see also* Region's Response Br. at 6 (describing mercury dry vapor deposition as "a significant pathway in the fate and transport of mercury, that had been detected in ESSROC's stack emissions"). The Region relied on four of the factors in 40 C.F.R. § 270.10(I) to support its determination that "a portion of the SSRA [should] be redone" for the 2008 permit renewal. 2009 Lee Letter at 1. According to the Region, "[a] number of changes were made to EPA's Human Health Risk Assessment Protocol for Hazardous Waste Combustors [sic] in 2005 (HHRAP) especially as they relate [to] the fate and transport of mercury in the environment."<sup>1</sup> *Id.* ESSROC

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<sup>1</sup> The HHRAP is the Agency's peer-reviewed guidance for conducting site-specific risk assessments for RCRA hazardous waste combustion units. Although it is not accorded the same weight as a binding Agency regulation, the Board considers the HHRAP a statement of the Agency's thinking on site-specific risk assessments for hazardous waste combustors.

disagreed that a second site-specific risk assessment was warranted, Petition at 8, but “attempted to address some of these changes.” 2009 Lee Letter at 1. However, the Region found that “the effort was not complete.” *Id.*

Relying on the HHRAP, the Region undertook a screening-level human health risk assessment<sup>2</sup> of the Facility and issued a site-specific risk assessment on June 19, 2012. RCRA Programs Branch, Land & Chem. Div., Region 5, U.S. EPA, *Screening-Level Human Health Risk Assessment 1* (June 19, 2012) (A.R. 38) (“2012 SSRA”).<sup>3</sup> The Region concluded that the 2012 SSRA demonstrated a need for mercury limits more stringent than the nationwide limit provided in HWC-MACT Rule that the Agency promulgated on October 12, 2005. *Id.* at 10-11; Region’s Response Br. at 7.

On July 22, 2012, the Region issued the draft permit for public comment, which included a proposed 87.91 pounds per year annual mercury feed rate limit for the Facility. The draft permit package included a memorandum stating that the Region had conducted a new risk assessment in 2012. According to ESSROC, this was the first notice it had of the 2012 SSRA. EAB Oral Arg. Tr. at 13-14. ESSROC, which submitted the only comments on the draft permit, commented that “the calculated HWC MACT feed rate limit for the two kiln operation is 1,793.4 \* \* \* [pounds per year].” Letter from Jeremy Black, Plant Manager, ESSROC Cement Co., to Gary Victorine, Chief, RCRA Branch, Region 5, U.S. EPA 2 (Oct. 22, 2012) (A.R. 43) (“Comments”).<sup>4</sup> ESSROC thus concluded from its calculations that the

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<sup>2</sup> The Region “refer[s] to the analysis as a risk screening because the focus is only on the pollutants that the EPA believes to have a likelihood of exceeding accepted levels of cancer risk or chronic toxicity at [the time of the analysis], based on EPA’s experience with previous risk assessments for hazardous waste combustors.” RCRA Programs Branch, Land & Chem. Div., Region 5, U.S. EPA, *Screening-Level Human Health Risk Assessment 1* (June 19, 2012) (A.R. 38).

<sup>3</sup> Because the pages of the Region’s 2012 SSRA are not numbered, the Board has numbered the pages in order, beginning with first page following the cover sheet.

<sup>4</sup> Because the pages of ESSROC’s comments are not numbered, the Board has numbered the pages in order, beginning with the cover letter.

HWC-MACT Rule is “sufficient to protect human health and the environment and additional mercury input limits are not necessary.” *Id.* attach. 2. Nonetheless, ESSROC proposed to accept a mercury feed rate limit of half its calculated MACT feed rate limit, or 896.7 pounds per year, “as an accommodation,” *Id.* at 1-2; Petition at 2. On June 5, 2013, the Region issued the Permit and the response to comments document. Region 5, U.S. EPA, Hazardous Waste Management Facility Permit (July 5, 2013) (A.R. 46.) (“Permit”); Region 5, U.S. EPA, Response to Comments on the Draft Permit for ESSROC Cement Corporation Federal RCRA Permit Logansport, Indiana IND 005 081 542 (June 5, 2013) (A.R. 45) (“Response Summary”). The Region stated that it retained the 87.91 pounds per year annual mercury feed rate limit in the Permit “to protect human health and the environment,” as required by RCRA § 3004(q). Permit § III.F.1, at 20.

ESSROC petitioned for review of the Region’s permit decision, challenging both the annual mercury feed rate limit and the 2012 SSRA that led to that limit.<sup>5</sup> Cement Kiln Recycling Coalition, participating as amicus curiae on behalf of ESSROC, also filed a brief with the Board.

## VI. ANALYSIS

### A. *The Region Did Not Clearly Err or Abuse Its Discretion in Requiring a Second Site-Specific Risk Assessment to Determine Whether Additional Controls Are Necessary to Ensure Protection of Human Health and the Environment*

#### 1. *40 C.F.R. § 270.10(l)(1) Provides Nine Factors for EPA to Use to Assess Whether Additional Information or Assessments Are Needed at HWC Facilities*

EPA’s regulations for hazardous waste combustors, including cement kilns burning hazardous wastes, state that if the Region

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<sup>5</sup> ESSROC erroneously states in its petition that the mercury feed rate limit that it is challenging is 89.17 pounds per year. *See, e.g.*, Petition at 8. However, the actual mercury feed rate limit in the permit is 87.91 pounds per year. Permit § III.F, at 20. The Board thus construes the petition as a challenge to the 87.91 pounds per year limit.

concludes, “based on *one or more of the factors* listed in [40 C.F.R. § 270.10(l)(1)] that compliance with [the HWC-MACT Rule] alone may not be protective of human health or the environment, the [Region] *shall* require the additional information or assessment(s) necessary to determine whether additional controls are necessary to ensure protection of human health and the environment.” 40 C.F.R. § 270.10(l) (emphasis added). The regulation further states that the Region “shall base the evaluation of whether compliance with the [HWC-MACT] standards \* \* \* alone is protective of human health or the environment on factors relevant to the potential risk from a hazardous waste combustion unit, including, as appropriate, *any of*” the nine factors provided in the regulation.” *Id.* (emphasis added).

Only four of the factors in the regulation are relevant to the Board’s resolution of this case, namely the four factors the Region cited in its 2009 Lee Letter to justify the need for an additional site-specific risk assessment. They are: factor (i) – proximity to receptors, such as parks; factor (ii) – identities and quantities of emissions of persistent, bioaccumulative or toxic pollutants, considering enforceable controls in place to limit those pollutants; factor (v) – proximity of a particularly sensitive ecological area; and factor (viii) – adequacy of any previously conducted risk assessment, given any subsequent changes in conditions likely to affect risk.<sup>6</sup> *Id.* § 270.10(l)(1)(i), (ii), (v), (viii). Specifically, the Region explained:

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<sup>6</sup> The relevant provisions in 40 C.F.R. § 270.10(l) state in full:

If the Director concludes, based on one or more of the factors listed in paragraph (l)(1) of this section that compliance with the standards of 40 CFR part 63, subpart EEE alone may not be protective of human health or the environment, the Director shall require the additional information or assessment(s) necessary to determine whether additional controls are necessary to ensure protection of human health and the environment. This includes information necessary to evaluate the potential risk to human health and/or the environment resulting from both direct and indirect exposure

EPA believes a portion of the SSRA [should] be redone based on the

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pathways. The Director may also require a permittee or applicant to provide information necessary to determine whether such an assessment(s) should be required.

(1) The Director shall base the evaluation of whether compliance with the standards of 40 CFR part 63, subpart EEE alone is protective of human health or the environment on factors relevant to the potential risk from a hazardous waste combustion unit, including, as appropriate, any of the following factors:

(i) Particular site-specific considerations such as proximity to receptors (such as schools, hospitals, nursing homes, day care centers, parks, community activity centers, or other potentially sensitive receptors), unique dispersion patterns, etc.;

(ii) Identities and quantities of emissions of persistent, bioaccumulative or toxic pollutants considering enforceable controls in place to limit those pollutants;

\* \* \* \*

(v) Presence of significant ecological considerations, such as the proximity of a particularly sensitive ecological area; [and]

(viii) Adequacy of any previously conducted risk assessment, given any subsequent changes in conditions likely to affect risk[.]

40 C.F.R. § 270.10(l).

ESSROC also challenged the application of the ninth factor, 40 C.F.R. § 270.10(l)(1)(ix) ("Such other factors as may be appropriate."). See Petition at 10; Corrected Petitioner's Reply Br. at 2. The Region, however, did not rely on this factor to conduct the 2012 SSRA, and thus, the Board denies review on this issue.

