



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: January 22, 2010

RE: Kemira Water Solutions, Inc. / 089-28818-00489

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-AM.dot12/3/07



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January 22, 2010

Kanish Jindal
Kemira Water Solutions, Inc.
3761 Canal Street
East Chicago, Indiana, 46312

Re: 089-28818-00489
Second Registration Notice-Only Change to
R089-21908-00489

Dear Kanish Jindal:

Kemira Water Solutions, Inc. was issued a Registration No. R089-21908-00489 on December 2, 2005 for a stationary facility to produce Ferrous Chloride (FeCl_2) and Ferric Chloride (FeCl_3) located at 3761 Canal Street, East Chicago, Indiana 46312. On December 29, 2009, the Office of Air Quality (OAQ) received an application from the source requesting to add an 8.4 MMBtu natural gas-fired boiler to its operation, and to remove a 50.0 MMBtu boiler from its operation, which was approved for construction in 2005, but was never constructed.

Pursuant to 326 IAC 2-5.5-6, the registration is hereby revised as follows, with deleted language as ~~strikeouts~~ and new language **bolded**:

1. relating to construction and operation of one natural gas-fired boiler, identified as Boiler B-1400, approved for construction in 2010, with a maximum heat input capacity of 8.4 MMBtu per hour, having no associated emission control device or alternative fuel option, and exhausting through stack CB-1408. Emission calculations for this unit is shown in the attached calculations in the attached Appendix A. The addition of these units to the registration is considered a notice-only change, since the potential emissions of regulated criteria pollutants and hazardous air pollutants are less than the ranges specified in 326 IAC 2-5.5-6(d)(10) and 326 IAC 2-5.5-6(d)(12), respectively. The uncontrolled/unlimited potential to emit of the entire source is below the threshold levels specified in 326 IAC 2-5.5-1(b)(1); however, the source has requested to remain at the Registration level. No new state rules are applicable to this source. There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this notice-only change. There are no new National Emission standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 20 and 40 CFR Part 61, 63) included in this notice-only change. The registration has been revised as follows:
 - **one natural gas-fired boiler, identified as Boiler B-1400, approved for construction in 2010, with a maximum heat input capacity of 8.4 MMBtu per hour, having no associated emission control device or alternative fuel option, and exhausting through stack CB-1408.**
2. relating to the removal of a boiler that was approved for construction and operation in 2005 but never constructed, identified as one (1) 50 MMBtu Natural Gas Boiler, identified as B-01, installed in 2006, exhausting to stack SB-01. This unit change to the registration is considered a notice-only change, since it is a description change to the emission units and the potential emissions of regulated criteria pollutants will be decreased as a result.
 - ~~One (1) 50 MMBtu Natural Gas Boiler, identified as B-01, installed in 2006, exhausting to stack SB-01.~~

IDEM, OAQ has decided to make additional revisions to the registration as described below. The registration has been revised as follows with deleted language as ~~strikeouts~~ and new language **bolded**:

3. National Emission standards for Hazardous Air Pollutants for Chemical Preparation (NESHAP) 40 CFR Part 63, Subpart BBBB was evaluated for applicability. This NESHAP does not apply because the source does not use the target HAPs of chromium, lead, manganese, or nickel. Therefore, the source is not subject to the requirements of 40 CFR Part 63, Subpart BBBB.
4. Several of IDEM's branches and sections have been renamed. Therefore, IDEM has updated the addresses listed in the registration. References to "Compliance Data Section" and "Compliance Branch" have been changed to "Compliance and Enforcement Branch". The registration has been revised as follows:

~~Compliance Data Section~~ **Compliance and Enforcement Branch**
~~Compliance Branch~~ **Compliance and Enforcement Branch**

5. Section A.1 has been revised to indicate that Lake County is now in attainment for the 8-hour ozone standard. Section A.1 is updated as follows:

Source Location Status: ~~Nonattainment area for 8-hour ozone~~
Attainment area for all other criteria pollutants

6. The following State Rules will continue to apply to the source:
 - (a) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this permit:
 - (1) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
 - (b) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The natural gas-fired boiler (B-1400) is subject to 326 IAC 6-2-4 because it will be constructed after September 21, 1983. Pursuant to 326 IAC 6-2-4 (a) (Particulate emission limitations for sources of indirect heating: emission limitations for facilities specified in 326 IAC 6-2-1(d)), particulate emissions from this boiler must be calculated using the following equation:

$$P_t = \frac{1.09}{Q^{0.26}}$$

Where:

P_t = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu).
 Q = total source operating capacity (8.4 MMBtu/hr).

$$P_t = \frac{1.09}{8.4^{0.26}}$$

$$P_t = 0.627 \text{ lb/MMBtu}$$

Pursuant to 326 IAC 6-2-4, particulate emissions from indirect heating facilities, which were constructed after September 21, 1983, with a total source operating capacity less than 10 MMBtu/hr, shall not exceed 0.6 lb/MMBtu heat input. Based on the calculations below, B-1400 can comply with this limit.

