UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUN 05 2013

REPLY TO THE ATTENTION OF:

Mr. Corey Conn
ESSROC Cement Corporation
3084 West C.R. 225 South
Logansport, Indiana 46947

Re: Final Federal RCRA Permit, ESSROC Cement Corporation
Logansport, Indiana, IND 005 081 542

Dear Mr. Conn:

Enclosed is a copy of the final EPA portion of the Resource Conservation and Recovery Act (RCRA) permit for ESSROC Cement Corporation (ESSROC), Logansport, Indiana.

This draft federal RCRA permit was publicly noticed in the "Pharos-Tribune" on July 22, 2012, and a copy of the draft federal RCRA permit was made available for review at the Logansport-Cass County Public Library, 616 East Broadway, Logansport, Indiana 46947. The public comment period extended from July 22 to October 23, 2012.

ESSROC submitted the only comments that the U.S. Environmental Protection Agency received regarding the draft federal permit during the public comment period. EPA's response to the comment is enclosed with this letter.

Eligibility to appeal the federal permit is discussed in 40 CFR § 124.19. Please note that if you chose to petition to appeal this permit decision, all original documents are to be signed in blue ink with five copies marked as such. EPA must receive the petition for review in Washington, DC via U.S. Postal Service at the address indicated below within thirty (30) days after service of notice of the final permit decision.

U.S. Environmental Protection Agency
Clerk of the Board
Environmental Appeals Board (1103B)
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460-0001

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Submissions can also be made by hand-delivery or courier, mailed via Federal Express, UPS, or non-U.S. Postal Service to the following address:

U.S. Environmental Protection Agency
Clerk of the Board
Environmental Appeals Board
Colorado Building
1341 G Street, N.W., Suite 600
Washington, DC 20005

A copy of the petition should also be sent to:

U.S. Environmental Protection Agency, Region 5
RCRA Branch (LR-8J)
77 West Jackson Boulevard
Chicago, Illinois 60604

The procedures for filing an appeal are found in 40 CFR § 124.19. The administrative appeal procedure must be completed prior to any action seeking judicial review.

If you have questions concerning the final federal RCRA permit, please contact Mr. Jae Lee of my staff at (312) 886-3781.

Sincerely,

Margaret M. Guerriero
Director
Land and Chemicals Division

Enclosure

cc: Vic Windle, IDEM

FINAL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

HAZARDOUS WASTE MANAGEMENT FACILITY PERMIT

Facility Name and Location:	**ESSROC Cement Corporation** **3084 West County Road 225 South** **Logansport, Indiana 46947**
Owner:	**ESSROC Cement Corporation** **3251 Bath Pike** **Nazareth, Pennsylvania 18064**
Operator:	**ESSROC Cement Corporation** **3084 West County Road 225 South** **Logansport, Indiana 46947**
U.S. EPA Identification Number:	**IND 005 081 542**
Effective Date:	**July 5, 2013**
Expiration Date:	**July 5, 2018**

The U.S. Environmental Protection Agency hereby issues a Resource Conservation and Recovery Act permit (hereinafter referred to as the "permit") to ESSROC Cement Corporation (hereinafter referred to as the "Permittee" or addressed in the second person as "you") in connection with the hazardous waste treatment operations at the ESSROC Cement Corporation located in Logansport, Indiana.

This permit is issued under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, and the Hazardous and Solid Waste Amendments (HSWA) of 1984 (42 USC § 6901 *et seq.*) (collectively referred to as "RCRA") and EPA's regulations promulgated thereunder (codified, and to be codified, in Title 40 of the Code of Federal Regulations (40 CFR)).

Specifically, this permit addresses requirements for cement kilns burning hazardous waste at 40 CFR Part 266 Subpart H – Hazardous Waste Burned in Boilers and Industrial Furnaces.

The RCRA permit consists of both this permit, which contains the effective Federal RCRA permit conditions, and the effective State RCRA permit conditions issued by the State of Indiana's RCRA program authorized under 40 CFR Part 271 (hereinafter called the "State RCRA permit".)

The State RCRA permit was issued on April 23, 2009. The effective and expiration dates of the permit were April 23, 2009 and April 23, 2014, respectively. Any hazardous waste activity which requires a RCRA permit and is not included in the RCRA permit is prohibited.

Permit Approval:

On January 31, 1986, the State of Indiana received final authorization pursuant to Section 3006 of RCRA, 42 USC § 6926, and 40 CFR Part 271, to administer the pre-HSWA RCRA hazardous waste program. The State of Indiana has also received final authorization to administer certain additional RCRA requirements on several occasions since then. However, because the EPA has not yet authorized the State of Indiana to administer certain regulations, including the Boilers and Industrial Furnaces regulations (see 40 CFR § 266.100 *et seq.*, also known as the BIF regulations), the EPA Region 5 is issuing the RCRA permit requirements for operations at your facility which fall under these regulations.

You must comply with all terms and conditions contained in this permit. This permit consists of all the conditions contained herein, the documents attached hereto, all documents cross-referenced in these documents, approved submittals (including plans, schedules and other documents), the applicable regulations in 40 CFR Parts 124, 260, 261, 262, 264, 266, 268, 270, and applicable provisions of RCRA.

This permit is based on the assumption that 1) the information submitted in your RCRA Part B Permit Application dated May 9, 2008, including the Part A Application, and all other modifications and responses to that application (hereinafter referred to as the "Part B Permit Application",) and 2) the stack test emission data, is accurate, and the facility is configured, operated and maintained as specified in the permit and as described in the Part B Permit Application and other relevant documents.

Any inaccuracies in the submitted information may be grounds for EPA to terminate, revoke and reissue, or modify this permit in accordance with 40 CFR §§ 270.41, 270.42 and 270.43; and for enforcement action. You must inform EPA of any deviation from, or changes in, the information in the Part B Permit Application and other pertinent documents that might affect your ability to comply with the applicable regulations or conditions of this permit.

Opportunity to Appeal:

Petitions for review must be submitted within thirty (30) days after EPA serves notice of the final permit decision. Any person who filed comments on the draft permit or participated in the public hearing may petition the Environmental Appeals Board to review any condition of the permit decision. Any person who failed to file comments or failed to participate in the public hearing on the draft permit may file a petition for review only to the extent of the changes from the draft to the final permit decision. The procedures for permit appeals are found in 40 CFR § 124.19.

Effective Date:

This permit is effective as of **July 5, 2013** and will remain in effect until **July 5, 2018**, unless revoked and reissued under 40 CFR § 270.41, terminated under 40 CFR § 270.43, or continued in accordance with 40 CFR § 270.51(a).

By: _____ Date: June 5, 2013

Margaret M. Guerriero
Director
Land and Chemicals Division

IND 005 081 542
ESSROC Cement Corporation, Logansport, Indiana

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SECTION I—STANDARD PERMIT CONDITIONS

I.A EFFECT OF PERMIT

You are hereby allowed to manage hazardous waste at ESSROC Cement Corporation, (facility) in accordance with this permit. Under this permit, the treatment of RCRA hazardous waste must comply with all Boilers and Industrial Furnaces (BIF) standards and all other terms and conditions in this permit. Other aspects of the storage of RCRA hazardous wastes in containers, tanks, etc., are subject to the conditions in the state-issued portion of the RCRA permit.

Subject to 40 CFR § 270.4, compliance with the RCRA permit during its term generally constitutes compliance, for purposes of enforcement, with Subtitle C of RCRA except for those requirements not included in the permit which become effective by statute.

This permit does not: (1) convey any property rights or any exclusive privilege; (2) authorize any injury to persons or property, or invasion of other private rights; or (3) authorize any infringement of state or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any order issued, or any action brought, under: (1) Sections 3008(a), 3008(h), 3013, or 7003 of RCRA; (2) Sections 104, 106(a), or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 USC §§ 9601 *et seq.* (commonly known as CERCLA); or (3) any other law protecting public health or the environment from any imminent and substantial endangerment to human health, welfare, or the environment.
(40 CFR §§ 270.4 and 270.30(g))

I.B PERMIT ACTIONS

I.B.1 Permit Review, Modification, Revocation and Reissuance, and Termination

The EPA may review, modify, or revoke and reissue this permit, or terminate it for cause, as specified in 40 CFR § 270.41, § 270.42, and § 270.43. The EPA may also review and modify this permit, consistent with 40 CFR § 270.41, to include any terms and conditions it determines are necessary to protect human health and the environment under Section 3005(c)(3) of RCRA. The filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance on your part will not stay the applicability or enforceability of any permit condition. (40 CFR § 270.30(f))

You may request a modification of this permit under the procedures specified in 40 CFR § 270.42. You must not perform any construction associated with a Class 3 permit modification request until such modification request is granted and the modification

becomes effective. You may perform construction associated with a Class 2 permit modification request beginning 60 days after submission of the request unless the Director establishes a later date. (40 CFR §§ 270.42(b)(8) and 270.42(c))

I.B.2 Permit Renewal

This permit may be renewed as specified in 40 CFR § 270.30(b) and Section I.E.2 of this permit. In reviewing any application for a permit renewal, the EPA will consider improvements in the state of control and measurement technology, and changes in applicable regulations. (40 CFR § 270.30(b) and RCRA Section 3005(c)(3))

I.C SEVERABILITY

This permit's provisions are severable; if any permit provision, or the application of any permit provision to any circumstance is held invalid, such provision's application to other circumstances and the remainder of this permit will not be affected. Invalidation of any statutory or regulatory provision on which any condition of this permit is based does not affect the validity of any other statutory or regulatory basis for that condition. (40 CFR § 124.16(a))

I.D DEFINITIONS

The terms used in this permit will have the same meaning as in 40 CFR Parts 124, 260 through 266, 268 and 270, unless this permit specifically provides otherwise. Where neither the regulations nor the permit define a term, the term's definition will be the standard dictionary definition or its generally accepted scientific or industrial meaning.

I.E DUTIES AND REQUIREMENTS

1.E.1 Duty to Comply

You must comply with all conditions of this permit, except to the extent and for the duration for which an emergency permit authorizes such noncompliance (40 CFR § 270.61). Any permit noncompliance, except under the terms of an emergency permit, constitutes a violation of RCRA and will be grounds for: enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR § 270.30(a))

I.E.2 Duty to Reapply

If you wish to continue an activity this permit regulates after its expiration date, you must apply for and obtain a new permit. You must submit a complete application for a new

permit at least 180 days before the permit expires, unless the Director grants permission for a later date. The Director will not grant permission to submit the complete application for a new permit later than the permit's expiration date. (40 CFR §§ 270.10(h) and 270.30(b))

I.E.3 Permit Expiration

Unless revoked or terminated, this permit and all conditions herein will be effective until five years from the effective date of this permit. This permit and all conditions herein will remain in effect beyond the permit's expiration date if you have submitted a timely, complete application (40 CFR § 270.10 and §§ 270.13 through 270.29,) and, through no fault of your own, the Director has not made a final determination regarding permit reissuance. (40 CFR §§ 270.50 and 270.51)

I.E.4 Need to Halt or Reduce Activity Not a Defense

In an enforcement action, you are not entitled to a defense that it would have been necessary to halt or reduce the permitted activity to maintain compliance with this permit. (40 CFR § 270.30(c))

I.E.5 Duty to Mitigate

In the event of noncompliance with this permit, you must take all reasonable steps to minimize releases to the environment resulting from the noncompliance and must implement all reasonable measures to prevent significant adverse impacts on human health or the environment. (40 CFR § 270.30(d))

I.E.6 Proper Operation and Maintenance

You must always properly operate and maintain all facilities and treatment and control systems (and related appurtenances) that you install or use to comply with this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires you to operate back-up or auxiliary facilities or similar systems only when necessary to comply with this permit. (40 CFR § 270.30(e))

I.E.7 Duty to Provide Information

You must provide the Director within a reasonable time, any relevant information that the Director requests to determine whether there is cause to modify, revoke and reissue, or terminate this permit, or to determine permit compliance. You must also provide the

Director, upon request, with copies of any records this permit requires. The information you must maintain under this permit is not subject to the Paperwork Reduction Act of 1995, 44 USC §§ 3501 *et seq.* (40 CFR §§ 264.74(a) and 270.30(h))

I.E.8 Inspection and Entry

Upon the presentation of credentials and other legally required documents, you must allow the Director or an authorized representative to:

I.E.8.a Enter at reasonable times upon your premises where a regulated activity is located or conducted, or where records must be kept under the conditions of this permit;

I.E.8.b Have access to and copy, at reasonable times, any records that you must keep under the conditions of this permit;

I.E.8.c Inspect at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

I.E.8.d Sample or monitor any substances at any location at reasonable times, to assure permit compliance or as RCRA otherwise authorizes.

Notwithstanding any provision of this permit, EPA retains the inspection and access authority which it has under RCRA and other applicable laws. (40 CFR § 270.30(i))

I.E.9 Monitoring and Records

I.E.9.a Samples and measurements taken for monitoring purposes must be representative of the monitored activity. The methods used to obtain a representative sample of the feed streams, treatment residues, or other hazardous wastes to be analyzed must be the appropriate methods from Appendix I of 40 CFR Part 261, or the methods specified in the Waste Analysis Plan which is Section 3 of the Part B Permit Application, or an equivalent method approved by the Director. Laboratory methods must be those specified in *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods* (SW-846, latest edition), *Methods for Chemical Analysis of Water and Wastes* (EPA 600/4-79-020), or an equivalent method, as specified in the referenced Waste Analysis Plan. (40 CFR § 270.30(j)(1))

I.E.9.b You must retain at the facility, records of all monitoring information as specified in 40 CFR § 264.74.

