# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*
**Governor**

*Thomas W. Easterly*
**Commissioner**

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204
(317) 232-8603
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Mr. Bryant Esch
ThyssenKrupp Waupaca, Inc Plant 5
P.O. Box 249
Waupaca, WI 54981

April 19, 2012

Re: Review Request No.123-31679-00019 to
Part 70 Permit No. 123-27047-00019

Dear Mr. Esch:

On March 29, 2012, ThyssenKrupp Waupaca, Inc Plant 5 submitted a letter requesting approval from the Office of Air Quality (OAQ) to repair its Line #5 pouring/mold cooling operation (P60) at Plant 5 in Tell City by replacing its precision mold conveyor (PMC) with similar components. This project is necessary since long-term wear is generating faulty castings. After this repair, operating hours may be reduced due to fewer rejected parts. This equipment is currently identified as Process P60 - Line 5 Pouring/Mold Cooling. It exhausts 101,000 cfm to Baghouse C15 and Stack S15.

Project Cost

A conservative cost estimate for this project is $800,000 or 26% of the cost to fully replace Process P60 not including the dust collection system. Therefore, the project cost is below 50% of the cost for the complete replacement of the process.

Uncontrolled Emissions or Potential to Emit from pouring/mold cooling operation (PMC) P60

The purpose of the PMC is to keep molds correctly aligned while they cool and thus reduce scrap castings. The emissions generated by Line 5 occur when the iron is poured into the molds, and as the castings cool prior to shakeout. The PMC does not generate emissions. These emissions are generated by the molten iron inside the molds.

Change in Actual Emissions

The change in actual emissions was evaluated to determine the applicability of the major source new source review regulations. Attachment B provides an analysis of the Actual to Projected Actual (ATPA) evaluation. The baseline used to determine historical actual emissions was the 24-month period including the calendar years 2010 and 2011. Therefore, based on the information provided by the source, the proposed replacement of the PMC on Line 5 will result in no change in baseline production or actual emission, and no increase in production capacity, actual production, uncontrolled emissions or controlled emissions.

Based on the Actual to Projected Actual evaluation (pursuant to 326 IAC 2-2-2, and 326 IAC 2-1.1-5) for this project, to be implemented at a major stationary source, the project will not be major for Prevention of Significant Deterioration (PSD) (326 IAC 2-2). IDEM, OAQ has not reviewed the information related to the future projected emissions and will not be making any determination in this regard to the validity of these projections as part of this review. However, the applicant will be required to keep records and report in accordance with 326 IAC 2-2-8 (Source Obligation) for all the units involved in this project.

IDEM has reviewed the information provided by the source and based on this information concludes that a source modification is not required for the proposed modification based on the following:

- This replacement is for only a portion of the process;
- This replacement is not prohibited by any applicable permit;
- Process components are not being replaced through several partial replacements;
- The project cost is below 50% of the cost for complete replacement of the process;
- This project will result in no increase in process production capacity;
- This project will result in no increase in net actual annual emissions;
- This project will not increase facility production through increased utilization; and,
- No changes in the current air permit emission limitations or conditions are required.

All conditions of the permit shall remain unchanged and in effect.

If you have any questions regarding this review, please contact Josiah Balogun of my staff at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5257 or toll free at 1-800-451-6027extension 4-5257.

Sincerely,

Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Enclosure: Review Request
ATPA, Hybrid Test.

cc: File – Perry County
Perry County Health Department
U.S. EPA, Region V
Air Compliance and Enforcement Branch
IDEM Southwest Regional Office