When burning natural gas:
PM Emissions = 1.9 lb PM/MMSCF * MMSCF/1,020 MMBtu = 0.0019 lbs/MMBtu

The source shall continue to operate according to 326 IAC 2-5.5. Please find enclosed the revised registration. A copy of the registration is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Jack Harmon, at (800) 451-6027, press 0 and ask for Jack Harmon or extension 3-4228, or dial (317) 233-4228.

Sincerely,



Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

IC/jh

Attachment: Revised Registration and Appendix A

cc: File - Lake County
Lake County Health Department
Compliance and Enforcement Branch
Billing, Licensing and Training Section



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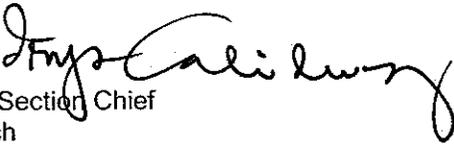
REGISTRATION OFFICE OF AIR QUALITY

Kemira Water Solutions, Inc.
3761 Canal Street
East Chicago, Indiana 46312

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. 089-21908-00489	
Original signed by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: December 2, 2005

First Registration Notice-Only Change No. 089-24042-00489 issued on January 3, 2007

Second Registration Notice-Only Change No. 089-28818-00489	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: January 22, 2010

SECTION A

SOURCE SUMMARY

This registration is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Registrant should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Registrant to obtain additional permits pursuant to 326 IAC 2.

A.1 General Information

The Registrant owns and operates a stationary facility to produce Ferrous Chloride (FeCl_2) and Ferric Chloride (FeCl_3).

Source Address:	3761 Canal Street, East Chicago, Indiana 46312
Mailing Address:	3761 Canal Street, East Chicago, Indiana 46312
General Source Phone Number:	219-397-2646
SIC Code:	2819
County Location:	Lake County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

A.2 Emission Units and Pollution Control Equipment Summary

This stationary source consists of the following emission units and pollution control devices:

One (1) closed-loop Ferrous Chloride production facility, including the following:

- (a) Tanks No. T310 and T311 for storing hydrochloric acid (HCl), with storage capacities of 20,000 gallons each.
- (b) Tanks No. T101 and T102 for storing Spent Pickle Liquor (SPL), with storage capacities of 100,000 gallons each.
- (c) Scrap metal digesters where FeCl_2 is produced in a continuous reaction system, using SPL and scrap iron as raw materials.
- (d) Three (3) chlorinators operated in series where reaction of FeCl_2 and Chlorine produces FeCl_3 .
- (e) One (1) wet scrubber for scrubbing HCl vapor and hydrogen gas produced, with a control efficiency of 80%, and flow rate of 15,000 cubic feet per minute.
- (f) One (1) filter press for treating unused scrap iron and carbon, which are then shipped out.
- (g) One (1) natural gas-fired boiler, identified as B-1400, approved for construction in 2010, with a maximum heat input capacity of 8.4 MMBtu per hour, having no associated emission control device or alternative fuel option, and exhausting through stack CD-1408.

SECTION B

GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this registration shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Effective Date of Registration [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this registration is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

B.3 Registration Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation), this registration to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this registration.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this registration shall not require revocation of this registration.
- (d) For any cause which establishes in the judgment of the fact that continuance of this registration is not consistent with purposes of this article.

B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to Registration No. 089-28818-00489 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this registration.

B.5 Annual Notification [326 IAC 2-5.1-2(f)(3)] [326 IAC 2-5.5-4(a)(3)]

Pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3):

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this registration.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251

- (c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.6 Source Modification Requirement [326 IAC 2-5.5-6(a)]

Pursuant to 326 IAC 2-5.5-6(a), an application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

B.7 Registrations [326 IAC 2-5.1-2(i)]

Pursuant to 326 IAC 2-5.1-2(i), this registration does not limit the source's potential to emit.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this registration:

- (a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.2 Fugitive Dust Emissions [326 IAC 6-4]

The Registrant shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

SECTION D.1

OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

- (a) One (1) natural gas-fired boiler, identified as B-1400, approved for construction in 2010, with a maximum heat input capacity of 8.4 MMBtu per hour, having no associated emission control device or alternative fuel option, and exhausting through stack CD-1408.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.1.1 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the particulate emissions from the boiler (B1400) shall in no case exceed 0.6 pounds of particulate matter per million British thermal units heat input.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

**REGISTRATION
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

Company Name:	Kemira Water Solutions, Inc.
Address:	3761 Canal Street
City:	East Chicago, Indiana 46312
Phone Number:	219-397-2646
Registration No.:	089-21908-00489

I hereby certify that Kemira Water Solutions, Inc. is :

still in operation.