I.E.9.c You must submit all monitoring results at the intervals specified in this permit.

I.E.9.d You must retain all reports, records, or other documents, required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the reports, records, or other documents, unless a different period is specified in this permit. All operating records, monitoring data, and waste analysis data produced to comply with the Section III of this permit shall be retained at the facility until closure of the facility. These periods may be extended by request of the Director at any time and automatically extended during the course of any unresolved enforcement action regarding this facility. (40 CFR §§ 270.30(j) and 270.31)

I.E.10 Reporting Planned Changes

You must notify the Director as soon as possible of any planned physical alterations or additions to the permitted facility. (40 CFR § 270.30(l)(1))

I.E.11 Reporting Anticipated Noncompliance

You must notify the Director, in advance, of any planned changes in the permitted facility or activity that may result in permit noncompliance. Advance notice will not constitute a defense for any noncompliance. (40 CFR § 270.30(l)(2))

I.E.12 Certification of Construction

You must not operate any RCRA air emission control devices completed after the effective date of this permit until you have submitted to the Director, by certified mail or hand-delivery, a letter signed both by your authorized representative and by a registered professional engineer. That letter must state that the portions of the facility covered by this permit have been constructed in compliance with the applicable conditions of this permit. In addition, you must not operate the permitted control devices until either:

I.E.12a. The Director or his/her representative has inspected those portions of the facility and finds them in compliance with the conditions of the permit; or

I.E.12b. The Director waives the inspection.

(40 CFR § 270.30(l)(2))

I.E.13 Transfer of Permits

This permit is not transferable to any person, except after notice to the Director. Under 40 CFR § 270.40, the Director may require permit modification, or revocation and reissuance to change your name and incorporate other RCRA requirements. Before transferring ownership or operation of the facility during its operating life, you must notify the new owner or operator in writing of the requirements of 40 CFR Parts 264, 266, 268, and 270, and must provide a copy of the RCRA permit to the new owner or operator. (40 CFR §§ 264.12(c), 270.30(l)(3), and 270.40(a))

I.E.14 Twenty-Four Hour Reporting

I.E.14.a You must report to the Director any noncompliance with this permit that may endanger human health or the environment. Any such information must be promptly reported orally, but no later than 24 hours after you become aware of the circumstances.

I.E.14.b The report must include the following (40 CFR §§ 270.30(l)(6) and 270.33): (1) Information concerning release of any hazardous waste that may endanger public drinking water supplies; (2) Information of a release or discharge of hazardous waste; or (3) Information of a fire or explosion from the hazardous waste management facility, that could threaten the environment or human health outside the facility. You must include the following information:

(1) Name, title and telephone number of the person making the report;

(2) Name, address and telephone number of the facility owner or operator;

(3) Facility name, address and telephone number;

(4) Date, time and type of incident;

(5) Location and cause of incident;

(6) Identification and quantity of material(s) involved;

(7) Extent of injuries, if any;

(8) Assessment of actual or potential hazards to the environment and human health outside the facility, where applicable;

(9) Description of any emergency action taken to minimize the threat to human health and the environment; and

(10) Estimated quantity and disposition of recovered material that resulted from the incident.

I.E.14.c In addition to the oral notification required under Sections I.E.14.a and I.E.14.b of this permit, a written report must also be provided within 5-calendar days after you become aware of the circumstances. The written report must include, but is not limited to, the following:

(1) Name, address and telephone number of the person reporting;

(2) Incident description (noncompliance and/or release or discharge of hazardous waste), including cause, location, extent of injuries, if any, and an assessment of actual or potential hazards to the environment and human health outside the facility, where applicable;

(3) Period(s) in which the incident (noncompliance and/or release or discharge of hazardous waste) occurred, including exact dates and times;

(4) Whether the incident's results continue to threaten human health and the environment, which will depend on whether the noncompliance has been corrected and/or the release or discharge of hazardous waste has been adequately cleaned up; and

(5) If the noncompliance has not been corrected, the anticipated period for which it is expected to continue and the steps taken or planned to reduce, eliminate, and prevent the recurrence of the noncompliance.

The Director may waive the requirement that written notice be provided within 5-calendar days; however, you will then be required to submit a written report within 15-calendar days of the day on which you must provide oral notice, in accordance with Sections I.E.14.a and I.E.14.b of this permit. (40 CFR § 270.30(1)(6)) (40 CFR § 270.30(h))

I.E.15 Other Noncompliance

You must report all instances of noncompliance not reported under Section I.E.14 of this permit, when any other reports this permit requires are submitted. The reports must contain the information listed in Section I.E.14 of this permit. (40 CFR § 270.30(l)(10))

I.E.16 Other Information

I.E.16.a Whenever you become aware that you failed to submit or otherwise omitted any relevant facts in the Part B Permit Application or other submittal, or submitted incorrect information in the Part B Permit Application or other submittal, you must promptly notify the Director of any incorrect information or previously omitted information, submit the correct facts or information, and explain in writing the circumstances of the incomplete or inaccurate submittal. (40 CFR § 270.30(l)(11)) (40 CFR § 270.30(h))

I.E.16.b All other requirements contained in 40 CFR § 270.30 not specifically described in this permit are incorporated into this permit and you must comply with all those requirements.

I.F SIGNATORY REQUIREMENT

You must sign and certify all applications, reports, or information this permit requires, or which are otherwise submitted to the Director, in accordance with 40 CFR § 270.11. (40 CFR § 270.30(k))

I.G REPORTS, NOTIFICATIONS AND SUBMITTALS TO THE DIRECTOR

Except as otherwise specified in this permit, all reports, notifications, or other submittals that this permit requires to be sent or given to the Director should be sent by certified mail or express mail, or hand-delivered to the U.S. Environmental Protection Agency Region 5, RCRA Branch, at the following address:

RCRA Branch, LR-8J
Land and Chemicals Division
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

I.H CONFIDENTIAL INFORMATION

In accordance with 40 CFR Part 2, Subpart B, you may claim any information this permit requires, or otherwise submitted to the Director, as confidential. You must assert any such claim at the time of submittal in the manner prescribed on the application form or instructions or, in the case of other submittals, by stamping the words "Confidential Business Information" on each page containing such information. If you made no claim at the time of submittal, the Director may make the information available to the public without further notice. If you assert a claim, the information will be treated in accordance with the procedures in 40 CFR Part 2. (40 CFR § 270.12)

I.I DOCUMENTS TO BE MAINTAINED AT THE FACILITY

You must maintain at the facility, until closure is completed and certified by an independent registered professional engineer, the following documents and all amendments, revisions, and modifications to them.

I.I.1 Operating Record

You must maintain in the facility's operating record the documents required by this permit, and by the applicable portions of 40 CFR § 266.102, § 264.13, and § 264.73 (as they apply to the equipment used to comply with this permit).

I.I.2 Notifications

You must maintain notifications from generators that are required by 40 CFR § 268.7 to accompany an incoming shipment of hazardous wastes subject to 40 CFR Part 268, Subpart C, that specify treatment standards, as required by 40 CFR §§ 264.73, 268.7, and this permit.

I.I.3 Copy of Permit

You must keep a copy of this permit on site, and you must update it as necessary to incorporate any official permit modifications.

I.J ATTACHMENTS AND DOCUMENTS INCORPORATED BY REFERENCE

I.J.1 All attachments and documents that this permit requires to be submitted, if any, including all plans and schedules are, upon the Director's approval, incorporated into this permit by reference and become an enforceable part of this permit. Since required items are essential elements of this permit, failure to submit any of the required items or submission of inadequate or insufficient information may subject you to enforcement

action under Section 3008 of RCRA. This may include fines, or permit suspension or revocation.

I.J.2 This permit also includes the documents attached hereto, all documents cross-referenced in these documents, and the applicable regulations contained in 40 CFR Parts 124, 260, 261, 262, 264, 266, 268, and 270, and applicable provisions of RCRA, all of which are incorporated herein by reference.

I.J.3 Any inconsistency or deviation from the approved designs, plans, and schedules is a permit noncompliance. The Director may grant written requests for extensions of due dates for submittals required in this permit.

I.J.4 If the Director determines that actions beyond those provided for, or changes to what is stated herein, are warranted, the Director may modify this permit according to procedures in Section I.B of this permit.

I.J.5 If any documents attached to this permit are found to conflict with any of the conditions in this permit, the condition will take precedence.

I.K COORDINATION WITH THE CLEAN AIR ACT

You must fully comply with all applicable Clean Air Act (CAA) and RCRA permit limits. Where two or more operating limitations apply, the most stringent operating limitations take precedence.

SECTION II—GENERAL FACILITY CONDITIONS

You must comply with the following conditions to the extent that they apply to the cement kilns and its associated and ancillary equipment.

II.A DESIGN AND OPERATION OF FACILITY

You must maintain and operate the cement kiln in a manner that minimizes the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous waste or hazardous constituents to air, soil, or surface water that could threaten human health or the environment (40 CFR § 264.31). The kiln unit must be configured, operated and maintained in accordance with the engineering drawings and specifications in the Part B Permit Application.

II.B TREA TMENT OF OFF-SITE HAZARDOUS WASTE

You are authorized to treat hazardous waste from off-site sources in the kilns. In order to treat off-site generated hazardous waste in the kilns, you shall first be allowed by the State RCRA Permit to receive and store the off-site hazardous waste.

II.C SPECIFIC WASTE PROHIBITIONS

You must comply with all applicable requirements of 40 CFR Part 268. No on- or off-site generated hazardous waste shall be burned in the kilns unless it is specified in the Part A Application which is Attachment 1-2 of the Part B Permit Application.

II.D GENERAL WASTE ANALYSIS

You must follow the waste analysis procedures required by 40 CFR § 264.13, as described in the Waste Analysis Plan which is Section 3 of the Part B Permit Application (40 CFR § 264.13).

II.E SECURITY PROCEDURES

You must comply with the security provisions of 40 CFR § 264.14(b) and (c) as described in Section 6, Hazard Prevention, of the Part B Permit Application.

II.F GENERAL INSPECTION REQUIREMENTS

II.F.1 Inspection Schedule

You must inspect the facility regularly in accordance with the inspection schedule described in Section 6, Hazard Prevention, of the Part B Permit Application. (40 CFR § 264.15(b))

II.F.2 Inspection Remedies

You must remedy any deterioration or malfunction of equipment or structures discovered during an inspection, in accordance with 40 CFR § 264.15(c).

II.F.3 Inspection Records

You must record all inspections in the inspection log or summary, in accordance with 40 CFR § 264.15(d), and keep them as part of the operating record, in accordance with 40 CFR § 264.73(b)(5) and Section I.I of this permit.

II.G PERSONNEL TRAINING

II.G.1 Training Requirements

You must ensure that all personnel who handle hazardous waste are trained in hazardous waste management, safety procedures and emergency procedures, as applicable to their job description, in accordance with 40 CFR § 264.16, and that they follow the outlines and procedures in Section 7, Personnel Training, of the Part B Permit Application.

II.G.2 Training Schedule

Facility personnel must successfully complete the hazardous waste training described in Section II.G.1 of this permit within six months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees must not work in unsupervised positions until they have completed the training identified in Section II.G.1 of this permit. (40 CFR § 264.16(b))

II.G.3 Training Records

You must maintain a copy of the personnel training documents and records, in accordance with 40 CFR § 264.16(d) and (e) and Section I.I of this permit.

II.H GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTES

You must comply with 40 CFR § 264.17(a) when handling ignitable, reactive, or incompatible wastes.

II.I PREPAREDNESS AND PREVENTION

You must comply with all applicable preparedness and prevention requirements, in accordance with 40 CFR Part 264, Subpart C, including those in the following conditions:

II.I.1 Required Equipment

At a minimum, you must maintain at the facility the equipment required in 40 CFR § 264.32 and § 264.52(e), and specified in Section 5, Contingency Plan and Section 6, Hazard Prevention, of the Part B Permit Application.

II.I.2 Testing and Maintenance of Equipment

You must test and maintain the equipment referred to in Section II.I.1 of this permit, in accordance with the inspection schedules that are included as Sections 5 and 6 of the Part B Permit Application. (40 CFR §§ 264.15(b)(1) and 264.33)

II.I.3 Arrangements with Local Authorities

You must attempt to develop and maintain preparedness and prevention arrangements with state and local authorities, as 40 CFR § 264.37 requires. If state or local authorities decline to enter into such arrangements, you must document this refusal in the operating record maintained under Section I.I of this permit. (40 CFR § 264.37(b))

II.J CONTINGENCY PLAN

You must comply with all applicable requirements in 40 CFR Part 264, Subpart D, including the following conditions:

II.J.1 Implementation of Contingency Plan

You must immediately carry out the provisions of the Contingency Plan included as Section 5 of the Part B Permit Application, and follow the emergency procedures described by 40 CFR § 264.56 whenever there is a fire, explosion or release of hazardous waste or hazardous waste constituents that could threaten human health or the environment. (40 CFR § 264.51(b))

II.J.2 Copies of Contingency Plan

You must provide a copy of the Contingency Plan, Section 5 of the Part B Permit Application and all revisions to the local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services. (40 CFR § 264.53(b))

II.J.3 Amendments to Contingency Plan

You must review, and immediately amend if necessary, the Contingency Plan, Section 5 of the Part B Permit Application, in accordance with 40 CFR § 264.54.