| Group ID | New Name | Stack | 2009 Thruput (tons) | 2010 Thruput (tons) | 2011 Thruput (tons) | Baseline 2010-11 Thruput (tons) | Future Thruput (tons) | Air Pollutant | Emission Factor | Factor Units | Factor Basis | Baseline Emission (tpy) | Baseline Emission (lbs/yr) | Future Emission (tpy) | Future Emission (lbs/yr) | Future Minus Baseline Emissions (tpy) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | P01-P24 Lines 1 to 4 Casting Lines | S01 | 208,884 | 332,938 | 362,693 | 347,816 | 347,816 | PM | 0.11700 | lbs/ton | 04 P5 Test | 20.3 | 40,694 | 20.3 | 40,694 | 0 |
| | | | | | | | | PM10 | 0.11700 | lbs/ton | 04 P5 Test | 20.3 | 40,694 | 20.3 | 40,694 | 0 |
| | | | | | | | | PM2.5 | 0.11700 | lbs/ton | 04 P5 Test | 20.3 | 40,694 | 20.3 | 40,694 | 0 |
| | | | | | | | | SO2 | 0.02 | lbs/ton | Permit | 3.5 | 6,956 | 3.5 | 6,956 | 0 |
| | | | | | | | | NOx | 0.0100 | lbs/ton | Permit | 1.7 | 3,478 | 1.7 | 3,478 | 0 |
| | | | | | | | | VOC | 1.4 | lbs/ton | Permit | 243.5 | 486,942 | 243.5 | 486,942 | 0 |
| | | | | | | | | CO | 6 | lbs/ton | Permit | 1043.4 | 2,086,893 | 1043.4 | 2,086,893 | 0 |
| | | | | | | | | Pb | 3.1701E-05 | lbs/ton | 04 P5 Test | 0.0055 | 11 | 0.0055 | 11 | 0 |
| | | | | | | | | Be | 0.00000125 | lbs/ton | 04 P5 Test | 0.0002 | 0.4 | 0.0002 | 0.4 | 0 |
| | | | | | | | | Antimony | 665 | ppm PM | P4 NR445 | 0.0081 | 16.2 | 0.0135 | 27.1 | |
| | | | | | | | | Arsenic | 14 | ppm PM | P4 NR445 | 0.0002 | 0.3 | 0.0003 | 0.6 | |
| | | | | | | | | Barium | 72 | ppm PM | P2 2006 | 0.0009 | 1.8 | 0.0015 | 2.9 | |
| | | | | | | | | Zinc | 77 | ppm PM | P2 2006 | 0.0009 | 1.9 | 0.0016 | 3.1 | |
| | | | | | | | | Mercury | 0.007 | ppm PM | P2 2006 | 8.5E-08 | 1.7E-04 | 1.4E-07 | 0.0 | |
| | | | | | | | | Cadmium | 7 | ppm PM | P4 NR445 | 0.0001 | 0.2 | 0.0001 | 0.3 | |
| | | | | | | | | Chromium | 190 | ppm PM | P4 NR445 | 0.0023 | 4.6 | 0.0039 | 7.7 | |
| | | | | | | | | Cobalt | 20 | ppm PM | P2 NR438 | 0.0002 | 0.5 | 0.0004 | 0.8 | |
| | | | | | | | | Copper | 850 | ppm PM | P4 NR445 | 0.0104 | 20.7 | 0.0173 | 34.6 | |
| | | | | | | | | Mn | 344 | ppm PM | P4 NR445 | 0.0042 | 8.4 | 0.0070 | 14.0 | |
| | | | | | | | | Nickel | 145 | ppm PM | P4 NR445 | 0.0018 | 3.5 | 0.0030 | 5.9 | |
| | | | | | | | | Selenium | 10 | ppm PM | P2 NR438 | 0.0001 | 0.2 | 0.0002 | 0.4 | |