## ESSROC CEMENT CORPORATION

following factors from 40 C.F.R. § 270.10(l):

(i) Particular site-specific considerations such as proximity to receptors (such as schools, hospitals, nursing homes, day care centers, parks, community activity centers, or other potentially sensitive receptors), unique dispersion patterns, etc.;

*The ESSROC facility is 1.6 miles from a lake used and promoted for public fishing.*

(ii) Identities and quantities of emissions of persistent, bioaccumulative or toxic pollutants  
\* \* \* considering enforceable controls in place to limit those pollutants;

*Mercury, a [bioaccumulative or toxic pollutants], has been detected in stack emissions at ESSROC.*

(v) Presence of significant ecological considerations, such as the proximity of a particularly sensitive ecological area;

*Nearby lakes used for public fishing present a potential for ecological bioaccumulation of mercury.*

(viii) Adequacy of any previously conducted risk assessment, given any subsequent changes in conditions likely to affect risk;

*Previous risk assessments did not include evaluation of mercury dry vapor deposition, a significant pathway in the fate and transport of mercury.*

Letter from Jae Lee, RCRA Branch, Region 5, U.S. EPA, to Corey Conn, ESSROC Cement Co., *Risk Assessment Update Request, ESSROC Cement Co. IND 005 081 542*, at 1-2 (Jan. 22, 2009) (emphases in original) (A.R. 10a) (“2009 Lee Letter”).

Based on the plain language of the regulation, the Region’s authority to require “additional information or assessment(s) necessary to determine whether additional controls are necessary to ensure protection of human health and the environment” may be based on *any* (i.e., a single) section 270.10(l)(1) factor. ESSROC does not challenge this. Petition at 9 (“EPA’s authority to order SSRAs on a case-by-case basis is therefore limited to the occurrence of one or more factors listed in 40 C.F.R. § 270.10(l)(1).”). In its petition, ESSROC challenged only *one* of the four factors the Region cited in its 2009 letter as justification for requiring an additional SSRA – factor (viii). ESSROC does not dispute any of the other three factors set forth in section 270.10(l)(1)(i), (ii), or (v) that the Region cited to require a second SSRA. Accordingly, the Board concludes that ESSROC has not shown that it was clearly erroneous or an abuse of discretion for the Region to require the 2012 SSRA because at minimum, there remain three unchallenged bases to support the Region’s determination.

2. *40 C.F.R. § 270.10(l)(1)(viii) Is Not Limited to Changes in Site-Specific Conditions*

ESSROC further argues that the Region erred in relying on section 270.10(l)(1)(viii) in requiring a second SSRA. The Board does not agree. As provided earlier, that factor states:

The Director shall base the evaluation of whether compliance with the [HWC-MACT Rule] alone is protective of human health or the

environment on factors relevant to the potential risk from a hazardous waste combustion unit, including \* \* \* [a]dequacy of any previously conducted risk assessment, *given any subsequent changes in conditions likely to affect risk* \* \* \*.

40 C.F.R. § 270.10(D)(1)(viii) (emphasis added).

ESSROC contends that because there were no operational changes or changes in surrounding circumstances at the Facility, the Region cannot justify a second SSRA based on factor (viii). Petition at 9. In support of its argument, ESSROC relies on the following statements in the preamble to the HWC-MACT Rule:

[EPA] expect[s] that facilities that have previously conducted an SSRA will not need to conduct another in consideration of today's final standards. Only those facilities newly subject to the RCRA permitting requirements, or existing sources where changes in conditions could lead to increased risk, may need to conduct or modify an existing SSRA.

70 Fed. Reg. 59,402, 59,511 n.241 (Oct. 12, 2005).

ESSROC argues that "EPA sought a second SSRA due to perceived weaknesses in the [2003] SSRA and the erroneous determination that more recent guidance warranted a redo of the previous EPA-approved risk assessment[.]" not because of any changes in conditions at the Facility. Petition at 9. According to ESSROC, new information regarding a previously unknown or undetected health threat or risk from emissions from a permitted facility does not fall within the meaning of "any subsequent changes in conditions likely to affect risk" in section 270.10(D)(1)(viii). EAB Oral Arg. Tr. at 20, 22-23. Amicus curiae Cement Kiln Recycling Coalition ("CKRC") agrees with

ESSROC's interpretation. *See generally* CKRC's Br. at 8-13 (arguing against the Region's view that "changes in conditions" include "changes 'in the science that supported the original risk assessment'").

The Board declines to restrict the scope of section 270.10(I)(1)(viii) to the narrow interpretation that ESSROC and CKRC propose. Contrary to ESSROC's and CKRC's arguments, the regulations do not limit "changes in conditions" in section 270.10(I)(1)(viii) only to changes in site-specific conditions. Nothing in the language of the regulation nor its preamble call for such a constrained interpretation. First, nothing in the regulation indicates that "changes in conditions" cannot include, for example, changes in science, new information about site-specific conditions, or new analyses that reflect application of changed science to site conditions. Second, in the preamble to the HWC-MACT Rule, the Agency expressly stated that "the [section 270.10(I)(1)] factors were not intended to function as stand-alone criteria for requiring an SSRA." 70 Fed. Reg. at 59,509. Rather, the regulation "provides a non-exclusive list of guiding factors for permit authorities to use in determining whether the MACT will be sufficiently protective at an individual site, and consequently, whether an SSRA is warranted." *Id.*; *see also Cement Kiln Recycling Coal. v. EPA*, 493 F.3d 207, 221 (D.C. Cir. 2007) ("[M]ost information requests [under factor (viii)] will be targeted at determining whether there has been a change in circumstances since the previous permitting process."<sup>7</sup>

Moreover, CKRC's and ESSROC's interpretation could result in EPA being unable to meet the express statutory requirement to issue permits to HWCs that "contain such terms and conditions as [the permitting authority] determines necessary to protect human health and the environment[,]" RCRA § 3005(c)(3), 42 U.S.C. § 6925(c)(3), even if the Agency had new studies showing previously unknown health effects due to exposure to a pollutant emitted by a covered facility.<sup>8</sup>

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<sup>7</sup> The word, "circumstance," has several broad definitions, one of which is relevant here: "a condition, fact, or event accompanying, conditioning, or determining another." Webster's Third New International Dictionary 410 (1993).

<sup>8</sup> *See, e.g.*, EAB Oral Arg. Tr. at 20, 22-23 (in response to questions, counsel for ESSROC argued that even if EPA discovers a new threat from a previously unknown

Similarly, even if the Agency discovered an error in a previous risk assessment, under ESSROC's interpretation the Agency would be precluded from conducting an additional risk assessment to correct the error and determine the actual risk to human health and the environment.<sup>9</sup> Such a reading of the HWC-MACT Rule does not comport with its plain language or the statutes it implements.

Lastly, ESSROC's specific challenge in this appeal is to the *mercury* feed rate limit in its permit. Importantly, the Agency expressly stated in the preamble to the HWC-MACT Rule that in establishing the nationwide emission limits, the Agency "*did not quantitatively assess the proposed [MACT] standards with respect to mercury*" due to a lack of adequate information regarding the behavior of mercury in the environment. 70 Fed. Reg. at 59,511 (emphasis added).

Since it was not possible to suitably evaluate the proposed standards for the potential risk posed by mercury \* \* \*, in order to support [the Agency's RCRA § 1006(b)] determination, [the Agency] continued to recommend that SSRAs be conducted for some facilities as part of the permitting process until [EPA] could conduct a further assessment once final MACT standards were promulgated and implemented. *Specifically, [the Agency] recommended that for*

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pollutant, an SSRA stands in perpetuity – even 30 or 40 years later – if there have been no changes in operations or conditions at the facility).

<sup>9</sup> This example applies to this case. At oral argument, the Region stated that it was not clear from the administrative record for the 2003 permit why the focus in the 2003 SSRA was on the Wabash River, given that the 2003 SSRA identified the France Park lakes and determined they were contaminated. For the 2012 SSRA, the Region "decided that it's not appropriate just because the wrong media was focused on in 2003 that we should perpetuate that and \* \* \* continue to focus on that media when we are under the regulatory mandate to evaluate whether there's a risk presented by the hazardous waste in MACT." EAB Oral Arg. Tr. at 76.

*hazardous waste combustors subject to the Phase 1 MACT standards — hazardous waste burning incinerators, cement kilns and light-weight aggregate kilns — permitting authorities should evaluate the need for an SSRA on a case-by-case basis. [The Agency] further stated that while SSRAs are not anticipated to be necessary for every facility, they should be conducted where there is some reason to believe that operation in accordance with the MACT standards alone may not be protective of human health and the environment.*

\* \* \* \*

*Thus \* \* \* [the Agency] continue[s] to believe that SSRAs may be necessary for some facilities.*

*Id.* (emphases added).

The preamble to the HWC-MACT Rule further explains that additional SSRAs for cement kiln facilities are not as a matter of course precluded because of a prior risk assessment. *Id.* Accordingly, based on the plain language of the HWC-MACT Rule and its intent as the Agency expressed in the rule's preamble, the Board concludes that the Region had authority to conduct a second SSRA under 40 C.F.R. § 270(l)(1)(viii) for the ESSROC facility. The Board further concludes that factor (viii) is not limited to a change in site-specific conditions.