II.K RECORD KEEPING AND REPORTING

In addition to the record keeping and reporting requirements specified elsewhere in this permit, you must comply with those in the following conditions:

II.K.1 Operating Record

You must maintain a written or electronic operating record at the facility, in accordance with 40 CFR §§ 264.73 and 266.102(e)(8).

II.K.2 Manifest Records

You must comply with the 40 CFR §§ 264.71, 264.72 and 270.30(1)(7) manifest and manifest discrepancy record keeping and reporting requirements. You must not receive any unmanifested hazardous waste (as defined by 40 CFR §§ 264.76 and 270.30(l)(8)).

II.K.3 Biennial Report

You must, by March 1 of each even-numbered year, submit to the Director, a biennial report covering each of the permitted hazardous waste management unit's activities, in accordance with 40 CFR § 264.75.

II.K.4 Other Reports

You must submit to the Director any additional reports specified in 40 CFR § 264.77.

II.K.5 Waste Minimization

For hazardous wastes you generate at your facility, if you generate in excess of 200 pounds of hazardous waste during a calendar year, in the following year you must implement a waste minimization program, unless the Director directs otherwise:

For each year that your facility generates 200 pounds or more of hazardous waste, you must, by March 1 of the following year, submit to the Director a certification in accordance with 40 CFR § 264.73(b)(9), and signed in accordance with 40 CFR § 270.11 and Section I.F of this permit, that you have a program in place to reduce the volume and toxicity of hazardous waste generated to the degree that you determine is economically practicable. The waste minimization program may include the following:

II.K.5.a Any written policy or statement that outlines goals, objectives, and/or methods for source reduction and recycling of hazardous waste generated at the facility;

II.K.5.b Any employee training or incentive programs designed to identify and implement source reduction and recycling opportunities;

II.K.5.c Any source reduction and/or recycling measures implemented in the

last five years or planned for the near future;

II.K.5.d An itemized list of the dollar amounts of capital expenditures (plant and equipment) and operating costs devoted to source reduction and recycling of hazardous waste generated at the facility;

II.K.5.e Factors that have prevented implementation of source reduction and/or recycling of waste generated at the facility;

II.K.5.f Sources of information on source reduction and/or recycling received at the facility (for example, local government, trade associations, or suppliers);

II.K.5.g An investigation of additional waste minimization efforts that could be implemented at the facility. This investigation must analyze the potential for reducing the quantity and toxicity of each hazardous waste stream generated at the facility through production reformulation, recycling and all other appropriate means. The analysis must assess the technical feasibility, cost and potential waste reduction for each option;

II.K.5.h A flow chart or matrix detailing all hazardous wastes you produce by quantity, type, and building or area; and

II.K.5.i A demonstration of the need to use those processes which produce a particular hazardous waste due to a lack of alternative processes or available technology that would produce less hazardous waste.

You must include the following information in the operating record: 1) the annual certification; 2) a written description of efforts undertaken during the year to reduce the volume and toxicity of waste generated; and 3) a written description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years. These documents must be available at the facility at all times for EPA, the State, local agencies, or their duly authorized representatives' inspection.

II.L GENERAL CLOSURE REQUIREMENTS

With respect to the kiln units, you must comply with all applicable requirements in 40 CFR Part 264, Subpart G, Closure and Post-Closure, including those in the following conditions:

II.L.1 Performance Standard

You must close the kiln unit in accordance with 40 CFR §§ 264.111, and 266.102(e)(11), and in accordance with the Closure Requirements for Cement Kilns

submitted in your Part B Permit Application.

II.L.2 Amendment to Closure Plan

Whenever necessary, you must amend the Closure Plan, in Section 8 of the Part B Permit Application, in accordance with 40 CFR § 264.112(c). When necessary you must submit a written notification or request to the Director for a permit modification to amend the Closure Plan, Section 8 of the Part B Permit Application in accordance with 40 CFR § 264.112(c).

II.L.3 Notification of Closure

You must notify the Director in writing at least 45 days before the date on which you expect to begin partial or final closure of the kiln unit at your facility.
(40 CFR § 264.112(d))

II.L.4 Time Allowed for Closure

After treating the final hazardous waste volume in the kiln unit at your facility, you must treat and remove from the unit all hazardous waste and must complete closure activities in accordance with 40 CFR § 264.113 and the schedule specified in the Closure Plan, in Section 8 of the Part B Permit Application.

II.L.5 Disposal or Decontamination of Equipment, Structures and Soils

You must decontaminate and/or dispose of all contaminated equipment, structures and soils, as 40 CFR § 264.114 requires, and in accordance with the Closure Plan, in Section 8 of the Part B Permit Application.

II.L.6 Certification of Closure

You must provide a certification statement for each hazardous waste management unit when that hazardous waste management unit has been closed in accordance with the Closure Plan, in Section 8 of the Part B Permit Application. An independent registered professional engineer must sign the certification in accordance with 40 CFR § 270.11 and other applicable conditions of this permit. (40 CFR § 264.115)

II.M COST ESTIMATE FOR FACILITY CLOSURE

II.M.1 Adjustment for Inflation

You must adjust the closure cost estimate for inflation pursuant to the schedule specified

in 40 CFR § 264.142(b).

II.M.2 Revision due to Changes in Closure Plan

You must revise the closure cost estimates within thirty (30) days after receiving the Director's approval whenever there is a change in the facility's Closure Plan, Section 8 of the Part B Permit Application, if that change increases closure costs.
(40 CFR § 264.142(c))

II.M.3 Copy at Facility

You must keep at the facility the latest closure cost estimates, as 40 CFR § 264.142(d) and Section I.I of this permit requires.

II.N FINANCIAL ASSURANCE FOR FACILITY CLOSURE

You must demonstrate continuous compliance with 40 CFR §§ 264.143 and 264.146 by documenting financial assurance, as 40 CFR § 264.151 requires, in at least the amount of the cost estimate that Section II.M of this permit requires. Under 40 CFR § 264.143, the Director or the Commissioner of the Indiana Department of Environmental Management (IDEM) must approve any changes in financial assurance mechanisms.

You must adjust the financial assurance documents, as necessary, to account for any adjustments to the closure cost estimate in Section II.M.1 of this permit pursuant to the schedules contained in 40 CFR § 264.143.

II.O LIABILITY REQUIREMENTS

You must demonstrate continuous compliance with the 40 CFR § 264.147(a) requirement of obtaining and maintaining liability insurance coverage for sudden accidental occurrences in the amount of at least $1 million per occurrence, with an annual aggregate of at least $2 million, exclusive of legal defense costs.

II.P INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS OR FINANCIAL INSTITUTIONS

You must comply with 40 CFR § 264.148, regarding voluntary or involuntary Bankruptcy, or loss of authority of a trustee or financial institution whenever necessary.

SECTION III—OPERATING REQUIREMENTS FOR CEMENT KILN UNIT

This Section addresses the operation of your cement kilns. ESSROC operates two cement kilns that use hazardous waste-derived fuels to produce cement at its Logansport facility. A Part 70 operating permit was issued by the Office of Air Quality of the IDEM on November 8, 2010. (The expiration date of the Part 70 operating permit is November 8, 2015.)

Modifications of the cement kiln system, including its ancillary equipment, shall require a permit modification pursuant to 40 CFR § 270.42.

III.A DESIGN

III.A.1 Compliance with Engineering Design Plans and Specifications

III.A.1.a You are authorized to manage hazardous waste in the cement kilns in accordance with the engineering design plans and specifications contained in the Part B Permit Application.

III.A.1.b You must operate the hazardous waste combustion units in a manner which minimizes the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil or surface water that might threaten human health or the environment. (40 CFR § 264.31)

III.A.2 Modifications

Modifications to the design plans and specifications will be allowed only in accordance with Section I.E.10 of this permit. Modifications which might affect the facility's handling of hazardous waste or emissions from the combustion of hazardous waste will be allowed only in accordance with Section I.B.1 of this permit.

III.B RESTRICTIVE MATERIALS TO BE BURNED

III.B.1 You shall not burn in the kiln the following hazardous waste listed for dioxin or hazardous waste derived from any of these wastes: F020, F021, F022, F023, F026, and F027.

III.B.2 You shall not burn hazardous waste containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 parts per million.

III.B.3 You shall not burn radioactive or nuclear hazardous waste.

III.B.4 You shall not burn hazardous waste considered medical waste.

III.B.5 You must not dilute the prohibited inorganic metal-bearing hazardous wastes (listed in Appendix XI of 40 CFR Part 268), unless the hazardous waste can be demonstrated to comply with one or more of the criteria specified in 40 CFR § 268.3(c), to prepare fuel for the kiln.

III.C REGULATION OF CEMENT KILN DUST AND OTHER RESIDUES

1. The cement kiln dust (CKD) or residue generated from the burning or processing of hazardous waste in your cement kilns is excluded from being considered a hazardous waste if the following criteria are met:

   (a) A minimum of fifty (50) percent by weight of the normal cement-production raw materials must be processed in the cement kiln;

   (b) The concentration of each constituent of concern, determined based on the information specified in Attachment C, Waste Analysis Plan, of the Part B Permit Application, in the hazardous waste-derived CKD or residue must not exceed the health-based level specified in Appendix VII of 40 CFR Part 266, or the level of detection (using analytical procedures prescribed in SW-846), whichever is higher, for the nonmetal constituents; and

   (c) Records sufficient to document compliance with the Condition III.C.1.(a) and (b) shall be retained until closure of the cement kilns. (40 CFR § 266.112)

2. You shall sample and analyze the waste-derived CKD or residue according to the sampling frequency and quality assurance and quality control procedures according to Section 3, Waste Analysis Plan, of the Part B Permit Application.

3. You shall place the CKD or residue in the on-site landfill according to the management guideline and plan approved by the IDEM.

4. You shall construct, maintain and operate the on-site landfill in accordance with the requirement of the IDEM.

5. Any pile of hazardous waste-derived CKD or residue which is not meeting exclusion requirements specified in Condition III.C.1 shall be stored in containers that meet federal and state standards and be disposed of off-site at a hazardous waste disposal or treatment facility.

6. You shall sample, analyze, and manage spent refractory materials used to line the cement kiln in accordance with Section 3, Waste Analysis Plan, of the Part B Permit Application.

III.D HAZARDOUS WASTE AND OTHER FEED STREAM ANALYSIS

You shall conduct sampling and analysis as described in the Waste Analysis Plan which is Section 3 of the Part B Permit Application, to ensure that the hazardous waste and other fuels fired into the cement kiln are within the physical and chemical composition limits specified in the permit. Changes to the sampling and analysis procedures described in the Waste Analysis Plan shall require a permit modification as required by 40 CFR § 270.42.

III.E COMPLIANCE WITH REGULATIONS

For the purposes of permit enforcement, compliance with the operating requirements specified in this permit shall be regarded as compliance with 40 CFR § 266.102. However, any evidence that indicates that compliance with these permit conditions is insufficient to ensure compliance with the requirements of 40 CFR § 266.102 shall constitute "information" which may justify modification or revocation and re-issuance of a permit under 40 CFR § 270.41.

III.F ANNUAL FEED RATE LIMIT FOR MERCURY

III.F.1 You shall comply with the annual feed rate limit for the compound specified below (yearly total both Kiln #1 and Kiln #2, combined):

Compound	Annual Feed Limit
Mercury	87.91 pounds (lb) per year

III.F.2 You must record in the operating record the annual total feed of the compound specified in Condition III.F.1.f of this permit, from both Kiln #1 and Kiln #2, combined. Starting from the effective date of this federal RCRA permit, at each anniversary date, you shall calculate the yearly total feed of mercury for both Kiln #1 and Kiln #2, combined. You must maintain the annual total feed data at the facility and it must be available at all times for EPA, the State, local agencies, or their duly authorized representatives' inspection.

III.F.3 You must conduct a test to determine the removal efficiency of the mercury compound at Kiln #2. Such test must be conducted before or during the next performance or compliance test required at the facility by the State or federal agencies. At least 90 days prior to conducting the removal efficiency test at Kiln #2, as required in this paragraph, you must submit a test plan, including, but not limited to, a waste analysis

plan, a quality assurance project plan, and a scope of procedures for the laboratories to EPA for approval. Based on the results of the removal efficiency test, EPA may recalculate and revise the mercury annual feed rate limit provided for in this permit using the new System Removal Efficiency.

III.G DIRECT TRANSFER OF HAZARDOUS WASTE (40 CFR § 266.11)

1. You are permitted to transfer pumpable hazardous waste directly from designated direct transfer areas to the cement kilns. The designated direct transfer areas are two bays for tank trucks (12,000 gallons total) and one bay for rail car tanker (25,000 gallons total).

2. You shall receive a maximum of two trucks or one rail car tanker at any one time at the designated direct transfer area. At all times at the designated direct transfer area, tank trucks shall contain the same material and originate from the same vendor.

3. You shall operate and maintain the area for direct transfer of hazardous waste to the cement kilns in accordance with the plans and specifications in the approved RCRA Part B Permit Application and 40 CFR § 266.111.