| | | | | | | | | Acrolein | 0.0034 | lbs/ton | P4 NR438 | 0.5913 | 1182.6 | 0.5913 | 1182.6 | |
| | | | | | | | | Benzene | 0.066 | lbs/ton | P4 NR438 | 11.4779 | 22955.8 | 11.4779 | 22955.8 | |
| | | | | | | | | CHOH | 0.005 | lbs/ton | P4 NR438 | 0.8695 | 1739.1 | 0.8695 | 1739.1 | |
| | | | | | | | | Phenol | 0.0153 | lbs/ton | P2 NR438 | 2.6608 | 5321.6 | 2.6608 | 5321.6 | |
| | | | | | | | | MDI | 0.0000014 | lbs/ton | P4 NR445 | 0.0002 | 0.5 | 0.0002 | 0.5 | |
| | | | | | | | | NH4 | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | H2SO4 | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | 2378TCDD | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | | | | | | | | | |
| 002 | P05-P25 Lines 1 to 4 Cleaning/Grinding | S07 | 133,184 | 220,874 | 250,337 | 235,605 | 235,605 | PM | 0.04600 | lbs/ton | 09 P5 Test | 5.4 | 10,838 | 5.4 | 10,838 | 0 |
| | | | | | | | | PM10 | 0.04600 | lbs/ton | 09 P5 Test | 5.4 | 10,838 | 5.4 | 10,838 | 0 |
| | | | | | | | | PM2.5 | 0.04600 | lbs/ton | 09 P5 Test | 5.4 | 10,838 | 5.4 | 10,838 | 0 |
| | | | | | | | | SO2 | | | | | | | | |
| | | | | | | | | NOx | | | | | | | | |
| | | | | | | | | VOC | | | | | | | | |
| | | | | | | | | CO | | | | | | | | |
| | | | | | | | | Pb | 2.5373E-05 | lbs/ton | 09 P5 Test | 0.0030 | 6 | 0.0030 | 6 | 0 |
| | | | | | | | | Be | 1.6418E-07 | lbs/ton | 09 P5 Test | 0.0000 | 0.0 | 0.0000 | 0.0 | 0 |
| | | | | | | | | Antimony | 665 | ppm PM | P4 NR445 | 0.0081 | 16.2 | 0.0036 | 7.2 | |
| | | | | | | | | Arsenic | 14 | ppm PM | P4 NR445 | 0.0002 | 0.3 | 0.0001 | 0.2 | |
| | | | | | | | | Barium | 72 | ppm PM | P2 2006 | 0.0009 | 1.8 | 0.0004 | 0.8 | |
| | | | | | | | | Zinc | 77 | ppm PM | P2 2006 | 0.0009 | 1.9 | 0.0004 | 0.8 | |
| | | | | | | | | Mercury | 0.007 | ppm PM | P2 2006 | 8.5E-08 | 1.7E-04 | 3.8E-08 | 0.0 | |
| | | | | | | | | Cadmium | 7 | ppm PM | P4 NR445 | 0.0001 | 0.2 | 0.0000 | 0.1 | |
| | | | | | | | | Chromium | 190 | ppm PM | P4 NR445 | 0.0023 | 4.6 | 0.0010 | 2.1 | |
| | | | | | | | | Cobalt | 20 | ppm PM | P2 NR438 | 0.0002 | 0.5 | 0.0001 | 0.2 | |
| | | | | | | | | Copper | 850 | ppm PM | P4 NR445 | 0.0104 | 20.7 | 0.0046 | 9.2 | |
| | | | | | | | | Mn | 344 | ppm PM | P4 NR445 | 0.0042 | 8.4 | 0.0019 | 3.7 | |
| | | | | | | | | Nickel | 145 | ppm PM | P4 NR445 | 0.0018 | 3.5 | 0.0008 | 1.6 | |