I hereby certify that Kemira Water Solutions, Inc. is :

no longer in operation.

in compliance with the requirements of Registration No. 089-21908-00489.

not in compliance with the requirements of Registration No. 089-21908-00489.

Authorized Individual (typed):
Title:
Signature:
Phone Number:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

Appendix A: Emissions Calculations

Company Name: Kemira Water Solutions, Inc.
Address City IN Zip: 3761 Canal Street, East Chicago, Indiana 46312
Permit Number: 089-28818-00489
Pit ID: 089-00489
Reviewer: Jack Harmon
Date: 1/12/2010

New Total Potential Emissions For Source

<u>Pollutant</u>	<u>Potential Emissions</u> (tons per year)	<u>Thresholds</u> <u>Exemption Level</u>	<u>Thresholds</u> <u>Registration Level</u>
PM	0.07	<5 tpy	≥5 tpy < 25 tpy
PM10	0.28	<5 tpy	≥5 tpy < 25 tpy
PM2.5	0.28	<5 tpy	≥5 tpy < 25 tpy
SO2	0.02	<10 tpy	≥10 tpy < 25 tpy
Nox	3.68	<10 tpy	≥10 tpy < 25 tpy
VOC	0.2	<5 tpy when control equipment required; <10 tpy when control equipment not required	≥ 5 tpy when control equipment required; ≥ 10 tpy when control equipment not required
CO	3.09	<25 tpy	≥25 tpy < 100 tpy
HAP Total	2.7	< 25 tpy	No specific thresholds cited
HAP Worst Single	2.63 (HCl)	<10 tpy	No specific thresholds cited

New emissions levels qualify the source for an Exemption Level; however, the source has requested to remain at the Registration Level.

Company Name: Kemira Water Solutions, Inc.
 Address City IN Zip: 3761 Canal Street, East Chicago, Indiana 46312
 Permit Number: 089-28818-00489
 Plt ID: 089-00489
 Reviewer: Jack Harmon
 Date: 1/12/2010

Summary of this Notice of Change

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
<u>New Boiler</u>						
Potential Emission in tons/yr	0.07	0.28	0.02	3.68	0.20	3.09
<u>Removed Boiler</u>						
Potential Emission in tons/yr	0.40	1.66	0.13	21.90	1.20	18.40
<u>Net Change this NOC</u>						
Potential Emission in tons/yr	-0.33	-1.38	-0.11	-18.22	-1.00	-15.31

	<u>HAPs - Organics</u>					<u>HAPs - Metals</u>				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Lead	Cadmium	Chromium	Manganese	Nickel
<u>New Boiler</u>										
Potential Emission in tons/yr	7.72632E-05	4.41504E-05	0.0027594	0.066226	0.000125	0.000018396	4.04712E-05	5.151E-05	1.3981E-05	7.72632E-05
<u>Removed Boiler</u>										
Potential Emission in tons/yr	4.60E-04	2.63E-04	1.64E-02	3.94E-01	7.45E-04	1.10E-04	2.41E-04	3.07E-04	8.32E-05	4.60E-04
<u>Net Change this NOC</u>										
Potential Emission in tons/yr	-3.83E-04	-2.19E-04	-1.37E-02	-3.28E-01	-6.20E-04	-9.11E-05	-2.00E-04	-2.55E-04	-6.92E-05	-3.83E-04

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Company Name: Kemira Water Solutions, Inc.
Address City IN Zip: 3761 Canal Street, East Chicago, Indiana 46312
Permit Number: 089-28818-00489
Plt ID: 089-00489
Reviewer: Jack Harmon
Date: 1/12/2010

New Boiler

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

8.4

73.6

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.07	0.28	0.02	3.68	0.20	3.09

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

HAPs Emissions

Company Name: Kemira Water Solutions, Inc.
Address City IN Zip: 3761 Canal Street, East Chicago, Indiana 46312
Permit Number: 089-28818-00489
Plt ID: 089-00489
Reviewer: Jack Harmon
Date: 1/12/2010

New Boiler

		HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	Total Organics	
Potential Emission in tons/yr	7.726E-05	4.415E-05	2.759E-03	6.623E-02	1.251E-04	6.923E-02	
		HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total Metals	
Potential Emission in tons/yr	1.840E-05	4.047E-05	5.151E-05	1.398E-05	7.726E-05	2.016E-04	