4. The direct transfer area shall be operated in accordance with the following conditions:

   (a) You shall not transfer pumpable hazardous waste directly from an open-top container to the cement kiln.

   (b) All direct transfer equipment used for pumpable hazardous waste shall remain closed at all times, except when necessary to add or remove the waste, and shall not be opened, handled, or stored in a manner that may cause any rupture or leak.

5. You shall conduct inspections of the direct transfer operations at least once each operating hour while hazardous waste is being transferred from a transport vehicle according to the procedures described in Process Description, Section 4 of the Part B Permit Application.

   The direct transfer of hazardous waste to the cement kiln shall be conducted so that it does not:

   (a) Generate extreme heat or pressure, or create a fire, explosion, or violent reaction;

   (b) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;

   (c) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a

risk of fire or explosion;

(d) Damage the structural integrity of the container or direct transfer equipment containing the waste;

(e) Adversely affect the capability of the cement kiln to meet the Performance Standards or Operating Conditions of this permit; or

(f) Threaten human health or the environment.

6. You shall use appropriate controls and practices to prevent spills and overflows from the direct transfer equipment or its secondary containment system. These include at a minimum:

   (a) Spill prevention controls (e.g., check valves, dry disconnect couplings); and

   (b) Automatic Waste Feed Cut-off in the event of a leak or spill from the direct transfer equipment.

RESPONSE SUMMARY

RESPONSE TO COMMENTS ON THE DRAFT PERMIT FOR
ESSROC Cement Corporation
Federal RCRA Permit
Logansport, Indiana
IND 005 081 542

I. INTRODUCTION

This summary is issued in response to all of the significant comments raised during the public comment period. The public comment period for the draft permit extended from July 22 to October 23, 2012.

II. COMMENTS, RESPONSES, AND CHANGES

The below comments on the draft ESSROC federal permit (Draft Permit) were submitted by ESSROC Cement Corporation.

Comment #1: ***Mercury Feed Rate Limit***

Current Draft Permit Language:

III.F.1 You shall comply with the annual feed rate limit for the compound specified below (yearly total both Kiln #1 and Kiln #2, combined):

Compound	Annual Feed Limit
Mercury	87.91 pounds (lb) per year

ESSROC's Proposed Permit Language:

IIIF.1 You shall comply with the annual feed rate limit for the compound specified below (yearly total both Kiln #1 and Kiln #2, combined):

Compound	Annual Feed Limit
Mercury	896.7 pounds (lb) per year

ESSROC's Expressed Reason for Requested Change:

Based on the analysis performed by ESSROC utilizing accepted risk assessment guidelines and factors as detailed in the calculations presented in Attachments 1 and 2, ESSROC concludes that no additional feed rate limit is needed to protect human health and the environment beyond those already provided in 40 CFR Part 63, Subpart EEE (hazardous waste combustion maximum achievable control technology (HWC MACT) standard).

However, ESSROC understands the need to reduce mercury emissions to the environment. ESSROC is therefore proposing an emission limit that is below the HWC MACT standard and the revised risk assessment feed limit. The revised acceptable mercury feed rate limit from the risk assessment is 2,131.98 lbs/yr and the calculated HWC MACT feed rate limit for the two kiln operation is 1,793.4 lbs/yr. Therefore, in the above proposed language ESSROC is proposing a facility limit that is approximately half of the HWC MACT and revised acceptable risk assessment limits.

(1) ESSROC's Comment on Mercury Feed Rate Limit: Attachment 1

(a) Bioaccumulation Factor for Methymercury in Fish

The U.S. Environmental Protection Agency's 2005 Human Health Risk Assessment Protocol (HHRAP) recommends a methylmercury bioaccumulation factor (BAF) of 6.8E+06 L/kg for Trophic Level 4 fish, which is based on the BAF used in the U.S. EPA 1997 *Mercury Study Report to Congress* for Trophic Level 4 fish. EPA Region 5 averaged this BAF and the BAF recommended for Trophic Level 3 fish, resulting in a BAF of 4.05E+06 L/kg, to represent a mixture of Trophic Level 3 and 4 fish being taken from the lakes at France Park for the risk analysis. ESSROC believes using an average BAF to represent a mixture of large and small fish is appropriate. However, as previously provided to Region 5, more recent guidance on appropriate BAF values is available from the EPA. The U.S. EPA January 2009 *Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion*[1] recommends a Trophic Level 4 BAF of 2.7E+06 L/kg and a Trophic Level 3 BAF of 6.8E+05 L/kg. Averaging these two BAFs to represent the appropriate fish Trophic Level results in a BAF of 1.69E+06 L/kg.

EPA has used a wide range of BAFs to estimate the fate and transport of methylmercury in fish. For example, EPA selected a bioaccumulation factor of 1.6E+06 in the *Utility Steam Report to Congress* for Trophic Level 4 fish. BAF values of 1.6E+06 and 6.8E+06 were both used in the risk assessment conducted for the HWC MACT rule. ESSROC believes the BAF of 1.69E+06 L/kg is more representative of the lake conditions at France Park, is based on more recent EPA guidance, and should be used for the analysis. Using this more representative and appropriate BAF value reduces the estimated Hazard Quotient (HQ) by 58%. The relationship between the BAF and resulting HQ value is linear. Therefore by using the revised HQ based on the lower BAF, the calculated mercury annual feed rate (MAF) is 211.49 pounds of mercury

[1] Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion, April 2010. EPA-823/R-10-001.

per year. Detailed calculations supporting this conclusion are provided in Attachment 2 of this document.

(b) Fish Consumption Rate

France Park consists of two small lakes, Elzbeck Lake and Old Kenith Stone Quarry. Elzbeck Lake is open to fishing all year. Old Kenith Stone Quarry, however, is closed to fishing from Labor Day to Memorial Day (approximate dates, actual dates are dependent upon weather and lifeguard availability) when the lake is used for recreational sunbathing and swimming. During the winter months, the lakes are known to freeze over, requiring ice fishing to harvest fish for consumption. Ice fishing does not typically produce the subsistence catch level due to the substantially decreased activity of the fish. After research and discussions with a fisheries biologist in Indiana,[2] it is unclear if these small lakes could support subsistence fishing, which generally occurs on much larger water bodies. The subsistence fishing scenario is typically considered for much larger water bodies, such as the Columbia River as cited in the HWC MACT rule development documentation.[3]

There are different ways to address the issue of the lakes' ability to support subsistence fishing.

Option 1

One way would be to evaluate the lakes under a recreational fisher type scenario, since the lakes can and do support recreational fishing. To evaluate a Recreational Fisher scenario, a modified fish consumption rate of one meal per week would be used versus the HHRAP default of 12 meals per month. The modified consumption rate is based on typical fish consumption advisory guidelines, which generally recommend that women of child-bearing age not consume more than one meal per week of fish. (The mercury reference dose is based on protecting the fetus and infants from neurological health effects.) In evaluating these two lakes for recreational fishing, an adult fish ingestion rate of 21.4 gram/day (fresh weight) for adults would be used. The 21.4 grams/day was derived from the U.S. EPA *Mercury Study Report to Congress* in which 140 grams/day was cited as being equivalent to 340 meals/year. This equivalency results in 150.29 grams of fish per meal. Thus, 21.4 grams/day is computed as follows:

1 meal/week × 52 weeks/year × 1 yr/365 days × 150.29 grams/meal = 21.4 grams/day

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[2] Phone conversations with Mr. Tom Stefanavage; Indiana's State Big Rivers Fisheries Biologist (812-789-2724).

[3] U.S. EPA (1999) *Human Health and Ecological Risk Assessment Support to the Development of Technical Standards for Emissions from Combustion Units Burning Hazardous Waste Response to Public Comment*. Office of Solid Waste.

For a 70 kg adult, the 21.4 gram/day ingestion rate corresponds to a per body weight value of 0.00031 kg/kg-day. The child fish ingestion rate of 0.00022 kg/kg-day would then be derived by applying the ratio of HHRAP child ingesting rate of 0.00088 kg/kg-day to HHRAP adult ingestion rate of 0.00125 kg/kg-day, to the recreational fisher adult fish ingestion rate of 0.00031 kg/kg-day. Utilizing these consumption rates in the risk analysis, this is consistent with the recreational fisher scenario and results in a 75% reduction in the estimated HQ. The relationship between the consumption rate of contaminated fish and resulting HQ value is linear. Therefore by using the revised HQ based on the lower fraction of contaminated fish consumed; the calculated MAF is 354.49 pounds of mercury per year. Detailed calculations supporting this conclusion are provided in Attachment 2 of this document.

Option 2

Another possible way to address the ability of the lakes to support a subsistence fishing scenario is to reduce the percentage of contaminated fish consumed. This type of scenario modification would account for a portion of the fish being consumed by a subsistence fisher coming from France Park (i.e., the amount of contaminated fish) while recognizing that a portion would also come from other water bodies (i.e., the amount of uncontaminated fish). Setting the fraction of contaminated fish consumed to 0.5 results in a decrease of 50% in the estimated HQ. The relationship between the consumption rate of contaminated fish and resulting HQ value is linear. Therefore by using the revised HQ based on the lower fraction of contaminated fish consumed; the calculated MAF is 175.83 pounds of mercury per year. Detailed calculations supporting this conclusion are provided in Attachment 2 of this document.

ESSROC believes either of the above scenario modifications are valid approaches for the risk analysis rather than the subsistence fisher scenario for France Park Lake. If EPA believes the subsistence fisher scenario is necessary, ESSROC believes a larger body of water that could obviously support subsistence fishing should be used for the analysis.

(c) Methylation Rate of Mercury

The U.S. EPA Mercury Report to Congress[4] reported methylation values of mercury in deep water lakes vary from 4.6% up to 15%. The EPA relied on this information in the HHRAP guidance for the default methylation rate of 15%. In previous risk assessments for the Logansport facility, a mercury methylation rate of 6% has been used versus the HHRAP default of 15% in

[4] U.S. EPA (1997) *Mercury Study Report to Congress. Volume III: Fate and Transport of Mercury in the Environment* (EPA-452/R-97-005). Office of Air quality Planning and Standards; Office of Solid Waste.

evaluating the fisher scenarios for the Wabash and Eel Rivers.[5] Given that the two water bodies at France Park are not "deep water lakes" like those in the Report, but are shallow, spring-fed lakes, ESSROC believes a more realistic mercury methylation rate should be used for the risk analysis. Considering that the shallow, spring-fed lakes are more like rivers than deep water lakes, the rate previously used for rivers could be used as a more realistic measure of the mercury methylation rate in the lakes at France Park. Using this more representative and realistic mercury methylation rate reduces the estimated HQ by 60%. The relationship between the methylation rate of mercury and resulting HQ value is linear. Therefore by using the revised HQ based on the lower methylation rate, the calculated MAF is 219.79 pounds of mercury per year. Detailed calculations supporting this conclusion are provided in Attachment 2 of this document

(2) ESSROC's Comment on Mercury Feed Rate Limit: Attachment 2

(a) Bioaccumulation Factor for Methymercury in Fish

BAF used by EPA:	4.05E+06 L/kg
BAF requested by ESSROC:	1.69E+06 L/kg

The relationship between the HQ calculated for emission of mercury and BAF is linear.

$$\frac{\text{EPA BAF}}{\text{EPA HQ}} = \frac{\text{ESSROC BAF}}{\text{ESSROC HQ}}$$

$$\frac{\text{4.05E+06 L/kg}}{2.55} = \frac{\text{1.69E+06 L/kg}}{\text{ESSROC HQ}}$$

$$1.06 = \text{ESSROC HQ}$$

Using the equation to calculate the annual mercury feed limit as presented in the June 28, 2012 memo from Jae Lee to file and included in the Draft Permit:

MAF*(1-SRE)*HIPEM*(1/8760) = 0.25

MAF = Annual feed rate of mercury

SRE = System removal efficiency for mercury = 69.84%

HIPEM = HQ value per g/hr mercury emission rate

[5] U.S. EPA Region 5 Waste Management Branch correspondence from Mario Mangino, Toxicologist, to Jae Lee. June 27, 2003.

14.004 g/hr = HWC MACT mercury emission rate (standard based on ESSROC stack conditions)

8760 = hours per year

0.25 = HQ risk value noted as acceptable by EPA

453.59 = grams per pound

MAF = 0.25 / [(1-.6984) * (1.06/14.004 g/hr) * (1/8760) * 453.59] = 211.49 pounds Hg /yr

(b) Fish Consumption Rate – Option 1

Fish consumed by adult subsistence fisher - used by EPA: 0.00125 kg/kg-day
Fish consumed by adult recreational fisher - used by ESSROC:0.00031 kg/kg-day

The relationship between the HQ calculated for emission of mercury and consumption of contaminated fish is linear.

$$\frac{\text{EPA consumption}}{\text{EPA HQ}} = \frac{\text{ESSROC consumption}}{\text{ESSROC HQ}}$$

$$\frac{0.00125 \text{ kg/kg-day}}{2.55} = \frac{0.00031 \text{ kg/kg-day}}{\text{ESSROC HQ}}$$

$$0.6324 = \text{ESSROC HQ}$$

Using the equation to calculate the annual mercury feed limit as presented in the June 28, 2012 memo from Jae Lee to file and included in the draft ESSROC federal RCRA permit:

MAF*(1-SRE)*HIPEM*(1/8760) = 0.25

MAF = Annual feed rate of mercury

SRE = System removal efficiency for mercury = 69.84%

HIPEM = HQ value per g/hr mercury emission rate

14.004 g/hr = HWC MACT mercury emission rate (standard based on ESSROC stack conditions)

8760 = hours per year

0.25 = HQ risk value noted as acceptable by EPA

453.59 = grams per pound

MAF = 0.25 / [(1-.6984) * (0.6324/14.004 g/hr) * (1/8760) * 453.59] = 354.49 pounds Hg /yr

Fish Consumption Rate – Option 2

Fraction of consumed fish contaminated used by EPA: 1.0
Fraction of consumed fish contaminated used by ESSROC: 0.5

The relationship between the HQ calculated for emission of mercury and consumption of contaminated fish is linear.