| Group ID | New Name | Stack | 2009 Thruput (tons) | 2010 Thruput (tons) | 2011 Thruput (tons) | Baseline 2010-11 Thruput (tons) | Future Thruput (tons) | Air Pollutant | Emission Factor | Factor Units | Factor Basis | Baseline Emission (tpy) | Baseline Emission (lbs/yr) | Future Emission (tpy) | Future Emission (lbs/yr) | Future Minus Baseline Emissions (tpy) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Selenium | 10 | ppm PM | P2 NR438 | 0.0001 | 0.2 | 0.0001 | 0.1 | |
| | | | | | | | | Acrolein | | | | | | | | |
| | | | | | | | | Benzene | | | | | | | | |
| | | | | | | | | CHOH | | | | | | | | |
| | | | | | | | | Phenol | | | | | | | | |
| | | | | | | | | MDI | | | | | | | | |
| | | | | | | | | NH4 | | | | | | | | |
| | | | | | | | | H2SO4 | | | | | | | | |
| | | | | | | | | 2378TCDD | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 003 | P26 - Painting Operations | S26 | 5,106 | 1,352 | 17,364 | 9,358 | 9,358 | PM | | | | | | | | |
| | | | | | | | | PM10 | | | | | | | | |
| | | | | | | | | PM2.5 | | | | | | | | |
| | | | | | | | | SO2 | | | | | | | | |
| | | | | | | | | NOx | | | | | | | | |
| | | | | | | | | VOC | 18% | lbs/ton | Permit | 0.8 | 1,684 | 0.8 | 1,684 | 0 |
| | | | | | | | | CO | | | | | | | | |
| | | | | | | | | Pb | | | | | | | | |
| | | | | | | | | Be | | | | | | | | |
| | | | | | | | | Antimony | | | | | | | | |
| | | | | | | | | Arsenic | | | | | | | | |
| | | | | | | | | Barium | | | | | | | | |
| | | | | | | | | Zinc | | | | | | | | |
| | | | | | | | | Mercury | | | | | | | | |
| | | | | | | | | Cadmium | | | | | | | | |
| | | | | | | | | Chromium | | | | | | | | |
| | | | | | | | | Cobalt | | | | | | | | |
| | | | | | | | | Copper | | | | | | | | |
| | | | | | | | | Mn | | | | | | | | |
| | | | | | | | | Nickel | | | | | | | | |
| | | | | | | | | Selenium | | | | | | | | |
| | | | | | | | | Acrolein | | | | | | | | |
| | | | | | | | | Benzene | | | | | | | | |
| | | | | | | | | CHOH | | | | | | | | |
| | | | | | | | | Phenol | | | | | | | | |
| | | | | | | | | MDI | | | | | | | | |
| | | | | | | | | NH4 | | | | | | | | |
| | | | | | | | | H2SO4 | | | | | | | | |
| | | | | | | | | 2378TCDD | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 004 | P33 Phase 1 & 2 Cupolas | S09 | 486,263 | 675,286 | 764,536 | 719,911 | 719,911 | PM | 0.02100 | lbs/ton | 04 P5 Test | 7.6 | 15,118 | 7.6 | 15,118 | 0 |
| | | | | | | | | PM10 | 0.02100 | lbs/ton | 04 P5 Test | 7.6 | 15,118 | 7.6 | 15,118 | 0 |
| | | | | | | | | PM2.5 | 0.02100 | lbs/ton | 04 P5 Test | 7.6 | 15,118 | 7.6 | 15,118 | 0 |
| | | | | | | | | SO2 | 0.22 | lbs/ton | P5 Permit | 79.2 | 158,380 | 79.2 | 158,380 | 0 |
| | | | | | | | | NOx | 0.2400 | lbs/ton | 04 P5 Test | 86.4 | 172,779 | 86.4 | 172,779 | 0 |
| | | | | | | | | VOC | 0.00066 | lbs/ton | 04 P5 Test | 0.2 | 475 | 0.2 | 475 | 0 |
| | | | | | | | | CO | 0.1 | lbs/ton | 04 P5 Test | 36.0 | 71,991 | 36.0 | 71,991 | 0 |
| | | | | | | | | Pb | 6.7742E-06 | lbs/ton | 04 P5 Test | 0.0024 | 5 | 0.0024 | 5 | 0 |
| | | | | | | | | Be | 2.0323E-07 | lbs/ton | 04 P5 Test | 0.0001 | 0.1 | 0.0001 | 0.1 | 0 |
| | | | | | | | | Antimony | 665 | ppm PM | P4 NR445 | 0.0081 | 16.2 | 0.0050 | 10.1 | |