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Company Name: Kemira Water Solutions, Inc.
Address City IN Zip: 3761 Canal Street, East Chicago, Indiana 46312
Permit Number: 089-28818-00489
Pit ID: 089-00489
Reviewer: Jack Harmon
Date: 1/12/2010

Removed Boiler

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

50.0

438.0

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx 100 **see below	VOC	CO
Potential Emission in tons/yr	1.9	7.6	0.6	21.90	5.5	84
	0.42	1.66	0.13		1.20	18.40

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

HAPs Emissions

Company Name: Kemira Water Solutions, Inc.
Address City IN Zip: 3761 Canal Street, East Chicago, Indiana 46312
Permit Number: 089-28818-00489
Plt ID: 089-00489
Reviewer: Jack Harmon
Date: 1/12/2010

Removed Boiler

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	4.599E-04	2.628E-04	1.643E-02	3.942E-01	7.446E-04

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	1.095E-04	2.409E-04	3.066E-04	8.322E-05	4.599E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
HCl Emission Calculations

Company Name: Kemira Water Solutions, Inc.
Address City IN Zip: 3761 Canal Street, East Chicago, Indiana 46312
Permit Number: 089-28818-00489
Pit ID: 089-00489
Reviewer: Jack Harmon
Date: 1/12/2010

HCL Emission Calculations:

The source previously submitted the following emissions calculations.

The emissions estimates are based on actual tests conducted on the HCl scrubber exhaust stream and used in original Registration calculations ref: R089-21908-00489 dated D

Flow Rate = 5000 cubic-ft/min
Emissions of HCl = 0.2 lb/hr
Emissions of Chlorine = Negligible

The flow rate of the scrubber in Indiana facility = 15,000 cubic-ft/min
Therefore, estimated emissions of HCl = 0.6 lb/hr

$$= 0.6 \text{ lb/hr} \times 8760 \text{ hr/yr} \times 1 \text{ ton}/2000 \text{ lb} = \mathbf{2.63 \text{ tpy}}$$



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Kanish Jindal
Kemira Water Solutions, Inc.
3761 Canal Street
East Chicago, IN 46312

DATE: January 22, 2010

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Registration Notice Only Change
089-28818-00489

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Brandon Snood (M3V, Inc.)
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

Mail Code 61-53

IDEM Staff	CDENNY 1/22/2010 Kemira Water Solutions, Inc. 089-28818-00489 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Kanish Jindal Kemira Water Solutions, Inc. 3761 Canal St East Chicago IN 46312 (Source CAATS)										
2		Ted Butler Plant Mgr Kemira Water Solutions, Inc. 3761 Canal St East Chicago IN 46312 (RO CAATS)										
3		East Chicago City Council 4525 Indianapolis Blvd East Chicago IN 46312 (Local Official)										
4		Gary - Hobart Water Corp 650 Madison St, P.O. Box M486 Gary IN 46401-0486 (Affected Party)										
5		Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 (Health Department)										
6		WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 (Affected Party)										
7		Laurence A. McHugh Barnes & Thornburg 100 North Michigan South Bend IN 46601-1632 (Affected Party)										
8		Shawn Sobocinski 3229 E. Atlanta Court Portage IN 46368 (Affected Party)										
9		Ms. Carolyn Marsh Lake Michigan Calumet Advisory Council 1804 Oliver St Whiting IN 46394-1725 (Affected Party)										
10		Mark Coleman 9 Locust Place Ogden Dunes IN 46368 (Affected Party)										
11		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 (Affected Party)										
12		Valerian Simianu Secor International, Inc. 8770 Guion Road, Suite B Indianapolis IN 46268 (Consultant)										
13		Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 (Affected Party)										
14		Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 (Local Official)										
15		Anthony Copeland 2006 E. 140th Street East Chicago IN 46312 (Affected Party)										

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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Mail Code 61-53

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Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handling Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee
											Remarks
1		Barbara G. 506 Lilac Street East Chicago IN 46312 (Affected Party)									
2		Mr. Robert Garcia 3733 Parrish Avenue East Chicago IN 46312 (Affected Party)									
3		Ms. Karen Kroczek 8212 Madison Ave Munster IN 46321-1627 (Affected Party)									
4		Calumet Township Trustee 35 E 5th Avenue Gary IN 46402 (Affected Party)									
5		Joseph Hero 11723 S Oakridge Drive St. John IN 46373 (Affected Party)									
6		Gary City Council 401 Broadway # 209 Gary IN 46402 (Local Official)									
7		Brandon Snoddy M3V, LLC 11925 East 65th Street Indianapolis IN 46236 (Consultant)									
8											
9											
10											
11											
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15											

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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