EPA consumption		ESSROC consumption
EPA HQ	=	ESSROC HQ
1.0		0.5
2.55	=	ESSROC HQ
1.275	=	ESSROC HQ

Using the equation to calculate the annual mercury feed limit as presented in the June 28, 2012 memo from Jae Lee to file and included in the Draft Permit:

MAF*(1-SRE)*HIPEM*(1/8760) = 0.25

MAF = Annual feed rate of mercury

SRE = System removal efficiency for mercury = 69.84%

HIPEM = HQ value per g/hr mercury emission rate

14.004 g/hr = HWC MACT mercury emission rate (standard based on ESSROC stack conditions)

8760 = hours per year

0.25 = HQ risk value noted as acceptable by EPA

453.59 = grams per pound

MAF = 0.25 / [(1-.6984) * (1.275/14.004 g/hr) * (1/8760) * 453.59] = 175.83 pounds Hg /yr

(c) Methylation Rate of Mercury

Methylation rate of mercury used by EPA: 15%
Methylation rate of mercury used by ESSROC: 6%

The relationship between the HQ calculated for emission of mercury and the methylation rate of mercury is linear.

EPA methylation %		ESSROC methylation %
EPA HQ	=	ESSROC HQ
15%		6%
2.55	=	ESSROC HQ
1.02	=	ESSROC HQ

Using the equation to calculate the annual mercury feed limit as presented in the June 28, 2012 memo from Jae Lee to file and included in the Draft Permit:

MAF*(1-SRE)*HIPEM*(1/8760) = 0.25

MAF = Annual feed rate of mercury

SRE = System removal efficiency for mercury = 69.84%

HIPEM = HQ value per g/hr mercury emission rate

14.004 g/hr = HWC MACT mercury emission rate (standard based on ESSROC stack conditions)

8760 = hours per year

0.25 = HQ risk value noted as acceptable by EPA

453.59 = grams per pound

MAF = 0.25 / [(1-.6984) * (1.02/14.004 g/hr) * (1/8760) * 453.59] = 219.79 pounds Hg /yr

When combined, the modified BAF value, fish consumption value (Option 1) and methylation rate would result in an overall reduction of the calculated HQ for mercury emissions by 95.8%. Revision of the BAF value results in a 58% reduction in the HQ. Appling the recreational fisher consumption rate results in *another* 75% reduction in the HQ value. Finally applying the lower methylation rate produces *an additional* 60% reduction in the HQ value. Because of the linear

relationship between calculated HQ and acceptable emission rate, the MAF increases to 2,131 pounds of mercury feed per year. This is above the corresponding input rate[6] allowed by the HWC MACT emission limits. Therefore, the HWC MACT regulations are sufficient to protect human health and the environment and additional mercury input limits are not necessary.

Again the equation to calculate the annual mercury feed limit as presented in the June 28, 2012 memo from Jae Lee to file was used to calculate an annual mercury feed limit:

MAF*(1-SRE)*HIPEM*(1/8760) = 0.25

Results are summarized in the table below.

Adjustment of Value	Affect on HQ		Resulting HQ	Resulting HIPEM	Resulting Hg Feed Rate Adjustment (lb/yr)	Resulting Hg Feed Limit Cumulative (lb/yr)
EPA Calculated	--		2.55	0.182091	--	87.91
HWC MACT	--		--	--	--	1793.4
Revision of BAF	58%	reduction	1.06	0.075693	211.49	211.49
Revision of Consumption	75%	reduction	0.26	0.018772	641.30	852.79
Revision of Methylation Rate	60%	reduction	0.11	0.007509	1067.70	2131.98

EPA's Response to ESSROC's Comments on Mercury Feed Rate Limit:

(a) Bioaccumulation Factor for Methymercury in Fish:

EPA does not believe the information provided in this comment is sufficient to justify modifying the default methyl mercury bioaccumulation factors (BAFs) used in the EPA's 2012 ESSROC Risk Assessment Report (2012 EPA RA Report).

ESSROC's primary basis for modification of mercury BAFs is that EPA prepared draft national methyl mercury BAFs in 2001 that are lower than those used in HHRAP. The BAFs in HHRAP have their origin in BAFs published in the 1997 *Mercury Study Report to Congress* and are based on directly-measured BAFs for freely-dissolved methyl mercury in several lakes throughout North America. This same data was incorporated into the 2001 guidance which was expanded to include additional lake-or lentic-data (where freely-dissolved methyl mercury was

[6] Based on HWC MACT mercury emission limits, facility stack characteristics and a 69.84% SRE, the input limit is 1793.4 pounds of mercury per year.

estimated from either total water column methyl mercury or total water column mercury) and data from the lotic environment (streams and rivers). In 2001, EPA prepared the draft national methyl mercury BAF as a combination of observed and converted BAFs from both lentic and lotic environments. The reasoning was that "at this time lotic BAFs cannot be distinguished from lentic BAFs, though the data suggests slightly reduced methyl mercury accumulation may occur in higher trophic level organisms in lotic/wetland environments."

Referring to Figure A-2 of Appendix A to the 2001 guidance, one can see that the lotic (riverine) methyl mercury BAFs for trophic-level 4 (BAF_4) fish overlap those of the lentic (lake) BAF_4s. In fact, lotic BAF_4s occur over an extremely wide range (two orders of magnitude), perhaps due to the wide variety of stream conditions possible (fast-flowing, slow-moving, etc.). However, the same cannot be said for the data presented for lentic environments. The reported lentic BAF_4s barely overlap the extreme upper range of lotic observations and are much less variable (ranging within less than one order of magnitude). EPA staff visited France Park and inspected most of the area and the lakes. We determined the specific waterbodies of concern for the ESSROC facility (Elzbeck lake and the Old Kenith Stone Quarry) are clearly lakes and not moving streams. EPA does not believe the draft national methyl mercury BAFs are more representative of actual conditions at the ESSROC facility than the lentic (lake) BAFs used in the 2012 EPA RA Report.

(b) **Fish Consumption Rate**:

EPA does not believe the information provided in this comment is sufficient to justify modifying the default fish consumption rates used in the 2012 EPA RA Report.

ESSROC states that the lakes studied in the 2012 EPA RA Report do not have the ability to support subsistence fishing scenarios. ESSROC argues several issues: use of a recreational fisher scenario instead of a subsistence fisher scenario, seasonal availability of lakes for fishing, use of fish consumption advisory guideline, and using a percentage of fish consumption from locally caught fish.

First, it should be clear that the fish consumption rates used in the 2012 EPA RA Report are not based on subsistence fisher scenarios. In some circumstances, EPA performs risk assessments using subsistence fisher scenarios. Subsistence fishers may be defined as "fishers who rely on noncommercially caught fish and shellfish as a major source of protein in their diets" (*Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories*, Volume 2, Risk Assessment and Fish Consumption Limits, Third Edition, EPA, November, 2000). However, in this case EPA used consumer only intake of home caught fish scenarios.

In the 2012 EPA RA Report, EPA used the default fish consumption rates in Appendix C, Table C-1-4 of the *Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities* (HHRAP)(EPA, September, 2005), which are derived from the *1987-1988 USDA National Food Consumption Survey.* Table C-1-4 of the HHRAP, Appendix C, states that these default consumption rates may be used to assess exposure to contaminants in foods grown, raised, or caught at a specific site. It is important to note that these default consumption rates are not intended to specifically represent subsistence fishers or other high-end consumers of home-caught fish, as explained in the HHRAP Guidance and the USDA Survey. The default consumption rates are derived from data that represents 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. Since there is no reliable site-specific information available about the fish consumed from France Park lakes, the 2012 EPA RA Report used the recommended default consumption rate values shown in HHRAP. These consumption rates convert to 87.5 grams per day for an Adult Fisher and 13.2 grams per day for a Child Fisher.

ESSROC comments that they believe the fish consumption rate should be lowered due to seasonal availability of the France Park lakes for fishing. Even though Old Kenith Quarry Lake currently closes for fishing in the summer months, Elzbeck Lake is fishable year-round. The permit limits are derived from fish consumption from Elzbeck Lake and not from Old Kenith Quarry Lake because Elzbeck Lake has a higher modeled methymercury concentration than Old Kenith Quarry Lake. Also, the default fisher scenarios take into account fish caught and frozen for later consumption. Therefore, EPA does not believe potential seasonal availability would reduce the fish consumption rates.

ESSROC states that the fish consumption rates should be reduced to match typical fish advisory guidelines. First, there are no local, county, state or federal fish advisories for the France Park lakes at this time. Secondly, a fish advisory would not legally restrict the actual amount of fish caught or consumed from a waterbody. Most importantly, this risk assessment and the EPA's *Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories* both use the same methodology to derive fish consumption rates.

The HHRAP default fish consumption rates may be different from typical fish advisory consumption rates because of different input parameters in the same equation. For example, HHRAP uses a predicted fish contamination concentration after 30 years of facility operation, whereas typical fish advisory consumption rates use current measured fish concentrations. HHRAP uses cancer risk and hazard index targets of $1x10^{-6}$ and 0.25, whereas typical fish advisory consumption rates use $1x10^{-5}$ and 1.0. HHRAP uses actual fish consumption rates from a USDA National Food Consumption Survey, whereas typical fish advisories attempt to calculate consumption rates without regard to what people are actually consuming.

The Fish Advisory Guidance is clear that the ultimate goal of the Agency is to have a waterbody where no advisory is needed. Therefore, the fish consumption rate for the 2012 EPA RA Report is not limited by fish consumption advisories, but instead is the consumption rate of fish from a waterbody with no restrictions. Therefore, EPA does not believe the fish consumption rates should be changed to match typical fish advisory guidelines.

Lastly, ESSROC states that the fish consumption rates should be reduced to match a percentage of fish consumed from locally caught fish. As stated above, the default fish consumption rates are derived from data that represents 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. Therefore, the default fish consumption rate already matches the percentage of fish consumed from locally caught fish.

(c) **Methylation Rate of Mercury**:

EPA was unable to find any credible study that concluded that the net mercury methylation rate in "shallow lakes" is more like "rivers" than "deep water lakes." In fact, some studies reviewed did not correlate depth to net mercury methylation rate. EPA models for mercury cycling in waterbodies use depth as one input parameter in an effort to characterize the waterbody, however, depth in and of itself, does not seem to be a correlating factor in net methylation rates. The same studies showed net methylation rates as high as 14% for a lake averaging only two meters in depth.

Additionally, EPA did not find any indication that a spring-fed lake would have different mercury methylation rates than any other type of lake. EPA did not find any indication that the France Park lakes are "stream like." ESSROC did not provide any evidence to support their assertion that these lakes are more like a lotic environment than a lentic environment. The estimated hydraulic residence times for the France Park lakes (a measure of flow-through) are consistent with hydraulic residence times for lakes in the studies below, not rivers. The U.S. Geological Survey indentifies the France Park lakes as lakes, not rivers or streams on maps at the following websites:
http://maps.indiana.edu/metadata/Hydrology/Water_Bodies_Lakes.html;
http://maps.indiana.edu/previewMaps/Hydrology/Water_Bodies_Lakes.html; and
http://maps.indiana.edu/previewMaps/Hydrology/Water_Bodies_Streams.html.

Furthermore, ESSROC's Comprehensive Risk Assessment Report, dated March 2003, identified water body parameters specific to lakes, not rivers, when evaluating the lakes at France Park.

The suggested rationale for altering the default net mercury methylation rate does not adequately justify using a different value. The default net mercury methylation rate was not changed. The sources reviewed for this response include

the following:

Knightes, C.D. & Ambrose, R.B. Jr., 2006, *Development of an Ecological Risk Assessment Methodology for Assessing Wildlife Exposure Risk Associated with Mercury-Contaminated Sediments in Lake and River Systems - Part 1: Essential Data Requirements, Part 2: SERAFM -- Spreadsheet-based Ecological Risk Assessment for the Fate of Mercury (A Screening-level Model)*, U.S. EPA, ORD – NERL, Ecosystems Research Division, Athens, GA, April

Knightes, C.D., 2008, *Development and test application of a screening-level mercury fate model and tool for evaluating wildlife exposure risk for surface waters with mercury-contaminated sediments (SERAFM)*, Environmental Modeling & Software, vol. 23, pp. 495-510

Knightes, C.D., et. al., 2009, *Application of Ecosystem-Scale Fate and Bioaccumulation Models to Predict Fish Mercury Response Times to Changes in Atmospheric Deposition*, Environmental Toxicology and Chemistry, Vol. 28, No. 4, pp. 881-893

Change: No change is made per ESSROC's Comment #1.