| Group ID | New Name | Stack | 2009 Thruput (tons) | 2010 Thruput (tons) | 2011 Thruput (tons) | Baseline 2010-11 Thruput (tons) | Future Thruput (tons) | Air Pollutant | Emission Factor | Factor Units | Factor Basis | Baseline Emission (tpy) | Baseline Emission (lbs/yr) | Future Emission (tpy) | Future Emission (lbs/yr) | Future Minus Baseline Emissions (tpy) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Arsenic | 14 | ppm PM | P4 NR445 | 0.0002 | 0.3 | 0.0001 | 0.2 | |
| | | | | | | | | Barium | 334 | ppm PM | P2 2006 | 0.0009 | 1.8 | 0.0025 | 5.0 | |
| | | | | | | | | Zinc | 45900 | ppm PM | P2 2006 | 0.0009 | 1.9 | 0.3470 | 693.9 | |
| | | | | | | | | Mercury | 1.42 | ppm PM | P2 2006 | 8.5E-08 | 1.7E-04 | 1.1E-05 | 0.0 | |
| | | | | | | | | Cadmium | 7 | ppm PM | P4 NR445 | 0.0001 | 0.2 | 0.0001 | 0.1 | |
| | | | | | | | | Chromium | 190 | ppm PM | P4 NR445 | 0.0023 | 4.6 | 0.0014 | 2.9 | |
| | | | | | | | | Cobalt | 20 | ppm PM | P2 NR438 | 0.0002 | 0.5 | 0.0002 | 0.3 | |
| | | | | | | | | Copper | 850 | ppm PM | P4 NR445 | 0.0104 | 20.7 | 0.0064 | 12.9 | |
| | | | | | | | | Mn | 344 | ppm PM | P4 NR445 | 0.0042 | 8.4 | 0.0026 | 5.2 | |
| | | | | | | | | Nickel | 145 | ppm PM | P4 NR445 | 0.0018 | 3.5 | 0.0011 | 2.2 | |
| | | | | | | | | Selenium | 10 | ppm PM | P2 NR438 | 0.0001 | 0.2 | 0.0001 | 0.2 | |
| | | | | | | | | Acrolein | | | | | | | | |
| | | | | | | | | Benzene | 0.0006 | lbs/ton | P2 NR438 | 0.2160 | 431.9 | 0.2160 | 431.9 | |
| | | | | | | | | CHOH | 0.0012 | lbs/ton | P2 NR438 | 0.4319 | 863.9 | 0.4319 | 863.9 | |
| | | | | | | | | Phenol | | | | | | | | |
| | | | | | | | | MDI | | | | | | | | |
| | | | | | | | | NH4 | | | | | | | | |
| | | | | | | | | H2SO4 | 0.0055 | lbs/ton | P2 NR438 | 1.9798 | 3959.5 | 1.9798 | 3959.5 | |
| | | | | | | | | 2378TCDD | 4E-10 | lbs/ton | 97 P5 Test | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | | | | | | | | | |
| 005 | P32 Melt Center Baghouse | S44 | 486,263 | 675,286 | 764,536 | 719,911 | 719,911 | PM | 0.01900 | lbs/ton | 02 P5 Test | 6.8 | 13,678 | 6.8 | 13,678 | 0 |
| | | | | | | | | PM10 | 0.01900 | lbs/ton | 02 P5 Test | 6.8 | 13,678 | 6.8 | 13,678 | 0 |
| | | | | | | | | PM2.5 | 0.01900 | lbs/ton | 02 P5 Test | 6.8 | 13,678 | 6.8 | 13,678 | 0 |
| | | | | | | | | SO2 | | | | | | | | |
| | | | | | | | | NOx | | | | | | | | |
| | | | | | | | | VOC | | | | | | | | |
| | | | | | | | | CO | | | | | | | | |
| | | | | | | | | Pb | | | | | | | | |
| | | | | | | | | Be | | | | | | | | |
| | | | | | | | | Antimony | | | | | | | | |
| | | | | | | | | Arsenic | | | | | | | | |
| | | | | | | | | Barium | | | | | | | | |
| | | | | | | | | Zinc | | | | | | | | |
| | | | | | | | | Mercury | | | | | | | | |
| | | | | | | | | Cadmium | | | | | | | | |
| | | | | | | | | Chromium | | | | | | | | |
| | | | | | | | | Cobalt | | | | | | | | |
| | | | | | | | | Copper | | | | | | | | |
| | | | | | | | | Mn | | | | | | | | |
| | | | | | | | | Nickel | | | | | | | | |
| | | | | | | | | Selenium | | | | | | | | |
| | | | | | | | | Acrolein | | | | | | | | |
| | | | | | | | | Benzene | | | | | | | | |
| | | | | | | | | CHOH | | | | | | | | |
| | | | | | | | | Phenol | | | | | | | | |
| | | | | | | | | MDI | | | | | | | | |
| | | | | | | | | NH4 | | | | | | | | |
| | | | | | | | | H2SO4 | | | | | | | | |
| | | | | | | | | 2378TCDD | | | | | | | | |
| | | | | | | | | | | | | | | | | |