3. *The Region Rationally Determined That a New Site-Specific Risk Assessment Was Needed to Evaluate the Risk of Mercury Emissions from the Facility*

In this case, the Region partially, rather than wholly, redid the 2003 risk assessment to evaluate “those pollutants that EPA believes to

have a likelihood of exceeding accepted levels of cancer risk or chronic toxicity \* \* \* based on the EPA's experience with previous risk assessments for hazardous waste combustors." RCRA Programs Branch, Land and Chemical Division, Region 5, U.S. EPA, *Screening-Level Human Health Risk Assessment 1* (June 19, 2012) (A.R. 38) ("2012 SSRA"). The Region stated that

[The 2012 SSRA] focused specifically on the health impacts of chemicals and circumstances that relate to emission limits established by the [HWC-MACT Rule]. The chemical emissions [the Region assessed in the 2012 SSRA] are polychlorinated dibenzodioxins and polychlorinated dibenzofurans ("Dioxins") and toxic or carcinogenic metals all regulated pursuant to [the HWC-MACT Rule].

#### 2012 SSRA § I.B.

The 2012 SSRA also considered the impact of dry deposition of mercury, which the 2003 SSRA had not evaluated. Further, the 2012 SSRA included the Region's determination of whether compliance with the existing MACT standards alone for certain pollutants, including mercury, "would be protective of human health" or whether additional controls would "be necessary on an individual source basis to ensure that adequate protection is achieved in accordance with RCRA."<sup>10</sup> 2012 SSRA §§ I.C, II. Consistent with the HWC-MACT Rule and its preamble, the Region limited the scope of the 2012 SSRA – a fact ESSROC conceded at oral argument. *See* EAB Oral Arg. Tr. at 29. The Region evaluated only those pollutants that it

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<sup>10</sup> The other pollutants the Region assessed in the 2012 SSRA were dioxins, lead, arsenic, beryllium, cadmium, and hexavalent chromium. In addition to establishing emission limits for these pollutants, the HWC-MACT Rule includes emission limits for carbon monoxide and hydrocarbons, hydrogen chloride and chlorine gas, and particulate matter. 70 Fed. Reg. at 59,571-74 (codified at 40 C.F.R. § 63.1220).

determined were likely to exceed accepted levels of cancer risk or chronic toxicity, and explained to ESSROC the basis for its determination that an additional SSRA was needed. *See* 2009 Lee Letter. In the “Findings of the Risk Assessment” section of the 2012 SSRA, the Region concluded that with the exception of mercury, no additional limits were needed beyond those established in the HWC-MACT Rule.<sup>11</sup> 2012 SSRA § II.

The 2003 SSRA, which a consultant conducted on ESSROC’s behalf using EPA-agreed-upon parameters and protocol, differs from the 2012 SSRA conducted by the Region in several aspects. *E.g.*, Petition at 7; EAB Oral Arg. Tr. at 75. First, the 2003 SSRA focused primarily on the impact of the Facility’s emissions on the Wabash River, and, upon the Region’s recommendation, used bioaccumulation factors that were appropriate for rivers and moving streams.<sup>12</sup> Ultimately, the 2003 SSRA “did not consider the potential effects from mercury on fishers at the nearby France Park lakes [, nor did it] \* \* \* consider the application of the HWC-MACT Rule emission standards.” 2012 SSRA § I.D; *see also* EAB Oral Arg. Tr. at 75.

By comparison, for the 2012 SSRA, the Region concluded that the media at greatest risk were the France Park lakes, not the Wabash River. *E.g.*, EAB Oral Arg. Tr. at 76. The Region thus shifted its focus to these lakes given “the regulatory mandate to evaluate whether there’s a risk presented by the hazardous waste in MACT.” *Id.* at 78-79; *see also* Region 5, U.S. EPA, Response to Comments on the Draft Permit for ESSROC Cement Corporation Federal RCRA Permit Logansport,

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<sup>11</sup> Importantly, the Board is not suggesting that the Region was precluded from completely redoing the SSRA as a matter of law, only that such a situation is not presented in this case. As noted in the preamble to the HWC-MACT Rule, permitting authorities should evaluate the need for an additional SSRA on a case-by-case basis and justify their decisions on the record should they deem that additional SSRAs are warranted. *See* 70 Fed. Reg. at 59,511. Such a determination would be subject to Board review, if appropriately challenged.

<sup>12</sup> Bioaccumulation factors consider the contaminant uptake in fish tissue from both water and food and are the “ratio of the contaminant concentration[] in fish tissue versus that in the water.” Office of Water, U.S. EPA, EPA-823-B-12-002, *Water Quality Standards Handbook: Second Edition* § 3.1.3 (Mar. 2012).

Indiana IND 005 081 542 at 9 (June 5, 2013) (“We determined the specific waterbodies of concern for the ESSROC facility (Elzbeck [L]ake and Old Kenith Stone Quarry) are clearly lakes and not moving streams.”) (A.R. 45) (“Response Summary”). As a result, in the 2012 SSRA the Region used a bioaccumulation factor that it derived from combining bioaccumulation factors from two types of lake fish to represent the fish in the France Park lakes. *Id.* In addition to considering a new pathway of mercury deposition and different bioaccumulation factors, the 2012 SSRA also considered the 2005 MACT mercury emission standards and an updated mass balance calculation pertaining to mercury methylation that were not considered in the 2003 SSRA. 2012 SSRA § 1.D.

Given the plain language of the HWC-MACT Rule, its preamble language clearly stating the Agency did not assess mercury when setting the MACT standards, and the Region’s explanations in the 2009 Lee Letter, the 2012 SSRA, and the response to comments document, the Board finds that ESSROC failed to demonstrate that the Region erred or abused its discretion in requiring a second site-specific risk assessment at the Facility.

*B. The Region Did Not Properly Exercise Its Considered Judgment When Conducting the 2012 Site-Specific Risk Assessment*

*1. The Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities (HHRAP) Provides Guidance to Risk Assessors of Hazardous Waste Combustors*

The HHRAP sets forth a methodology for conducting “multi-pathway, site-specific human health risk assessments on [RCRA] hazardous waste combustors” when the “permitting authority determines such risk assessments are necessary.” Office of Solid Waste & Emergency Response, U.S. EPA, EPA530-R-05-006, *Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities* 1-1 (Sept. 2005). Risk assessors may use the HHRAP as a screening tool by selecting conservative assumptions, and “[i]f estimates don’t exceed the selected risk target, additional iterations of the assessment may not be necessary.” *Id.* at 1-9. The HHRAP further advises the risk

assessor to “generally make every effort to reduce limitations and uncertainties in the risk assessment process \* \* \*.” *Id.* In particular, the HHRAP states “that identifying potentially unacceptable risks does not necessarily signify the end of the risk assessment. You can view risk assessments as an iterative process, with a number of available options once risk estimates are produced.” *Id.* at 1-11.

With respect to estimating the risks of mercury, the HHRAP recommends using its equations and assumptions. *Id.* at 2-55. “If estimated risks exceed target levels, it may be appropriate to use more extensive site-specific data (if available) and subsequently a more rigorous modeling effort, to further evaluate points of potential exposure.” *Id.*

The HHRAP recommends that the risk assessor’s final step be conducting a risk characterization.<sup>13</sup> *Id.* at 7-1. The HHRAP explains the importance of including a discussion in the risk assessment that “fully explain[s] the areas of uncertainty \* \* \* and to identify the key assumptions used in conducting the assessments.” *Id.* at 8-7. The HHRAP recommends a formal uncertainty discussion that, for example, may “list the key assumptions in [a particular section of the risk

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<sup>13</sup> To develop a risk characterization, the risk assessor:

[Combines] the exposure quantities generated [during the risk assessment], and the toxicity benchmarks available in the HHRAP companion database, to calculate the excess lifetime cancer risks (risk) and noncancer hazards (hazard) for each of the pathways and receptors identified [earlier in the risk assessment process]. Risks (and hazards) are then summed for each receptor, across all applicable exposure pathways, to obtain an estimate of total individual risk and hazard. Risk characterization also involves documenting the uncertainties and limitations associated with the risk [sic] assessment \* \* \*.

HHRAP at 7-1.

analysis], the rationale for those assumptions, their effect on estimates of risk \* \* \*, and the magnitude of the effect \* \* \*.” *Id.*

2. *The Region Used the HHRAP as Guidance for Conducting Its 2012 SSRA*

In conducting the 2012 SSRA, the Region relied on the HHRAP guidance. 2012 SSRA § I.F(1) (citing HHRAP). The Region made “several simplifying conservative (protective) assumptions in the process of conducting the [2012 SSRA].” *Id.* § I.B. The risk assessment summarized the site-specific factors relevant to the potential risk from the Facility and described the components of the site-specific risk assessment process and the methodology for the assessment. *Id.* §§ I.D, I.E. The Region also identified the model used for each emission point and the computer application used for the modeling. *Id.* § I.F(1). The Region appended “listings summarizing the non-default assumptions the EPA set in the \* \* \* model” for the screening. *Id.*

One of the critical calculations in the 2012 SSRA that drives, in part, the determination of the mercury feed rate is the hazard quotient for the emission of mercury at the Facility. This calculation includes the methylmercury bioaccumulation factor and the fish consumption rate, along with other variables.<sup>14</sup> *Id.* § II.B(2). The Region calculated that the HWC-MACT mercury emissions standard yielded a 2.55 hazard quotient for mercury emissions from the Facility. This exceeds the Agency’s benchmark acceptable hazard quotient risk value of 0.25.<sup>15</sup>

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<sup>14</sup> For a discussion of the methylmercury bioaccumulation factor, see Section VI.A.3, above. The fish consumption rate is “the amount of fish and shellfish in kilograms consumed by a person each day.” Office of Water, U.S. EPA, *Human Health Ambient Water Quality Criteria and Fish Consumption Rates: Frequently Asked Questions* (Jan. 18, 2013).