Comment #2: ***Kiln # 2 System Removal Efficiency Testing***

Current Draft Permit Language:

III.F.3 You must conduct a test to determine the removal efficiency of the mercury compound at Kiln #2. Such testing must be conducted before or during the next performance or compliance test required at the facility by the State or federal agencies. At least 90 days prior to conducting the removal efficiency test at Kiln #2, as required in this paragraph, you must submit a test plan, including, but not limited to, a waste analysis plan, a quality assurance project plan, and a scope of procedures for the laboratories to EPA for approval. Based on the results of the removal efficiency test, EPA may recalculate and revise the mercury annual feed rate limit provided in this permit using the new System Removal Efficiency.

ESSROC's Proposed Permit Language:

None – Eliminate Section III.F.3

ESSROC's Expressed Reason for Requested Change:

Based on the analysis provided in Attachments 1 and 2 of this response, no

additional mercury limit is necessary beyond that provided in the HWC MACT standard. The inclusion of additional testing to determine a Kiln #2 mercury SRE will not alter this conclusion. Additionally, with the self imposed limit presented in the proposed comment for condition III.F.1, ESSROC has provided additional reductions in the potential mercury emissions.

EPA's Response to ESSROC's Comment on Kiln # 2 System Removal Efficiency Testing: As explained in the 2012 EPA RA Report and the June 28, 2012 Memo from Jae Lee to File, EPA finds that it is appropriate to include a mercury feed rate limit in the permit. Section III.F.3 is necessary to ensure that the emission limit is based on realistic system removal efficiency (SRE). Since a SRE of 69.84 %, determined based on emission from the bag house control device at Kiln #1, was applied to the ESP control device of the Kiln #2, ESSROC is required to conduct a specific test to determine the removal efficiency at the ESP device of the Kiln #2. Such test must be conducted during the next performance or compliance test required by the CAA or State/federal agencies at Kiln #2.

At least 90 days prior to conducting the removal efficiency test at Kiln #2, as referenced in the previous paragraph, the permit requires ESSROC to submit a removal efficiency test plan, including, but not limited to, a waste analysis plan, a quality assurance project plan, and a scope of procedures for the laboratories, to EPA for approval.

Once the SRE of the ESP at Kiln #2 is determined based on the EPA's approved test plan, an annual feed rate for the facility may be adjusted to reflect the more kiln-specific System Removal Efficiency.

Change: No change is made per ESSROC's Comment #2.

Comment #3: ***Direct Transfer Operations*** (Comment #3 was submitted by ESSROC on April 11, 2013, 170 days after the close of the public comment period. The public comment period closed on October 23, 2013. Since this comment and requested change do not alter ESSROC's current operations and are consistent with the Part B Application listed in the Administrative Record index, EPA is responding this comment accordingly.)

ESSROC is submitting this letter to provide comments on the July 22, 2012 Draft Permit. The facility previously submitted comments to the Draft Permit on October 22, 2012.

Since that time, the facility has discovered an oversight pertaining to its ability to perform direct transfer operations. This practice is allowed by the current EPA's hazardous waste management facility permit under which the facility operates. The facility is requesting that the enclosed changes are made to the renewed permit's conditions prior to its final issuance. Please note that the facility is not

requesting the addition of any new processes. Rather, we request the deletion of an inadvertent restriction on direct transfer (Section III.B.6), and reinsertion of a Section III.G into the new permit (previously Section III.N of the original EPA Hazardous Waste Management Facility Permit). The renewal application submitted on May 9, 2008 included complete information for direct transfer which was also previously in the original facility application and permit. The requested language change in the enclosure made today acknowledges that the direct transfer system is already constructed.

Current Draft Permit Language:

III.B.6 You must not directly transfer hazardous waste from tank-truck, rail-car, or any other moving vehicle to the cements kilns.

ESSROC's Proposed Permit Language:

Eliminate Section III.B.6 currently in the Draft Permit

Add Section III.G.

Proposed Section III.G DIRECT TRANSFER OF HAZARDOUS WASTE (40 CFR 266.11)

- You are permitted to transfer pumpable hazardous waste directly from designated direct transfer areas to the cement kilns. The designated direct transfer areas are two bays for tank trucks (12,000 gallons total) and one bay for rail car tanker (25,000 gallons total).
- You shall receive a maximum of two trucks or one rail car tanker at any one time at the designated direct transfer area. At all times at the designated direct transfer area, tank trucks shall contain the same material and originate from the same vendor.
- You shall operate and maintain the area for direct transfer of hazardous waste to the cement kilns in accordance with the plans and specifications in the approved RCRA Part B Permit Application and 40 CFR 266.111.
- The direct transfer area shall be operated in accordance with the following conditions:
    - You shall not transfer pumpable hazardous waste directly from an open-top container to the cement kiln.
    - All direct transfer equipment used for pumpable hazardous waste shall remain closed at all times, except when necessary to add or remove the waste, and shall not be opened, handled, or stored in a manner that may cause any rupture or leak.
    - You shall conduct inspections of the direct transfer operations at least once each operating hour while hazardous waste is being transferred from a transport vehicle according to the procedures described in

Process Description, Section 4 of the Part B Permit Application. The direct transfer of hazardous waste to the cement kiln shall be conducted so that it does not:

- Generate extreme heat or pressure, or create a fire, explosion, or violent reaction;
- Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;
- Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion;
- Damage the structural integrity of the container or direct transfer equipment containing the waste;
- Adversely affect the capability of the cement kiln to meet the Performance Standards or Operating Conditions of this permit; or
- Threaten human health or the environment.
- You shall use appropriate controls and practices to prevent spills and overflows from the direct transfer equipment or its secondary containment system. These include at a minimum:
- Spill prevention controls (e.g., check valves, dry disconnect couplings); and
- AWFCO in the event of a leak or spill from the direct transfer equipment.

EPA Response to ESSROC's Comment on Direct Transfer Operations: EPA agrees with ESSROC's Comment #3 and will modify the Draft Permit accordingly.

Change: EPA will delete Section III.B.6 in the current Draft Permit. **EPA will add ESSROC's proposed Section III.G:**

III.G DIRECT TRANSFER OF HAZARDOUS WASTE (40 CFR 266.11)

1. You are permitted to transfer pumpable hazardous waste directly from designated direct transfer areas to the cement kilns. The designated direct transfer areas are two bays for tank trucks (12,000 gallons total) and one bay for rail car tanker (25,000 gallons total).

2. You shall receive a maximum of two trucks or one rail car tanker at any one time at the designated direct transfer area. At all times at the designated direct transfer area, tank trucks shall contain the same material and originate from the same vendor.

3. You shall operate and maintain the area for direct transfer of hazardous waste to the cement kilns in accordance with the plans and specifications in the approved RCRA Part B Permit Application and 40 CFR § 266.111.

4. The direct transfer area shall be operated in accordance with the following conditions:

   (a) You shall not transfer pumpable hazardous waste directly from an open-top container to the cement kiln.

   (b) All direct transfer equipment used for pumpable hazardous waste shall remain closed at all times, except when necessary to add or remove the waste, and shall not be opened, handled, or stored in a manner that may cause any rupture or leak.

5. You shall conduct inspections of the direct transfer operations at least once each operating hour while hazardous waste is being transferred from a transport vehicle according to the procedures described in Process Description, Section 4 of the Part B Permit Application.

   The direct transfer of hazardous waste to the cement kiln shall be conducted so that it does not:

   (a) Generate extreme heat or pressure, or create a fire, explosion, or violent reaction;

   (b) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;

   (c) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion;

   (d) Damage the structural integrity of the container or direct transfer equipment containing the waste;

   (e) Adversely affect the capability of the cement kiln to meet the Performance Standards or Operating Conditions of this permit; or

(f) Threaten human health or the environment.

6. You shall use appropriate controls and practices to prevent spills and overflows from the direct transfer equipment or its secondary containment system. These include at a minimum:

   (a) Spill prevention controls (e.g., check valves, dry disconnect couplings); and

   (b) Automatic Waste Feed Cut-off in the event of a leak or spill from the direct transfer equipment.

Comment #4: (Comment #4 was submitted by ESSROC on April 11, 2013, 170 days after the close of the public comment period. The public comment period closed on October 23, 2013. Since this comment is not significant and would not change any emission rate or feed rate limit addressed in the Draft Permit, EPA is responding this comment accordingly.)

Of additional concern is condition I.K on page 10 of the Draft Permit, which requires compliance with all applicable Clean Air Act (CAA) permit limits. Compliance with all applicable CAA limits is already required by the facility's Part 70 Operating Permit T017-26351-00005. To eliminate the burden associated with duplicative regulation, we are requesting modification of this requirement as is noted in the enclosure.

Current Draft Permit Language:

Section I.K You must fully comply with all applicable Clean Air Act (CAA) and RCRA permit limits. Where two or more operating limitations apply, the most stringent operating limitations take precedence.

ESSROC's Proposed Permit Language:

Section I.K You must fully comply with all applicable RCRA permit limits. Where operating limits in the Clean Air Act (CAA) permit and this RCRA permit conflict, the most stringent operating limit takes precedence.

EPA Response to ESSROC's Comment on CAA Complinace: Condition I.K simply requires the facility to operate its facility in compliance with CAA and RCRA regulations. Since the CAA regulates cement kiln units with specific operating limits, it's important for the facility to comply with requirements set aside by the CAA.

Change: No change is made per ESSROC's Comment #4.

THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

Date: June 28, 2012

From: Jae Lee, Permit Writer
Land and Chemicals Division

To: File

Subject: Annual Mercury Feed Rate Limit for ESSROC Cement Corporation Logansport, Indiana, RCRA Permit

I. Background

The United States Environmental Protection Agency requires that the ESSROC Cement Corporation (ESSROC) facility in Logansport, Indiana (ESSROC Facility) not exceed a total annual feed rate limit of 87.91 pound (lb) per year of mercury for both Kiln #1 and Kiln #2. The purpose of this memorandum is to explain the basis for this requirement for the administrative record. [ESSROC operates two cement kilns with a common exhaust stack. Kiln # 1 utilizes a bag house as an air pollution control device and Kiln #2 utilizes an Electrostatic Precipitator (ESP) as a control device.]

EPA promulgated the National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors[1] at 40 CFR Part 63, Subpart EEE (HWC MACT). This regulation sets hazardous waste combustor Maximum Achievable Control Technology standards for emissions of mercury and other pollutants at, among other hazardous waste combustors, hazardous waste burning cement kilns. 40 CFR § 63.1204(a); 40 CFR § 63.1220(a). If a site-specific risk assessment demonstrates that operation in accordance with the HWC MACT standard is not protective of human health and the environment, permitting authorities may require additional conditions in the RCRA permit.[2]

In June 2012, EPA completed a site-specific risk assessment for the ESSROC Facility (ESSROC Risk Report). In the ESSROC Risk Report, EPA assessed site-specific risks associated with compliance with the HWC MACT standard consistent with agency

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[1] For existing owners of hazardous waste boilers or industrial furnaces, the RCRA Subpart H regulations for boilers and Industrial furnaces generally no longer apply once the facility demonstrates compliance with the MACT. 40 CFR § 266.100(b).

[2] U.S. EPA, Office of Solid Waste, *Resource Conservation and Recovery Act Site-Specific Risk Assessment Policy for Hazardous Waste Combustion Facilities* , at 3 (July 1999), http://www.epa.gov/epaoswer/hazwaste/combust/toolkit/ssrapofs.pdf ; 40 CFR § 270.32(b).

guidance. The ESSROC Risk Report concluded that emissions from the ESSROC Facility at the HWC MACT emission standard for mercury would create an unacceptable risk to human health. Therefore, risk-based limits on the emission of mercury from the ESSROC facility are necessary in addition to the HWC MACT standard in order to protect human health.

II. HWC MACT Emission Standard

The HWC MACT mercury emission standard for existing hazardous waste cement kiln units is 120 micrograms per dry standard cubic meter (ug/dscm) corrected to 7 percent oxygen. 40 CFR § 63.1204(a); 40 CFR § 63.1220(a). At the ESSROC Facility, this stack gas concentration would be expected to result 0.00389 gram per second (g/s) or 14.004 grams per hour (g/hr)`.

Attachment 1 of the Dispersion Modeling Report explains in detail how the HWC MACT emission standard was converted to the stack-specific mass emission rate.

III. Risk Assessment

The ESSROC Risk Report indicates that the Hazard Quotients (HQ) for the emission of mercury at the HWC MACT emission standard from the cement kilns at the ESSROC Facility is 2.55.

This HQ value is approximately 10 times higher than the benchmark HQ of 0.25. To evaluate the potential for non-cancer health effects, the Agency generally uses a HQ of 1.0. However, for purposes of RCRA combustion permitting decisions, EPA Region 5 has modified the target levels to reflect the contribution of background levels of contamination. See Exposure Assessment Guidance for RCRA Hazardous Waste Combustion Facilities, Draft, U.S. EPA, April 1994.

The HQ per g/hr mercury emission rate per unit can be calculated using the above mass rate and resultant HQ per unit. Since the resultant HQ was 2.55 from a mercury emission rate of 14.004 g/hr (0.00389 g/sec), the HQ per g/hr emission rate of mercury is 0.182091 (i.e., 2.55 / 14.004). It should be noted that the relationship between the emission rate of mercury and the resultant HQ value per unit is linear.