| Group ID | New Name | Stack | 2009 Thruput (tons) | 2010 Thruput (tons) | 2011 Thruput (tons) | Baseline 2010-11 Thruput (tons) | Future Thruput (tons) | Air Pollutant | Emission Factor | Factor Units | Factor Basis | Baseline Emission (tpy) | Baseline Emission (lbs/yr) | Future Emission (tpy) | Future Emission (lbs/yr) | Future Minus Baseline Emissions (tpy) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 006 | P40/P42 Core Sand Handling | S08 | 61,927 | 88,915 | 93,510 | 91,213 | 91,213 | PM | 0.00900 | lbs/ton | 0.003gr/acf | 0.4 | 821 | 0.4 | 821 | 0 |
| | | | | | | | | PM10 | 0.00900 | lbs/ton | 0.003gr/acf | 0.4 | 821 | 0.4 | 821 | 0 |
| | | | | | | | | PM2.5 | 0.00900 | lbs/ton | 0.003gr/acf | 0.4 | 821 | 0.4 | 821 | 0 |
| | | | | | | | | SO2 | | | | | | | | |
| | | | | | | | | NOx | | | | | | | | |
| | | | | | | | | VOC | | | | | | | | |
| | | | | | | | | CO | | | | | | | | |
| | | | | | | | | Pb | | | | | | | | |
| | | | | | | | | Be | | | | | | | | |
| | | | | | | | | Antimony | | | | | | | | |
| | | | | | | | | Arsenic | | | | | | | | |
| | | | | | | | | Barium | | | | | | | | |
| | | | | | | | | Zinc | | | | | | | | |
| | | | | | | | | Mercury | | | | | | | | |
| | | | | | | | | Cadmium | | | | | | | | |
| | | | | | | | | Chromium | | | | | | | | |
| | | | | | | | | Cobalt | | | | | | | | |
| | | | | | | | | Copper | | | | | | | | |
| | | | | | | | | Mn | | | | | | | | |
| | | | | | | | | Nickel | | | | | | | | |
| | | | | | | | | Selenium | | | | | | | | |
| | | | | | | | | Acrolein | | | | | | | | |
| | | | | | | | | Benzene | | | | | | | | |
| | | | | | | | | CHOH | | | | | | | | |
| | | | | | | | | Phenol | | | | | | | | |
| | | | | | | | | MDI | | | | | | | | |
| | | | | | | | | NH4 | | | | | | | | |
| | | | | | | | | H2SO4 | | | | | | | | |
| | | | | | | | | 2378TCDD | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 007 | P41 Warmbox Core Making | S11 | 19,662 | 23,360 | 22,381 | 22,871 | 22,871 | PM | | | | | | | | |
| | | | | | | | | PM10 | | | | | | | | |
| | | | | | | | | PM2.5 | | | | | | | | |
| | | | | | | | | SO2 | | | | | | | | |
| | | | | | | | | NOx | | | | | | | | |
| | | | | | | | | VOC | 0.288 | lbs/ton | P5 Permit | 3.3 | 6,587 | 3.3 | 6,587 | 0 |
| | | | | | | | | CO | | | | | | | | |
| | | | | | | | | Pb | | | | | | | | |
| | | | | | | | | Be | | | | | | | | |
| | | | | | | | | Antimony | | | | | | | | |
| | | | | | | | | Arsenic | | | | | | | | |
| | | | | | | | | Barium | | | | | | | | |
| | | | | | | | | Zinc | | | | | | | | |
| | | | | | | | | Mercury | | | | | | | | |
| | | | | | | | | Cadmium | | | | | | | | |
| | | | | | | | | Chromium | | | | | | | | |
| | | | | | | | | Cobalt | | | | | | | | |
| | | | | | | | | Copper | | | | | | | | |
| | | | | | | | | Mn | | | | | | | | |
| | | | | | | | | Nickel | | | | | | | | |