<sup>15</sup> A hazard quotient for a direct exposure assessment is a ratio of the maximum environmental concentration (milligrams per kilograms) to an ecological benchmark (for example, EPA water quality criteria). A hazard quotient for an indirect exposure assessment is the estimated chemical intake (milligrams per kilogram-day) to an ecotoxicity screening value (for example, a no-observed-adverse-effect level). A hazard index is the sum of the hazard quotients for individual pollutants. *E.g.*, HHRAP at 7-7; 2012 SSRA § I.F(1)(i). According to the Cancer Risk and Hazard Quotient Results table in the 2012 SSRA, the cancer risk value is not applicable to mercury.

*E.g., id.* § III; Memorandum from Jae Lee, Land & Chemicals Div., Region 5, U.S. EPA, to File, *Annual Mercury Feed Rate Limit for ESSROC Cement Corp. Logansport, Indiana, RCRA Permit 2-3* (June 28, 2012) (A.R. 39) (“2012 Lee Memo”) (citing Office of Solid Waste & Emergency Response, U.S. EPA, EPA-R-94-021, *Exposure Assessment Guidance for RCRA Hazardous Waste Combustion Facilities, Draft* (Apr. 1994)).

In the 2012 SSRA, the Region stated:

From the standpoint of risk assessment, mercury deposition and runoff to water bodies is a concern primarily because of the conversion of mercury to methylmercury within the water column. Methylmercury has a high potential for bioaccumulation and bioconcentration into aquatic species and fish.

The EPA follows the risk management guidelines specified in the EPA’s *Implementation of Exposure Assessment Guidance for RCRA Hazardous Waste Combustion Facilities*, which states that any one facility should contribute no more than [a hazard index] = 0.25 under a reasonable maximum exposure scenario. Accordingly, the EPA would recommend that the annual total stack emission of mercury be restricted to

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2012 SSRA § II.B(2). Therefore, the hazard index for mercury is equivalent to its hazard quotient.

result in a total [hazard index] equal to or less than 0.25.

2012 SSRA § II.B(2).

Based on the considerations described above and relying on the RCRA omnibus authority that requires permit issuers to include any additional permit terms necessary to protect human health and the environment, the Region concluded that additional controls for mercury at the Facility were required. *See* 2012 Lee Memo at 3 (explaining 2012 SSRA); *see also* 2012 SSRA § III. Accordingly, the Region calculated and set a mercury feed rate limit of 87.91 pounds per year<sup>16</sup> “to ensure that the hazard quotient that results from the emission of mercury from the ESSROC Facility will be equal to or below the benchmark [hazard quotient] value of 0.25.” 2012 Lee Memo at 3. In contrast, ESSROC argues that the mercury feed rate at the HWC-MACT emissions level should be 1,793.4 pounds per year.<sup>17</sup> Comments at 2.

ESSROC argues that the Region clearly erred in setting the mercury feed rate limit in the Permit at 87.91 pounds per year (5 percent of ESSROC’s calculated limit) because the Region chose inappropriate values for both the methylmercury bioaccumulation factor and the fish consumption rate for the France Park lakes. *See* Petition at 15-17.

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<sup>16</sup> It does not appear from the administrative record that the Region calculated a mercury feed rate for the Facility using the MACT mercury emissions limit. *See* 2012 Lee Memo at 2. The record further does not directly compare the mercury feed rates using the mercury MACT emissions standard as calculated by the Region, and the Region’s risk-based standard for the Facility. The Region stated that the formula it used to derive the annual feed rate ensures that the hazard quotient that results from the emission of mercury from the Facility will be equal to or below the 0.25 acceptable hazard quotient risk value. *Id.*

<sup>17</sup> It is not clear to the Board how this figure was derived because the Region does not refer to it, and ESSROC’s citations to the figure refer only to its own documents. *See* Petition at 7-8 (citing Response Summary at 9 (citing Comments attach. 2 & n.6 (“Based on [hazardous waste combustion] MACT mercury emission limits, facility stack characteristics, and a 69.84% [system removal efficiency for mercury], the input limit is 1793.4 pounds of mercury per year.”))). Nonetheless, the Board notes that the Region did not contest ESSROC’s calculated mercury feed rate in its response to comments document nor its pleadings to the Board.

ESSROC asserts that the Region's failure to consider site-specific fish consumption rate information that ESSROC provided is inconsistent with Board case law and "the overall layout of [the] HHRAP." *Id.* at 15. ESSROC further contends that the Region did not complete all of the steps outlined in the HHRAP for conducting an SSRA. *See, e.g.*, EAB Oral Arg. Tr. at 33-34 (ESSROC counsel arguing that once the Region found unacceptable risk based on the use of default values, it should have evaluated the variables and uncertainties, evaluated the impact of those uncertainties, and developed additional information, including possibly site-specific information, prior to issuing the risk assessment report). According to ESSROC, had the Region conducted a more comprehensive risk analysis, it would have selected more representative bioaccumulation factors and fish consumption values, which would have resulted in a higher mercury feed rate limit. ESSROC argues that this higher mercury feed rate would be protective of human health and the environment, thereby meeting the RCRA § 3004(q) standard without the need for further controls. Comments attach. 2; Petition at 7-8.

In addition, ESSROC identifies two documents that it believes the Region erroneously omitted from the administrative record that ESSROC contends support its arguments: an e-mail dated September 9, 2011, sent to EPA employee Christopher Lambesis with the subject "Risk Analysis Assumptions for Mercury," and a June 27, 2003 EPA Region 5 intra-agency memorandum authored by an EPA toxicologist, Dr. Mario Mangino ("Mangino Memorandum"). ESSROC claims that these documents constitute "supporting information" that should be in the record, and "the proper remedy is to remand the decision back to the agency to ensure that any permitting decision is based upon a complete record." Petition at 12.

These challenges require the Board to determine whether the Region clearly erred or abused its discretion in determining the methylmercury bioaccumulation factor and fish consumption rate, and in conducting the 2012 SSRA. Because the two documents that ESSROC asserts should be in the administrative record are potentially relevant to the Region's analysis of the appropriate bioaccumulation factor and fish consumption rate, the Board addresses this preliminary procedural issue first.

3. *The Region Did Not Clearly Err or Abuse Its Discretion When It Excluded the Two Documents in Question from the Administrative Record*

General principles of administrative law dictate that the complete or official administrative record for an agency decision must include all documents, materials, and information that the agency relied on directly or indirectly in making its decision. *E.g., In re Russell City Energy Ctr., LLC*, PSD Appeal Nos. 10-01 through 10-05, slip op. at 48-49 (EAB Nov. 18, 2010), 15 E.A.D. \_\_\_\_, *petition denied sub nom. Chabot-Las Positas Cmty. Coll. Dist. v. EPA*, 482 F. App'x 219 (9th Cir. 2012). Consistent with these principles, the part 124 regulations require that the final permitting decision be based on the administrative record, and further specify what must be included in the administrative record for EPA-issued permits. *E.g., 40 C.F.R. §§ 124.9, .17(b), .18(b)*. As stated therein, the administrative record for a final permit must include the administrative record for the draft permit;<sup>18</sup> all comments received *during the public comment period*; the tape or transcript of any public hearings held under section 124.12; any written materials submitted at such public hearing; the response to comments document required to be prepared pursuant to section 124.17 and any documents cited in the response to comments; other documents contained in the supporting file for the permit; and the final permit. *Id.* § 124.18(b); *see also id.* § 124.17(b). The administrative record need not include comments that are received prior to the comment period “unless a commenter makes it clear *during* the public comment period that these pre-comment period statements should be considered as part of the permit proceeding \* \* \*.” *In re Dominion Energy Brayton Point, LLC*, 12 E.A.D. 490, 523 n.50 (EAB 2006) (emphasis added) (citing *In re Avon Custom Mixing Servs., Inc.*, 10 E.A.D. 700, 706 (EAB 2002); *In re City of Phoenix*, 9 E.A.D. 515, 529 & n.21 (EAB 2000)). Finally,

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<sup>18</sup> The administrative record for a draft RCRA permit must include the following: (1) the permit application and any supporting data furnished by the applicant; (2) the draft permit; (3) the statement of basis or fact sheet; (4) all documents cited in the statement of basis or the fact sheet; and (5) other documents contained in the supporting file for the draft permit. 40 C.F.R. § 124.9.

the administrative record “shall be complete on the date the final permit is issued.” 40 C.F.R. § 124.18(c); *accord Dominion*, 12 E.A.D. at 516.