The system removal efficiency (SRE) for the ESSROC Facility Cement Kiln System, consisting of Kiln #1 and Kiln #2, was based on a comprehensive performance test (CPT) conducted in October 2009. The SRE of the ESSROC Facility's Cement Kiln System was determined to be 69.84 percent. However, it should be noted that the October 2009 CPT was conducted only at Kiln #1 which has bag house. Since there is no acceptable SRE data for the ESP at Kiln #2, the SRE for Kiln #1 was applied to Kiln #2 in determining the SRE for purpose of the ESSROC Risk Assessment.

IV. Risk-Based Limits on Mercury

Since the resultant HQ from emissions at the HWCMACT standard for mercury may pose an unacceptable risk to human health, there is a need to set an additional risk-based limit for mercury emission from the ESSROC Facility Cement Kiln System.
In order to determine the annual feed rate limit that would be below a hazard quotient of 0.25, the following equation is utilized:

$$MAF*(1-SRE)*(HIPEM)*(1/8760) = 0.25$$

MAF = Annual feed rate limit of mercury (grams per year);

SRE = System removal efficiency for mercury;

HIPEM = HQ value per g/hr mercury emission rate;

8760 = Unit conversion factor from one year to hours; and

0.25 = Acceptable HQ risk value

Therefore, MAF = (0.25)(8760)/(0.3016)(0.18209) = 39877.386 g/year = 87.91 lb/year

The SRE for mercury at ESSROC Facility's Cement Kiln utilized for above calculation was 69.84 percent.

Therefore, based on the above calculations, EPA recommends that the total annual mercury feed rate limit for the ESSROC Facility's Cement Kiln System should not exceed 87.91 lbs. This limit will ensure that the hazard quotient that results from the emission of mercury from the ESSROC Facility will be equal to or below the benchmark HQ value of 0.25.

This limit is in addition to any mercury feed rate limit imposed by the Clean Air Act (CAA), either at each cement kiln or for entire facility.

Since a SRE of 69.84 %, determined based on emission from the bag house control device at Kiln #1, was applied to the ESP control device of the Kiln #2, ESSROC is required to conduct a specific test to determine the removal efficiency at the ESP device of the Kiln #2. Such test must be conducted during the next performance or compliance test required by the CAA or State/federal agencies at Kiln #2.

At least 90 days prior to conducting the removal efficiency test at Kiln #2, as referenced in the previous paragraph, the permit requires ESSROC to submit a removal efficiency test plan, including, but not limited to, a waste analysis plan, a quality assurance project plan, and a scope of procedures for the laboratories, to EPA for approval.

Once a removal efficiency of the ESP at Kiln #2 is determined based on the EPA's approved test plan, an annual feed rate for the facility may be adjusted to reflect the more kiln-specific System Removal Efficiency.

United States Environmental Protection Agency

EPA Proposes to OK Permit For ESSROC

Logansport, Indiana July 2012

U.S. Environmental Protection Agency Region 5 is proposing to issue a hazardous waste management permit to ESSROC Cement Corporation (ESSROC), but will review public comments before making a final decision. The permit would include operating requirements for the cement kilns, including an annual mercury feed rate limit at the Logansport facility. [1] EPA is acting on the hazardous waste permit application under its responsibilities set out in the federal Resource Conservation and Recovery Act (RCRA).

Background

ESSROC operates a hazardous waste storage and treatment facility at Logansport, Indiana. ESSROC stores hazardous waste derived fuel in tanks and containers and then burns that fuel in two rotary cement kilns to facilitate the production of cement.

State permit

On September 24, 2010, Ohio Environmental Protection Agency issued the state-portion of the RCRA permit. That portion contains rules for storing of hazardous waste in container storage areas, corrective action and groundwater monitoring requirements.

Proposed decision on federal permit

Since EPA has not yet authorized the State of Indiana to administer certain RCRA regulations, including the Boilers and Industrial Furnace (40 CFR Part 266 Subpart H), EPA Region 5 is issuing the RCRA permit requirements for operations at this facility which fall under these regulations. The Ohio permit expires on April 23, 2014, and the federal permit would be expired five years after the issuance date of the final permit. EPA has concluded the company has fulfilled all requirements and proposes to issue a RCRA permit to ESSROC for the hazardous waste activities discussed above. After the close of the public comment period, EPA will review all comments received and decide whether to issue the permit. The final decision will include notification to those who submitted written comments during the official comment period. EPA will also prepare and send to all responders a document answering significant comments.

The Agency will hold a public meeting if enough people request such a gathering *(see left-hand box for ways you can participate in the decision-making process.)*. EPA may modify the proposed permit or take other action based on new information or public comments so your opinion is important.

[1] *EPA is proposing to issue the ESSROC permit under the authority of the federal Resource Conservation and Recovery Act (RCRA) as amended by the Hazardous and Solid Waste Amendments of 1984 and subject to public notice and comment under the provisions of 40 Code of Federal Regulations (CFR) Section 124.10. See http://www.epa.gov/lawsregs/index.html to read RCRA and 40 CFR.*

Comments welcomed

Comments on the ESSROC proposed permit action can be submitted to EPA Environmental Engineer Jae Lee at the address below no later than September 7, 2012. You may also request EPA hold a public hearing about this permit. At a hearing you would have an opportunity to submit oral and written comments, ask questions, make statements and discuss any concerns about the permit with EPA staff. Here is Jae's contact information:

Jae Lee
EPA Region 5, Land and Chemicals Division (LR-8J)
77 W. Jackson Blvd.
Chicago, Illinois 60604-3590
Voice: 312-886-3781
Fax: 312-692-2408
E-mail: lee.jae@epa.gov

Region 5 toll-free:
800-621-8431, ext 6-3781, 9:30 a.m. – 5:30 p.m., weekdays

For more information

The draft permit and this fact sheet may also be viewed online: http://www.epa.gov/region5/waste/permits/actions.htm#2012

(See box back page for locations of the administrative record, which can be reviewed by the public.)

EPA Tentatively Approves ESSROC Permit

Logansport, Indiana

Comment Period: Until September 7, 2012

(details front page)

Review the documents

The administrative record consists of the draft permit, fact sheet and other materials that EPA used to make a decision in this case. The file is available for public review at the following locations:

Logansport-Cass County Public Library
616 East Broadway
Logansport, IN 46947
(574) 753-6383

(The library will have a fact sheet, draft permit and public notice. Other records such as part B permit applications will be available at the EPA, noted below.)

EPA Region 5 Offices
RCRA Branch, 77 W. Jackson Blvd.
Chicago Call Jae Lee at 312- 886-3781, or toll-free 800-621-8431, Ext. 6-378.

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ESSROC Cement: Tentative Permit Approval

EPA
United States
Environmental Protection
Agency
Region 5
Office of Public Affairs (P-19J)
77 W. Jackson Blvd.
Chicago, IL 60604-3590

Administrative Record Index ***(FINAL RCRA PERMIT)***
ESSROC Cement Corporation
Logansport, Indiana
IND 005 081 542

	Title	Date	Prepared
1.	Part B Permit Application (Separate, 3 binders)	5/9/08	ESSROC
2.	Part B Application NOD #1 (not alone, included in #4)	7/31/08	IDEM
3.	Particle Size Lab Documents (40)	8/13/08	ESSROC
4.	ESSROC's response to NOD #1	8/29/08	ESSROC
5.	Revised Part B Application ((Separate, 3 binders)	8/29/08	ESSROC
6.	Part B Application NOD #2 (included in #7)	10/23/08	IDEM
7.	ESSROC's Response to NOD #2	11/12/08	ESSROC
8.	HWC NESHAP CPT and CMS Performance Evaluation Plan (Actual Plan Date is October 2008)	11/20/08	ESSROC
9.	Class 1 Modification Request	1/2/09	ESSROC
10.	State Draft RCRA Permit (300)	1/22/09	IDEM
10A	Risk assessment Update Request	1/22/09	EPA
11.	CPT Plan NOD (4)	3/27/09	IDEM
12.	Temporary Authorization of Roll-off Containers	4/6/09	IDEM
13.	State Final RCRA Permit	4/8/09	IDEM
14.	Class 1 modification request for sunset Language	5/11/09	SSROC
15.	Mercury Sensitivity Analysis (a CD is included)	5/15/09	SSROC
16.	CPT plan NOD Response (40)	5/27/09	ESSROC
17.	EPA 's Response for Sunset Language Request	6/5/09	EPA
18.	Mercury Risk Assessment Data Collection (8)	08/2009	SSROC
19.	Hg Speciation and Particle Size Request	8/3/09	EPA
20.	Response to test extension of Kiln #2(2)	8/06/09	EPA
21.	ESSROC's response to Hg Speciation Request	8/31/09	ESSROC
22.	Metals Extrapolation Data (5)	9/10/09	ESSROC
23.	E-mail questions for waste analysis (included in #24)	9/10/09	EPA
24.	Response to the 9/10/09 e-mail questions (Feedstream Analysis and Waste analysis Plan Attached)	9/11/09	ESSROC
25.	Mercury Risk Assessment Data Collection Test Report Kiln #1 (Appendices are included in a CD (attached))	02/2010	ESSROC
26.	NOC and CPT Report-Kiln 1 (50)	02/2010	ESSROC
27.	Revised Mercury Sensitivity Analysis (40)	2/17/10	ESSROC
28.	Permit Modification	10/14/10	IDEM
29.	Title 5 Air permit (500)	11/8/10	IDEM
30.	Particle Size Data Report (by METCO Environmental)	12/8/10	ESSROC
31.	Final Class 3 Modification	1/12/11	IDEM
32.	Stack Information (email from Dan Carney)	3/1/11	ESSROC
33.	Class 1 Modification Request	3/5/12	ESSROC
34.	NOC and CPT Report-Kiln 2 (50)	10/2011	ESSROC

35. EJ Report	4/12/12	EPA
36. DM Report	4/12/12	EPA
37. System Removal efficiency Report	5/10/12	EPA
38. Risk Assessment Report	6/19/12	EPA
39. Annual Hg Feed Rate Limit memo	6/28/12	EPA
40. Field Note and Google map	3/2/2011	EPA
41. Draft RCRA Federal Permit	7/22/12	EPA
42. Public comment period extension approval	8/31/12	EPA
43. ESSROC's comments for the permit	10/22/12	ESSROC
44. ESSROC's comments for the permit	4/11/13	ESSROC
45. Responsive Summary	June 2013	EPA
46. Final RCRA federal Permit	June 2013	EPA

47. The following documents are referenced in the development of the Dispersion Modeling Report, dated April 12, 2012:

a. Bishop, E., 2007, Memorandum to Messrs. Robinson (U.S. EPA), Haywood (MDEQ), and Mason (MDEQ). RE: Mercury Vapor Deposition Modeling Parameters for Use in AERMOD, June 27

b. Crosby, D.G., 1985, *The Degradation and Disposal of Chlorinated Dioxins: Dioxins in the Environment,* Hemisphere, Washington DC, pp195-204

c. U.S. EPA 2004, *User's Guide for the AERMOD Meteorological Preprocessor (AERMET)*, EPA-454/B-03-002, U.S. EPA, OAQPS, Research Triangle Park, NC, November http://www.epa.gov/scram001/7thconf/aermod/aermetugb.pdf

d. U.S. EPA 2005, *Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities,* Office of Solid Waste and Emergency Response, EPA530-R-05-006, September. http://www.epa.gov/osw/hazard/tsd/td/combust/risk.htm

e. U.S. EPA 2008, *DRAFT Regional Meteorological Data Processing Protocol, EPA Region 5 and States,* U.S. EPA, Chicago, July http://www.pca.state.mn.us/index.php/view-document.html?gid=17386

f. Water 9, 2006, Computer Software, U.S. EPA, *Version 3.0 – Beta,* June 29 http://www.epa.gov/ttnchie1/software/water/water9_3/index.html

g. Wesely, M.L., Doskey, P.V., and Shannon, J.D., 2002, *Deposition Parameterizations for the Industrial Source Complex (ISC3) Model*, Environmental Research Division, Argonne National Laboratory, Argonne, IL, June http://adsabs.harvard.edu/abs/2002AGUSM.A51E..02W

h. http://www.seamless.usgs.gov
(This site is now redirected to http://nationalmap.gov/viewer.html)

i. http://www.ncdc.noaa.gov/snow-and-ice/snow-cover.php

j. http://cdo.ncdc.noaa.gov/ancsum/ACS

k. METCO ENVIRONMENTAL, 2010, Letter to Mr. Corey Conn, ESSROC Cement Corporation re: particle size testing, METCO ENVIRONMENTAL, Addison, TX, July 21

l. Carney, D., 2011, electronic message to Mr. Todd Ramaly, U.S. EPA re: average stack parameters from recent CPT, Shreiber, Yonley & Associates, Ellisville, MO, March 1 (Same as #32 memo)

m. Shreiber Yonley, 2010, *Mercury Risk Assessment Data Collection, Test Report – Kiln 1*, Shreiber, Yonley & Associates, Ellisville, MO, February (Same as #24 Report)

n. U.S. EPA 1997, *Mercury Study Report to Congress, Volume III: Fate and Transport of Mercury in the Environment,* EPA-452/R-97-005, OAQPS and ORD, U.S. EPA, Washington DC, December
http://www.epa.gov/ttn/atw/112nmerc/volume3.pdf