| Group ID | New Name | Stack | 2009 Thruput (tons) | 2010 Thruput (tons) | 2011 Thruput (tons) | Baseline 2010-11 Thruput (tons) | Future Thruput (tons) | Air Pollutant | Emission Factor | Factor Units | Factor Basis | Baseline Emission (tpy) | Baseline Emission (lbs/yr) | Future Emission (tpy) | Future Emission (lbs/yr) | Future Minus Baseline Emissions (tpy) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Selenium | | | | | | | | |
| | | | | | | | | Acrolein | | | | | | | | |
| | | | | | | | | Benzene | | | | | | | | |
| | | | | | | | | CHOH | 0.0201 | lbs/ton | P2 NR438 | 0.2298 | 459.7 | 0.2298 | 459.7 | |
| | | | | | | | | Phenol | | | | | | | | |
| | | | | | | | | MDI | | | | | | | | |
| | | | | | | | | NH4 | | | | | | | | |
| | | | | | | | | H2SO4 | | | | | | | | |
| | | | | | | | | 2378TCDD | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 008 | P43/P44 Cold Box Core Making | S14 | 42,265 | 65,555 | 71,129 | 68,342 | 68,342 | PM | | | | | | | | |
| | | | | | | | | PM10 | | | | | | | | |
| | | | | | | | | PM2.5 | | | | | | | | |
| | | | | | | | | SO2 | | | | | | | | |
| | | | | | | | | NOx | | | | | | | | |
| | | | | | | | | VOC | 0.4 | lbs/ton | P5 Permit | 13.7 | 27,337 | 13.7 | 27,337 | 0 |
| | | | | | | | | CO | | | | | | | | |
| | | | | | | | | Pb | | | | | | | | |
| | | | | | | | | Be | | | | | | | | |
| | | | | | | | | Antimony | | | | | | | | |
| | | | | | | | | Arsenic | | | | | | | | |
| | | | | | | | | Barium | | | | | | | | |
| | | | | | | | | Zinc | | | | | | | | |
| | | | | | | | | Mercury | | | | | | | | |
| | | | | | | | | Copper | | | | | | | | |
| | | | | | | | | Mn | | | | | | | | |
| | | | | | | | | Nickel | | | | | | | | |
| | | | | | | | | Selenium | | | | | | | | |
| | | | | | | | | Acrolein | | | | | | | | |
| | | | | | | | | Benzene | | | | | | | | |
| | | | | | | | | CHOH | | | | | | | | |
| | | | | | | | | Phenol | | | | | | | | |
| | | | | | | | | MDI | | | | | | | | |
| | | | | | | | | NH4 | | | | | | | | |
| | | | | | | | | H2SO4 | | | | | | | | |
| | | | | | | | | 2378TCDD | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 009 | Facility Natural Gas Usage without Cupola | S01-S15 | 168 | 232.7 | 270.7 | 252 | 252 | PM | 7.6 | lbs/cf6 | EPA | 1.0 | 1,913 | 1.0 | 1,913 | 0 |
| | | | | | | | | PM10 | 7.6 | lbs/cf6 | EPA | 1.0 | 1,913 | 1.0 | 1,913 | 0 |
| | | | | | | | | PM2.5 | 7.6 | lbs/cf6 | EPA | 1.0 | 1,913 | 1.0 | 1,913 | 0 |
| | | | | | | | | SO2 | 0.6 | lbs/cf6 | EPA | 0.1 | 151 | 0.1 | 151 | 0 |
| | | | | | | | | NOx | 100.00 | lbs/cf6 | EPA | 12.6 | 25,172 | 12.6 | 25,172 | 0 |
| | | | | | | | | VOC | 5.5 | lbs/cf6 | EPA | 0.7 | 1,384 | 0.7 | 1,384 | 0 |
| | | | | | | | | CO | 84 | lbs/cf6 | EPA | 10.6 | 21,144 | 10.6 | 21,144 | 0 |
| | | | | | | | | Pb | | | | | | | | |
| | | | | | | | | Be | | | | | | | | |
| | | | | | | | | Antimony | | | | | | | | |
| | | | | | | | | Arsenic | | | | | | | | |
| | | | | | | | | Barium | | | | | | | | |
| | | | | | | | | Zinc | | | | | | | | |