- a. *ESSROC Failed to Demonstrate that the Region Clearly Erred in Omitting the September 9, 2011 E-mail from the Administrative Record for the 2013 Permit*

ESSROC contends that the Region improperly omitted from the administrative record a September 9, 2011 e-mail sent from ESSROC’s consultant to the Region regarding site-specific fish consumption rates. Petition at 12-13; *see* E-mail from Dan Carney, P.E., Senior Engineer, Schreiber, Yonley & Assocs., to Christopher Lambesis, U.S. EPA, *Risk Analysis Assumptions for Mercury* (Sept. 9, 2011) (Pet. Ex. 2) (“September 9, 2011 E-mail”). The Board does not agree that the Region was required to include the e-mail in the administrative record for the 2012 permit. The contested e-mail states that the sender and the recipient previously discussed “consumption habits of fishers for the lake in France Park as part of the study area of the human health risk assessment modeling for the [Facility],” and “provid[es] information on one specific factor that [the parties] had not previously spoken about \* \* \*.” September 9, 2011 E-mail at 1. Included in the e-mail is narrative information regarding subsistence fishing obtained from a conversation with an Indiana Department of Fisheries biologist. *Id.* at 2-3. The sole source of the information appears to be the biologist, and no studies or other research are referenced.

Significantly, the September 9, 2011 e-mail preceded the July 22, 2012 through September 7, 2012 comment period for the draft permit. The Region did not include the e-mail in the draft administrative record made available during the public comment period. Administrative Record Index (Draft RCRA Permit), ESSROC Cement Corporation, Logansport, Indiana, IND 005 081 542 (A.R. 41); U.S. EPA Region 5, *EPA Announces Public Comment Period on a Permit for ESSROC Cement Corp.* (July 22, 2012) (A.R. 41). The biologist identified in the September 9, 2011 e-mail also is identified in ESSROC’s comments to the draft permit; however, ESSROC also did not cite or include the e-mail in its comments. ESSROC’s comments mention “research and discussions with a fisheries biologist in Indiana,” identified the biologist by name in a footnote, and stated that based on

those discussions, "it is unclear if [the France Park lakes] could support subsistence fishing \* \* \*. The subsistence fishing scenario is typically considered for much larger water bodies \* \* \*." Comments at attach. 1 & n.2.

The Region's response to comments does not mention either the fisheries biologist or the e-mail. However, the Region did address the substance of ESSROC's comments, which it summarized as follows: "ESSROC states that the lakes studied in the 2012 [SSRA] do not have the ability to support subsistence fishing scenarios." Response Summary at 10. In response, the Region stated that it used a *recreational*, rather than a *subsistence*, fisher scenario, *id.*; that neither potential seasonal availability of fish nor fish advisory guidelines warranted a reduction of the fish consumption rate, *id.* at 11-12; and that the default fish consumption rate used in the risk analysis already matches the percentage of fish consumed from locally caught fish, *id.* at 13. On appeal, neither party's arguments regarding the fish consumption rate specifically references either the e-mail or the fisheries biologist, other than ESSROC's argument that the e-mail was erroneously excluded from the administrative record.

ESSROC has not shown that the e-mail's contents clearly fall into any of the categories of materials that must be included in the administrative record or draft administrative record. 40 C.F.R. §§ 124.9, .18(b)(1)-(7). Nor does ESSROC demonstrate that the e-mail contains information that the Region "relied on" in its final permitting decision, or that the Region sought to clarify issues raised during the comment period. *See Russell City*, slip op. at 49-50, 15 E.A.D. at \_\_\_ (directing permit issuer to add to the administrative record e-mail sent from permit issuer to applicant seeking follow-up information after receiving applicant's comments, where e-mail provided context to comments and administrative record contained other similar e-mails). Rather, ESSROC's argument that the Region should have included the e-mail in the administrative record is merely due to the fact that ESSROC sent the communication to the Region. Without more, ESSROC falls short of its burden to demonstrate that the Region clearly

erred in its omission of the September 9, 2011 e-mail from the final administrative record.<sup>19</sup>

b. *ESSROC Fails to Show the Relevance of the June 27, 2003 Internal Memorandum to the 2013 Permit Decision*

ESSROC also contends that the Region erroneously omitted from the administrative record an internal June 27, 2003 Agency memorandum authored by Dr. Mangino. Petition at 12; see Memorandum from Mario M. Mangino, Toxicologist, Waste Management Branch, Region 5, U.S. EPA, to Jae Lee, Waste Management Branch, Region 5, U.S. EPA, *Further Evaluation of Tier 1A Metals Emissions at the ESSROC Materials Cement Corp. (Logansport, IN) – Exposure to Mercury via the Fish Ingestion Pathway (June 27, 2003)* (“Mangino Memorandum”) (Pet. Ex. 3). ESSROC does not explain, however, why the memorandum should be included. The Board finds no error in the Region’s decision to exclude the Mangino Memorandum from the administrative record for the 2012 permit.

As with the September 9, 2011 e-mail discussed above, the internal memorandum precedes the public comment period on the draft decision and was not included or cited in ESSROC’s comments on the draft permit, the Region’s response to comments, or ESSROC’s petition, other than to challenge its absence from the administrative record. Dr. Mangino wrote the memorandum to his branch chief in connection with the 2003 permit decision (regarding a potential pollutant for which there ultimately was not a permit limit), not the 2013 permit that is the subject of this case. Region’s Response Br. at 36; see also EAB Oral Arg. Tr. at 68-69. The memorandum, which the Region characterizes as part of its 2003 deliberative process, summarizes Dr. Mangino’s views concerning a letter an ESSROC consultant had submitted describing “certain aspects of the fate and transport modeling that were used to estimate the hazard index for

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<sup>19</sup> As noted above, the Region addressed the substantive comments raised in the e-mail and responded that it did not use a subsistence fisher scenario in its calculations as ESSROC asserts, but a recreational fisher scenario. See Region’s Resp. at 32.

mercury from the consumption of locally caught fish” from the Wabash River. Mangino Memorandum at 1. As part of his review, Dr. Mangino considered the consultant’s estimated impact of fishing from the Wabash River and default bioaccumulation factors from a riverine environment. *Id.*; see also Region’s Response Br. at 36. The Region did not cite or rely on this memorandum in its decisionmaking for the 2013 Permit, which, as noted above, involved potential impacts to the France Park lakes, not the Wabash River.

When determining whether it is clear error not to include predecisional and deliberative internal Agency materials in the final administrative record, the Board considers the importance of the materials’ relevance to the permit issuer’s final decision. *Dominion*, 12 E.A.D. at 525 (“Cluttering the record with the internal discussions between all the regional staff members working on a permit decision would only serve to provide misleading, confusing, and potentially internally inconsistent information about the permit decision.”). The Mangino Memorandum addressed a risk assessment that was not relied upon in the permit decision at issue and addressed risks for a different water body than the ones the Region concluded were the water bodies posing the greatest risk to human health and the environment. ESSROC has not shown that the memorandum is relevant to this permit decision; therefore, the Board concludes that the Region did not clearly err in excluding the memorandum from the administrative record.

To the extent that ESSROC is arguing that the Region should have continued to consider the Wabash River and not the France Park lakes as the media of concern, the Board declines to review the Region’s determination. This decision is fundamentally technical and/or scientific in nature. The Board typically defers to the permit issuer’s technical expertise in such matters, as long as the permit issuer adequately explains its rationale and supports its reasoning in the administrative record. *E.g.*, *Russell City*, slip op. at 37-41, 88, 15 E.A.D. at \_\_\_; *Dominion*, 12 E.A.D. at 510. The Board finds that the Region has done so here with respect to its decision not to include the Mangino Memorandum in the final administrative record for the Permit, given that the focus of the 2012 SSRA was on the France Park lakes, not the Wabash River.

4. *The Region Duly Considered the Issues Raised in the Comments Regarding the Bioaccumulation Factor and the Fish Consumption Rate*

During the comment period, ESSROC challenged the Region's use of default bioaccumulation factors and the fish consumption rate in the 2012 SSRA to set the annual mercury feed rate limit. Where, as here, a petitioner raises technical issues in a permit appeal, the record must demonstrate that "the Region duly considered the issues raised in the comments." *In re City of Moscow*, 10 E.A.D. 135, 142 (EAB 2001); *accord Russell City*, slip op. at 79, 15 E.A.D. at \_\_\_\_\_. The approach the Region ultimately adopts must be "rational in light of all the information in the record." *City of Moscow*, 10 E.A.D. at 142 (citing *In re NE Hub Partners, L.P.*, 7 E.A.D. 561, 568 (EAB 1998)). The Board will defer to the Region's position if the Region has given due consideration to the comments received and "adopted an approach in the final permit decision that is rational and supportable." *Id.*

a. *The Region Adequately Responded to ESSROC's Comments Concerning the Bioaccumulation Factor*

ESSROC challenged the Region's decision to use bioaccumulation factors recommended in the HHRAP, arguing that "more recent guidance [than the HHRAP] on appropriate bioaccumulation factor values is available from the U.S. EPA," referring to the *Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion ("Implementing Guidance")*.<sup>20</sup> Comments attach. 1 & n.1 (citing Office of Science & Technology,

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<sup>20</sup> The *Implementing Guidance* "provides advice on how to implement the water quality criterion recommendation for methylmercury that the U.S. Environmental Protection Agency \*\*\* published in January 2001," in the *Water Quality Criterion for the Protection of Human Health: Methylmercury* document ("Water Quality Criterion"). *Implementing Guidance* at i. Appended to the Water Quality Criterion is the "Draft National Methylmercury Bioaccumulation Factors," which ESSROC presumably is referencing for its challenge to the bioaccumulation factor. See Office of Science & Technology, Office of Water, U.S. EPA, EPA-823-R-01-001, *Water Quality Criterion for the Protection of Human Health: Methylmercury* app. A (Jan. 2001); see also Region's Response Br. at 15-16 & n.5 (discussing Agency methylmercury bioaccumulation factor guidance).