48. The following documents are referenced in the development of the Risk Assessment Report, dated June 19, 2012:

a. France Park staff phone conversation with C. Lambesis, EPA, March 2, 2011, 9:27am. (Same as #40 record)

b. *Indiana State Department of Health 2010 Fish Advisory Report*, http://www.in.gov/isdh/files/2010_FCA.pdf

c. NESHAP Air Permit Notification of Compliance, ESSROC, February 2010. (Same as #26 Record)

d. *Comprehensive Risk Assessment for the Cement Kiln Operations at the ESSROC Cement Corporation in Logansport*, Indiana, Horizon Environmental Corporation, March, 2003.

e. *Risk Assessment in the Federal Government: Managing the Process*, The National Academy of Science, 1983.

http://www.epa.gov/region9/science/seminars/2012/red-book.pdf

f. EPA *Final Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities,* EPA520-R-05-006,

http://www.epa.gov/epaoswer/hazwaste/combust/risk.htm

http://www.epa.gov/osw/hazard/tsd/td/combust/risk.htm

g. *Industrial Risk Assessment Protocol - Human Health v.4.5.5* (IRAP-h View™), Lakes Environmental Software, Waterloo, Ontario, Canada. http://www.weblakes.com/products/iraph/index.html

h. *Dispersion Modeling of Stack Gases for ESSROC Cement, Logansport, IN,* April 12,2012, EPA, 2012. (Same as #36 Record)

i. *Implementation of Exposure Assessment Guidance for RCRA Hazardous Waste Combustion Facilities,* EPA A530-R-94-021, April 1994.

http://nepis.epa.gov/Exe/ZyNET.exe/10000TC3.TXT?ZyActionD=ZyDocument&Client=EPA&Index=1991+Thru+1994&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C91thru94%5CTxt%5C00000010%5C10000TC3.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p%7Cf&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL

j. Waterbody– France Quarry Lake

k. Waterbody– Lake Elzbeck

l. Watershed– France Lake Quarry

m. Watershed– Lake Elzbeck

49. The following documents are referenced in the development of Responsive Summary related to the mercury feed rate limit:

a. Knightes, C.D. & Ambrose, R.B. Jr., 2006, *Development of an Ecological Risk Assessment Methodology for Assessing Wildlife Exposure Risk Associated with Mercury-Contaminated Sediments in Lake and River Systems - Part 1: Essential Data Requirements, Part 2: SERAFM -- Spreadsheet-based Ecological Risk Assessment for the Fate of Mercury (A Screening-level Model)*, U.S. EPA, ORD – NERL, Ecosystems Research Division, Athens, GA, April
http://www.epa.gov/athens/publications/reports/Knightes600R06073_SERAFM.pdf

b. Knightes, C.D., 2008, *Development and test application of a screening-level mercury fate model and tool for evaluating wildlife exposure risk for surface waters with mercury-contaminated sediments (SERAFM)*, Environmental Modeling & Software, vol. 23, pp. 495-510
http://www.sciencedirect.com/science/article/pii/S1364815207001260

c. Knightes, C.D., et. al., 2009, *Application of Ecosystem-Scale Fate and Bioaccumulation Models to Predict Fish Mercury Response Times to Changes in Atmospheric Deposition*, Environmental Toxicology and Chemistry, Vol. 28, No. 4, pp. 881-893
http://www.ncbi.nlm.nih.gov/pubmed/19391686

d. U.S. EPA, 2001, *Water Quality Criterion for the Protection of Human Health: Mercury*, EPA-823-R-01-001, U.S. EPA Office of Science and Technology, Office of Water, Washington, DC, January

http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/methylmercury/upload/2009_01_15_criteria_methylmercury_mercury-criterion.pdf

e. http://maps.indiana.edu/metadata/Hydrology/Water_Bodies_Lakes.html

f. http://maps.indiana.edu/previewMaps/Hydrology/Water_Bodies_Lakes.html

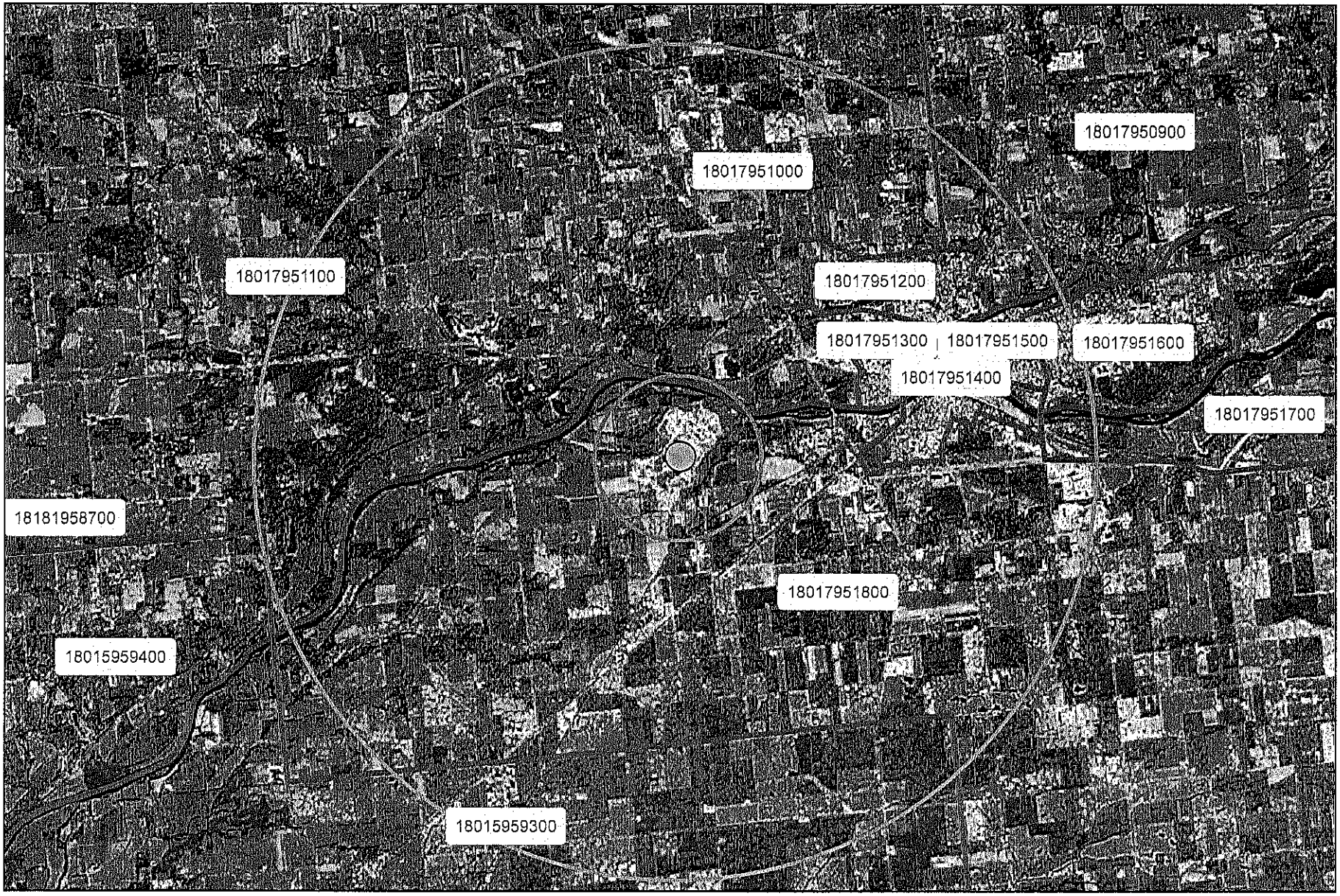
g. http://maps.indiana.edu/previewMaps/Hydrology/Water_Bodies_Streams.html

*** Above Documents are on file in the RCRA Branch, EPA, Chicago, IL **
(For the reference documents noted in #47, #48, and #49, a web site address is specified to view and obtain a copy of the referenced document. For the non-voluminous document a hard copy of the document is in file.)

CMS: Compliance Monitoring Strategy
CPT: Comprehensive Performance Test
EJ: Environmental Justice
EPA: U.S. Environmental Protection Agency
ESSROC: ESSROC Cement Corporation
DM: Dispersion Modeling
Hg: Mercury
HWC: Hazardous Waste Combustion
IDEM: Indiana Department of Environmental Management Hg: Mercury
MACT: Maximum Achievable Control Technology
NESHAP: National Emission Standards for Hazardous Air Pollutants
NOD: Notice of Deficiency
NOC: Notice of Compliance
Part B: Part B Permit Application
RCRA: Resource Conservation Resource Act
SRE: System Removal Efficiency

State/County Tract	2008EJRank	2011EJRank	% minority	% over 25 no HS diploma	% in poverty	% under 5 yrs. old	% over 64 yrs. Old	% linguistically isolated households
18015959300	10	10	1.57	16.98	8.98	7.06	14.25	4.64
18015959400	10	10	1.45	14.14	4.92	5.76	9.99	4.04
18017950900	10	8	3.72	12.52	6.55	5.85	16.24	4.40
18017951000	6	6	3.68	12.68	5.26	7.35	14.05	5.19
18017951100	10	8	3.09	14.86	5.83	6.89	13.16	5.69
18017951200	8	7	12.32	24.27	5.46	5.15	13.48	7.14
18017951300	4	5	16.78	31.75	5.50	8.91	11.11	12.78
18017951400	5	6	12.71	25.53	8.21	5.87	14.77	6.65
18017951500	3	2	28.52	30.28	15.85	8.69	8.89	20.83
18017951600	8	6	9.63	14.38	7.63	7.50	21.75	6.13
18017951700	9	8	4.46	10.21	6.98	6.42	14.54	6.01
18017951800	6	5	6.17	18.48	6.73	6.51	15.85	4.56

ESSROC Materials, Logansport, IN.
with 2011 Environmental Justice Zones



N

0 1.25 2.5 5 Miles

Legend

- 5_mile_circle
- one_mile_circle
- EJSEAT 2011
- ESSROC Materials facility
- state/county/tract number

ESSROC Materials, Logansport, IN.
with 2011 Environmental Justice Zones

N

0 0.25 0.5 1 Miles

Legend

one_mile_circle

R5_EJSEAT_2011

ESSROC Materials facility

State/County Tract	2008EJRank	2011EJRank	% minority	% over 25 no HS diploma	% in poverty	% under 5 yrs. old	% over 64 yrs. Old	% linguistically isolated households
18015959300	10	10	1.57	16.98	8.98	7.06	14.25	4.64
18015959400	10	10	1.45	14.14	4.92	5.76	9.99	4.04
18017950900	10	8	3.72	12.52	6.55	5.85	16.24	4.40
18017951000	6	6	3.68	12.68	5.26	7.35	14.05	5.19
18017951100	10	8	3.09	14.86	5.83	6.89	13.16	5.69
18017951200	8	7	12.32	24.27	5.46	5.15	13.48	7.14
18017951300	4	5	16.78	31.75	5.50	8.91	11.11	12.78
18017951400	5	6	12.71	25.53	8.21	5.87	14.77	6.65
18017951500	3	2	28.52	30.28	15.85	8.69	8.89	20.83
18017951600	8	6	9.63	14.38	7.63	7.50	21.75	6.13
18017951700	9	8	4.46	10.21	6.98	6.42	14.54	6.01
18017951800	6	5	6.17	18.48	6.73	6.51	15.85	4.56

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUN 05 2013

REPLY TO THE ATTENTION OF:

Vic Windle
Hazardous Waste Management Branch
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, Indiana 46206-6015

RE: Final Federal RCRA Permit, ESSROC Cement Corp.
Logansport, Indiana, IND 005 081 542

Dear Mr. Windle:

Enclosed please find a copy of the final Federal Resource Conservation and Recovery Act permit and cover letter to the above-referenced facility.

If you have any questions, please contact Mr. Jae Lee of my staff at (312) 886-3781.

Sincerely,

Mary S. Setnicar, Chief
RCRA/TSCA Programs Section
Land and Chemicals Division

Enclosure

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUN 05 2013

REPLY TO THE ATTENTION OF:

Logansport Public Library
616 East Broadway
Logansport, Indiana 46947

Re: Final Federal RCRA Permit
ESSROC Cement Corp., Logansport, Indiana
IND 005 081 542

Dear Sir/Madam:

The U.S. Environmental Protection Agency issued a final Hazardous Waste Management permit to ESSROC Cement Corporation of Logansport, Indiana. In accordance with the public involvement procedures in Title 40 Code of Federal Regulations Part 124, the draft federal RCRA permit was publicly noticed in the "Pharos-Tribune" on July 22, 2012.

The public comment period extended from July 22 to October 23, 2012.

Please make available for public examination this letter and the enclosed documents for at least seventy-five (75) days under "Reference Materials - ESSROC Cement Corp.". The following items are enclosed.

-- Final Permit
-- Fact Sheet
-- Response Summary

Thank you for your assistance. If you have any questions, please call me at 312-886-3781.

Sincerely,

Jae B. Lee, Permit Writer
RCRA Branch
Land and Chemicals Division

cc: V. Windle, IDEM

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