U.S. EPA, EPA-823/R-10-001, *Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion* (Apr. 2010)). According to ESSROC, the more recent bioaccumulation factor values are more representative of the conditions at the local lakes, and applying ESSROC's preferred bioaccumulation factor to the mercury feed rate calculation would result in a higher annual mercury feed rate limit. Comments attach. 1. The Board concludes that the Region adequately addressed ESSROC's concerns in its response to comments.

The Region explained that the bioaccumulation factors in the HHRAP are based on "directly-measured [bioaccumulation factors] for freely-dissolved methyl mercury in several lakes throughout North America" that were published in the 1997 *Mercury Study Report to Congress*. Response Summary at 9 (referring to Office of Air Quality Planning & Standards & Office of Research & Development, U.S. EPA, EPA-452/R-97-003, *Mercury Study Report to Congress* (Dec. 1997)); see also Region's Response Br. at 18-19. According to the Region, ESSROC's preferred bioaccumulation factors, which are taken from the *Implementing Guidance*, consist of "a combination of observed and converted [bioaccumulation factors] from both lentic and lotic environments"<sup>21</sup> because the Agency could not distinguish bioaccumulation factors from the two environments at the time it published this document. Response Summary at 10. Because the water bodies considered in the 2012 SSRA are lentic, or lake, environments, the Region believed that the lake-only bioaccumulation factors in the HHRAP were more representative of the actual conditions at the Facility than the combination lake-river bioaccumulation factors that ESSROC prefers. *Id.*; see also Region's Response Br. at 16-17.

"The Board traditionally assigns a heavy burden to persons seeking review of issues that are quintessentially technical." *In re Ash Grove Cement Co.*, 7 E.A.D. 387, 403 (EAB 1997). Absent compelling circumstances, the Board will defer to a Region's determination of issues that depend heavily upon the Region's technical expertise and

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<sup>21</sup> A lentic environment is one that is "of [or] relating to \* \* \* still waters (as lakes, ponds, swamps)." Webster's Third New International Dictionary 1294 (1993). In contrast, a lotic environment is "of [or] relating to \* \* \* actively moving water (as stream currents or waves)." *Id.* at 1338.

experience. *In re Envotech, L.P.*, 6 E.A.D. 260, 284 (EAB 1996). No compelling circumstances exist with respect to this issue. The Region adequately responded to ESSROC's comment, and thus, the Board defers to the Region's technical judgment on this issue.

b. *The Region Also Adequately Responded to ESSROC's Comments Regarding the Fish Consumption Rate*

ESSROC questioned whether the France Park lakes could support subsistence fishing and proposed that either a recreational fisher scenario or a subsistence fishing scenario with a smaller percentage of contaminated fish consumed would be more appropriate for the risk analysis than the subsistence fisher scenario used by the Region. Comments attach. 1. In response, the Region explained that it did not base the fish consumption rate on subsistence fisher scenarios. Response Summary at 10. Rather, the Region stated that its use of "consumer only intake of home caught fish scenarios" is a default consumption rate that is appended to the HHRAP and derived from the 1987-1988 USDA National Food Consumption Survey. Response Summary at 10-11 (citing HHRAP tbl.C-1-4, app. C-14 to -16); *see also* Region's Response Br. at 21 ("[The] HHRAP specifically states that its fisher exposure scenarios are not 'subsistence' scenarios and are more comparable to reasonable (versus subsistence) amounts.") (citing HHRAP at 4-12). The Region stated, "The default consumption rates are derived from data that represents [sic] the average amount of home-caught fish eaten per day by people who fish in a local waterbody and eat at least some of the fish they catch." Response Summary at 11. Further, the Region explained that it used the HHRAP default consumption rate values because of a lack of "reliable site-specific information \* \* \* about the fish consumed from France Park lakes." *Id.*

As a permitting authority, the Region "must be free to exercise expert judgment and rely on the data [it] conclude[s] are more accurate or comprehensive." *In re Inter-Power of N.Y., Inc.*, 5 E.A.D. 130, 147 (EAB 1994) (concluding that the permit issuer did not clearly err by rejecting state data and "relying instead on the more comprehensive 'tri-state' data" for cost-effectiveness analysis in prevention of significant deterioration permitting decision); *see also In re Masonite Corp.*, 5 E.A.D. 551, 584 (EAB 1994) ("The Region of necessity can rely on the information supplied to it by the permittee \* \* \* [as] long as the

Region does not see any reason to question a particular piece of information.”). The Board concludes that the Region adequately responded to ESSROC’s specific comments concerning the fish consumption rate, and accordingly defers to the Region’s technical judgment on this issue.

5. *The Region Did Not Exercise Its Considered Judgment When Conducting Its 2012 Site-Specific Risk Assessment*

The Region’s conclusion that the mercury standard in the HWC-MACT Rule did not adequately protect human health and the environment was based on the Region’s 2012 site-specific risk assessment. ESSROC argues that the Region erred in setting the mercury feed rate limit in its permit in part because the Region did not complete the 2012 SSRA as recommended by the HHRAP. *See, e.g., EAB Oral Tr. at 33-34, 125-30.* The Board concludes that the administrative record does not demonstrate that the Region exercised its considered judgment in conducting the 2012 SSRA. The Region did not include all the sections recommended by the HHRAP in the 2012 SSRA. Most importantly, the Region failed to provide the robust analysis of the degree of uncertainty that the HHRAP recommends be included in every risk assessment. Nor did the Region explain why it did not need to provide this analysis. Accordingly, the Board remands the permit.

In this case, the Region determined based on the results of the 2012 SSRA that a more stringent mercury feed rate limit of 87.91 pounds per year was required to meet the terms of RCRA’s omnibus provision.<sup>22</sup> A permit issuer’s decision to rely on RCRA’s omnibus authority involves an exercise of discretion, and acts of discretion must be adequately explained and justified. *Ash Grove*, 7 E.A.D. at 397; *see also In re Chem. Waste Mgmt. of Ind., Inc.*, 6 E.A.D. 144, 162 (EAB 1995) (holding that although the substantive standards for exercise of omnibus authority may be met, the

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<sup>22</sup> As noted earlier, the RCRA omnibus provision requires permit issuers to include in cement kiln permits any additional terms and conditions beyond those established in the HWC-MACT Rule deemed necessary to protect public health and the environment. RCRA § 3005(c)(3), 42 U.S.C. § 6925(c)(3).

administrative record must contain “a properly supported finding” to that effect); *In re Sandoz Pharm. Corp.*, 4 E.A.D. 75, 80 (EAB 1992) (the omnibus authority may not be invoked “unless the record contains a properly supported finding that an exercise of that authority is necessary to protect human health or the environment”); accord *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 48 (1983) (“We have frequently reiterated that an agency must cogently explain why it has exercised its discretion in a given manner.”). Specifically, the Region “must articulate with reasonable clarity the reasons for [its] conclusions and the significance of the crucial facts in reaching those conclusions.” *In re Carolina Power & Light Co.*, 1 E.A.D. 448, 451 (Act’g Adm’r 1978) (citation omitted).

In conducting the 2012 SSRA, the Region stated that it “conducted the risk assessment in accordance with the EPA [HHRAP].” 2012 SSRA § I.A. The Region explained that it chose to follow the HHRAP for the risk screening “because it is peer-reviewed and incorporates an opportunity to use site-specific data \* \* \* [and] outlines a comprehensive procedure for calculating estimated environmental media (e.g., air, soil, vegetables, fish, meat) concentrations, \* \* \* and health risks due to [chemical emissions] from combustion stacks.” *Id.* § I.F(1) (emphasis added). The Region further stated that it “considered a number of site-specific factors in evaluating whether compliance with the [HWC-MACT Rule] alone at the ESSROC facility would be protective of human health.” *Id.* § I.D. These site-specific factors included ESSROC’s proximity to parks, identities and quantities of emissions of bioaccumulative and toxic pollutants, such as mercury, and the volume and types of wastes containing highly toxic constituents. *Id.* The 2012 SSRA also includes an appendix, which summarizes “the non-default assumptions the [Region] set in [its] model for this revised risk screening[,]” and identifies where readers can find “[d]efault assumptions incorporated in the model.” *Id.* § I.F(1).

However, without any explanation in the 2012 SSRA, the fact sheet for the draft permit, or response to comments document, the Region did not include an uncertainty discussion. The HHRAP – a peer-reviewed document issued by the Agency to guide risk assessors of hazardous waste combustors – expressly states that it is important for every risk assessment to include an uncertainty discussion. HHRAP at 8-7. The 2012 SSRA also fails to include a robust conclusions

section, which the HHRAP also recommends be in each risk assessment. HHRAP at 9-1. The uncertainty discussion and conclusions section should describe “the degree of conservatism” in a risk estimate and interpret the risk analysis results. *Id.* at 8-2, 9-1.

a. *The HHRAP’s Uncertainty Discussion*

The HHRAP states that every risk assessment is limited by the quantity and quality of site-specific environmental data, emission rate information, and other assumptions made during the risk estimation process. *Id.* at 1-9. Thus, the HHRAP recommends that the risk assessment “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.* The HHRAP further states that a risk assessment report should:

- Indicate the scope of the risk assessment (match the level of effort to the scope)[.]
- Summarize the major risk conclusions.
- Identify key issues (a key issue is critical to properly evaluate the conclusions). For example, was [sic] surrogate or measured emissions data used.
- Describe clearly the methods used to determine risk (provide qualitative narration of the quantitative results).
- *Summarize the overall strengths and major uncertainties.*

*Id.* at 7-3 (emphasis added).

The HHRAP further recommends that every SSRA include an “Uncertainty Discussion” section, noting that:

Uncertainty is inherent in the process even when using the most accurate data and the most sophisticated models. The method we recommend in the HHRAP relies on a combination of point values — some protective and some typical — yielding a point estimate of exposure and risk that falls at an unknown percentile of the full distributions of exposure and risk. For this reason, the degree of conservatism in risk estimates cannot be known. *Therefore, you need a formal uncertainty analysis to determine the degree of conservatism.*

\* \* \* \*

A second area of decision-rule uncertainty includes the use of standard Agency default values in the analysis. \* \* \* Using a single point estimate for these variables instead of a joint probability distribution ignores a variability *that may influence the results by a factor of up to two or three.*

\* \* \* \*

The science of risk assessment is evolving. Where the science-base is incomplete and uncertainties exist, science policy assumptions must be made. *It is important for risk assessments to fully explain the areas of uncertainty in the assessments and to identify the key assumptions used in conducting the assessments.* Toward that end, one option is to add a table at

the end of each section (e.g., stack emissions, air modeling, exposure assessment, toxicity evaluation, risk characterization) that lists the key assumptions in that section, the rationale for those assumptions, *their effect on estimates of risk (overestimation, underestimation, neutral)*, and the magnitude of the effect (high, medium, low). \* \* \* *These tables could be used to evaluate the extent to which you used public health-protective assumptions in the risk assessment.* They could also help determine the nature of the uncertainty analysis to be performed. The assumptions listed in the risk characterization section, which synthesizes the data outputs from the exposure and toxicity analyses, might include the most significant assumptions from each of the previous sections.

*Id.* at 8-2, -4, -7 (emphases added).

In addition, the HHRAP describes the following uncertainties introduced by the assumptions made to calculate the fish consumption values:

These intake rates do not represent long behavior patterns, which is the focus of the exposure assessments used to support chronic health effects. This introduces uncertainty into the estimates of medians and other percentiles. *This assumption can*

*overestimate or underestimate [the fish consumption rate].*

The intake rates represent total intake rates of home-caught fish. Where use of site-specific information would reveal the amount of fish consumed from waters within the study area, this information should be used. This assumption can overestimate or underestimate [the fish consumption rate].

*Id.* at C-15 (emphasis added).

The Region's 2012 SSRA fails to include "a formal uncertainty analysis to determine the degree of conservatism" as recommended by the HHRAP, and only in two places does the 2012 SSRA discuss the impact of the Region's estimates. First, the Region acknowledged that the 2012 SSRA is a risk screening "in the sense that we make several simplifying conservative (protective) assumptions in the process of conducting the assessment." 2012 SSRA § I.B. Secondly, under the section entitled "Major site-specific exposure model assumptions", the Region noted for the receptor locations that "[t]he Receptor Areas for all receptor scenarios is the 10-by-10 kilometer air-dispersion grid surrounding the facility. This procedure adds conservatism to the risk screening." *Id.* § I.F(2). The appendix to the 2012 SSRA includes numerous pages "summarizing the non-default assumptions the EPA set in the \* \* \* model [used] for this revised screening[.]" *id.* § I.F(1), but the Board does not see anything in the fact sheet, the 2012 SSRA, or the response to comments document that provide the recommended formal uncertainty analysis recommended by the HHRAP or an explanation by the Region why such an analysis was unnecessary in this case.<sup>23</sup>

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<sup>23</sup> There may be an uncertainty analysis somewhere in the administrative record; however, it is not the Board's duty as the reviewing official to search for it. *In re Phelps Dodge Co.*, 10 E.A.D. 460, 507 n.39 (EAB 2002); *see also Doddy v. Oxy USA, Inc.*, 101 F.3d 448, 463-64 (5th Cir. 1996) (the court is not required to search the record for some piece of evidence that might make the party's case for it). If the Region did in fact complete the uncertainty discussion and have a more robust conclusion

“Identification and explanation of uncertainties is an expected and essential component of valid risk assessment reports.” *Ash Grove*, 7 E.A.D. at 405 n.18.

b. *HHRAP Conclusions Section*

The HHRAP also recommends that each risk assessment include a conclusions section:

This section is included primarily to interpret the results of the risk and hazard characterization in light of the uncertainty analysis. We recommend that, at a minimum, it present and interpret all risk and hazard results exceeding target levels. *Finally, the Conclusions section is a place for [the risk assessor] to present and defend [its] position on whether actual or potential releases from the facility [it] studied pose significant risks and hazards to human populations.*

HHRAP at 9-1 to -2 (emphasis added). The Board finds that while the 2012 SSRA did include a conclusions section, it merely mirrored previous statements in the document. The 2012 SSRA’s conclusions section states in its entirety:

The EPA conducted a screening human health risk assessment for the ESSROC facility in Logansport, IN. The risk assessment calculated potential risks based on contaminant emissions at the existing regulatory limits for stack emissions of dioxin and toxic/carcinogenic metals, which

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elsewhere in the record, at minimum, the Region should have referenced this information in the 2012 SSRA and/or fact sheet.

have also become compliance limits for the ESSROC facility. In comparison to the frequently recommended risk management benchmarks of [hazard index] = 0.25 and cancer risk = 1.0 E-6 for each pollutant, the following recommendations are made with respect to further emission limits beyond the HWC-MACT concentration limits:

Dioxins: No additional limits necessary.

Mercury: Restrict total annual stack emissions such that total [hazard index] is equal to or less than 0.25.

Cadmium: No additional limits necessary.

Lead: No additional limits necessary.

Chromium: No additional limits necessary.

Beryllium: No additional limits necessary.

Arsenic: No additional limits necessary.

#### 2012 SSRA § III.

The above conclusions section does not include any assumptions the Region made in the 2012 SSRA, the rationale for those assumptions, their effect on estimates of risk (overestimation, underestimation, neutral), and the magnitude of the effect (high,

medium, low), as recommended by the HHRAP. As with the Uncertainties Discussion section, the Board similarly does not find that this is sufficient evidence of the Region's considered judgment, as it neither addresses the full scope of areas the HHRAP recommends be included in a conclusions section, nor provides an explanation for why the recommended information is unnecessary.

"We are respectful of the Region's choice of tools to guide its permitting decisions under the omnibus provision, but the Region's ultimate decisions must then follow logically from its chosen method." *Ash Grove*, 7 E.A.D. at 417-18. While the HHRAP is a guidance document and thus is not a required protocol, the Region chose to follow it in conducting its 2012 SSRA because it "outlines a comprehensive procedure for calculating estimated environmental media (e.g., air, soil, vegetables, fish, meat) concentrations, \* \* \* and health risks due to [chemical emissions] from combustion stacks." 2012 SSRA § I.F(1). Given the Region's acknowledgment of the HHRAP's comprehensive procedure, the Board does not understand the Region's failure to include these two sections as the HHRAP recommends. Further, the Region's failure to explain why it deemed these two important sections unnecessary gives the Board no basis for concluding that the Region exercised its considered judgment in conducting the 2012 SSRA. As a result, the Board is unable to conclude based on the record before us that the Region's decisionmaker had all the information she should have had before her prior to making the final permit decision that a mercury feed rate limit of 87.91 pounds per year was required to protect human health and the environment.<sup>24</sup>

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<sup>24</sup> By comparison, the Board notes that the 2003 SSRA that ESSROC prepared using EPA-agreed-upon protocols included such an uncertainty discussion, along with the impact the risk assessor believed resulted from the use of various assumptions. *See, e.g., Mercury Comparative Analysis* at 17 (stating that the 15% methylation rate adopted in the HHRAP guidance is overly conservative, and a 6% methylation rate would be sufficient as a conservative estimate and would adjust the hazard quotient downward by a factor of 2.5). The Board is expressing no opinion as to the accuracy of any of these statements. We only include them as examples of the type of information that could have been before the Regional Administrator when she was determining whether the existing limits in the HWC-MACT Rule were adequately protective of human health and the environment or whether additional controls were required pursuant to RCRA's omnibus authority. This information also may have impacted the mercury feed rate

The unexplained impacts of the Region's conservative assumptions were a concern for both the Region and ESSROC during the Permit decisionmaking process. The Region acknowledged that it "ma[d]e several simplifying conservative (protective) assumptions" in the 2012 SSRA. *Id.* § I.B. ESSROC commented that the Region's selected bioaccumulation factor and use of the default fish consumption rate resulted in the Region setting an annual mercury feed rate limit of 87.91 pounds per year, which is significantly lower than the limit ESSROC argues is the correct calculated feed rate based on the HWC-MACT standard (1,793.4 pounds per year). Comments at 2. The Region's limit also is substantially lower than the 896.7 pounds per year that ESSROC proposed as an accommodation. *Id.*; Petition at 2. The Region asserts that the lower feed rate limit is necessary to satisfy RCRA's omnibus provision to protect human health and the environment, but based on the record before the Board, the Region has not adequately justified that determination.

If the Region had prepared a formal uncertainty analysis and a robust conclusions discussion as part of its 2012 SSRA, the Region's decision maker may have decided to exercise her fully-informed discretion in any number of ways. For example, she could have determined that the Region needed additional site-specific information for the analysis, as recommended by the HHRAP.<sup>25</sup> The HHRAP states:

You [(the risk assessor)] would need considerable time, effort, and funding to investigate the representativeness of all the values (or ranges of values) available in the HHRAP. As a result, you might choose to use only readily available site-specific information in

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limit the Region selected (i.e., the uncertainty discussion and conclusion may have indicated whether the final permit's mercury feed rate limit was appropriate or conversely was more stringent than needed to satisfy RCRA).

<sup>25</sup> See, e.g., *Ash Grove*, 7 E.A.D. at 406 (noting that in setting permit limits, the Region consulted with the Kansas Department of Wildlife and Game and the local Chamber of Commerce, and used actual data on mercury levels in local fish when evaluating the risk assessment results).

an initial assessment. You could then use the results of that assessment to determine where (or if) more site-specific risk information should be collected \* \* \*. This allows you to use resources most efficiently and effectively, by focusing resources on areas that are considered "risk drivers[,"] rather than areas that do not appreciably affect the risk outcome. For example, 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. You would not have to spend resources collecting site-specific information that may not affect the final results of the assessment \* \* \*.

HHRAP at 1-8 to -9. The Region's decisionmaker also may have decided based on an uncertainty discussion that the Region should use a more rigorous modeling effort to evaluate further points of potential exposure. *See id.* at 2-55. Or, as another example, she could have determined that the Region could use other assumptions and still derive a limit that adequately protected human health and the environment.

Alternatively, more complete uncertainty and conclusion sections (or explanation of why they were not needed) could justify in more detail why the mercury feed rate limit the Region included in ESSROC's permit was necessary to protect human health and the environment. There may be other options as well that are within the Region's technical expertise from which the Board could conclude that the Region properly exercised its considered judgment. Given the lack of an uncertainty discussion and a full conclusions section in the 2012 SSRA, especially in light of the substantial difference between the mercury feed rate limit that the Region calculated and the HWC-MACT

limit that ESSROC and CKRC argue otherwise would apply, the Board cannot conclude that the Region exercised its considered judgment in conducting the 2012 SSRA. And because the Region determined that it needed to require a more stringent mercury feed rate limit in the Facility's permit based on the 2012 SSRA, the Board cannot conclude that the Region exercised its considered judgment in setting this permit limit. In sum, the Board finds that the Region has failed to "articulate with reasonable clarity the reasons for [its] conclusions and the significance of the crucial facts in reaching those conclusions." *Ash Grove*, 7 E.A.D. at 417 (quoting *Carolina Power & Light*, 1 E.A.D. at 451) (internal quotations omitted).<sup>26</sup>

The Board remands the Permit to the Region to complete the risk assessment or to explain why it does not need to include robust uncertainty and conclusion sections, in the detail recommended by the HHRAP. Because the Region is relying on the 2012 SSRA as justification for invoking the RCRA omnibus authority, the Region must reopen the record and allow for public comment on either its completed risk assessment, or its explanation for why the Region does not need to provide the detailed uncertainty discussion and conclusions section the HHRAP recommends. Given the pivotal role the 2012 SSRA plays in determining whether the Region properly invoked the RCRA omnibus authority, the Board concludes that the Region should in the first instance make the determination on how to proceed upon remand – i.e., whether to complete the sections the HHRAP recommends or justify its decision not to do so. The Region then must

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<sup>26</sup> The importance of the uncertainty discussion and conclusions section is further underscored by the fact that the Region is relying on its 2012 screening-level site-specific risk assessment (which is summarized in 12 pages, not including appendices) the Region conducted in lieu of the very lengthy and detailed 2003 SSRA ESSROC conducted. The record also shows that ESSROC prepared a comparative mercury risk assessment in 2009 after it received the Region's 2009 letter indicating another risk assessment was needed. Carrie Yonley, Schrieber, Yonley & Assocs., *Mercury Sensitivity Analysis* (May 2009) (A.R. 15). While the decision to rely on the 2012 SSRA clearly is within the Region's technical expertise, given the difference in scope of the two risk assessments as presented in the record, and the substantial disparity between the mercury limit that ESSROC asserts (without objection from the Region) would apply under the HWC-MACT Rule and the limit the Region established in ESSROC's permit, it is imperative that the Region's decision be fully explained and justified in the administrative record.

provide that decision to the public for comment, and finalize the Permit's mercury feed rate limit after considering the public comments it receives. This is consistent with the expectation that "most permit conditions should be finally determined at the [permit authority] level." *In re Knauf Fiber Glass, GmbH*, 8 E.A.D. 121, 127 (EAB 1999) (quoting 45 Fed. Reg. 33,290, 33,412 (May 19, 1980)); *see also, e.g., In re Upper Blackstone Water Pollution Abatement Dist.*, 14 E.A.D. 577, 633 (EAB 2010). Accordingly, the Board is requiring the Region to seek public comment to ensure that the Region's decisionmaker will have ample opportunity to consider carefully the important technical and policy issues raised in this case, based on a full and robust record explaining the results of the Region's risk assessment for the Facility.

#### VII. CONCLUSION AND ORDER

For the reasons stated above, the Board remands the Permit. The Region did not clearly err or abuse its discretion in requiring a second site-specific risk assessment to determine whether additional controls are necessary to ensure protection of human health and the environment as required by RCRA § 3005(c)(3), 42 U.S.C. § 6925(c)(3). Nor did the Region clearly err by excluding the September 9, 2011 e-mail and the June 27, 2003 internal memorandum from the administrative record. However, the administrative record does not reflect that the Region exercised its considered judgment in conducting the 2012 SSRA. Because the Region relied on the 2012 SSRA to include additional controls on mercury emissions in the Permit to protect human health and the environment, the Board cannot conclude that the Region exercised its considered judgment in establishing the mercury limit. Accordingly, the Board remands the Permit.

On remand, the Region must either supplement the 2012 SSRA by preparing a complete uncertainty discussion and conclusions section (or provide analogous information elsewhere in the administrative record), or explain why the inclusion of those sections is not needed to support its final mercury feed rate limit. The Region must reopen the public comment period to provide the public with an opportunity to review and comment on the additional risk assessment sections (or explanation of why they are not needed), and the Region's

determination of the mercury feed rate limit, including the assumptions underlying its determination.

After the Region either completes its risk assessment or supplements the administrative record with an explanation of why an uncertainty discussion and conclusions section are not necessary and issues the final permit, anyone who participates in the remand process and is dissatisfied with the Region's decision on remand must file a petition with the Board seeking review in order to exhaust administrative remedies pursuant to 40 C.F.R. § 124.19(l)(2)(iii). Any such appeal shall be limited to issues within the scope of the remand.<sup>27</sup>

So ordered.

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<sup>27</sup> The Board is expressing no opinion at this time as to the appropriateness of the mercury feed rate limit contained in the Permit given the incomplete administrative record, as stated above. Upon remand, the Region may decide to retain the current annual mercury feed rate limit or, alternatively, may determine in its technical judgment that the additional information and/or comments it receives during the public comment period warrant a different limit.

**CERTIFICATE OF SERVICE**

I hereby certify that copies of the foregoing Remand Order in the matter of *ESSROC Cement Corporation*, RCRA Appeal No. 13-03, were sent to the following persons in the manner indicated:

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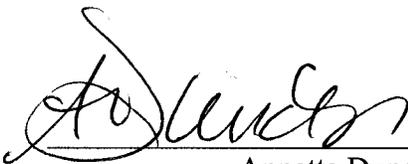
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