| Group ID | New Name | Stack | 2009 Thruput (tons) | 2010 Thruput (tons) | 2011 Thruput (tons) | Baseline 2010-11 Thruput (tons) | Future Thruput (tons) | Air Pollutant | Emission Factor | Factor Units | Factor Basis | Baseline Emission (tpy) | Baseline Emission (lbs/yr) | Future Emission (tpy) | Future Emission (lbs/yr) | Future Minus Baseline Emissions (tpy) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Mercury | | | | | | | | |
| | | | | | | | | Cadmium | | | | | | | | |
| | | | | | | | | Chromium | | | | | | | | |
| | | | | | | | | Cobalt | | | | | | | | |
| | | | | | | | | Copper | | | | | | | | |
| | | | | | | | | Mn | | | | | | | | |
| | | | | | | | | Nickel | | | | | | | | |
| | | | | | | | | Selenium | | | | | | | | |
| | | | | | | | | Acrolein | | | | | | | | |
| | | | | | | | | Benzene | | | | | | | | |
| | | | | | | | | CHOH | | | | | | | | |
| | | | | | | | | Phenol | | | | | | | | |
| | | | | | | | | MDI | | | | | | | | |
| | | | | | | | | NH4 | 3.2 | lbs/cf6 | EPA | 0.4027 | 805.5 | 0.4027 | 805.5 | |
| | | | | | | | | H2SO4 | | | | | | | | |
| | | | | | | | | 2378TCDD | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 010 | P60-P84 Lines 5 - 8 P/MC/S/PS/Sand Handling | S15 | 250,645 | 304,505 | 354,292 | 329,399 | 329,399 | PM | 0.1570 | lbs/ton | 04 P5 Test | 25.9 | 51,716 | 25.9 | 51,716 | 0 |
| | | | | | | | | PM10 | 0.1570 | lbs/ton | 04 P5 Test | 25.9 | 51,716 | 25.9 | 51,716 | 0 |
| | | | | | | | | PM2.5 | 0.1570 | lbs/ton | 04 P5 Test | 25.9 | 51,716 | 25.9 | 51,716 | 0 |
| | | | | | | | | SO2 | 0.02 | lbs/ton | P5 Permit | 3.3 | 6,588 | 3.3 | 6,588 | 0 |
| | | | | | | | | NOx | 0.0100 | lbs/ton | P5 Permit | 1.6 | 3,294 | 1.6 | 3,294 | 0 |
| | | | | | | | | VOC | 0.6 | lbs/ton | P5 Permit | 98.8 | 197,639 | 98.8 | 197,639 | 0 |
| | | | | | | | | CO | 6 | lbs/ton | P5 Permit | 988.2 | 1,976,391 | 988.2 | 1,976,391 | 0 |
| | | | | | | | | Pb | 4.8571E-05 | lbs/ton | 04 P5 Test | 0.0080 | 16 | 0.0080 | 16 | 0 |
| | | | | | | | | Be | 1.5714E-06 | lbs/ton | 04 P5 Test | 0.0003 | 0.5 | 0.0003 | 0.5 | 0 |
| | | | | | | | | Antimony | 665 | ppm PM | P4 NR445 | 0.0081 | 16.2 | 0.0172 | 34.4 | |
| | | | | | | | | Arsenic | 14 | ppm PM | P4 NR445 | 0.0002 | 0.3 | 0.0004 | 0.7 | |
| | | | | | | | | Barium | 72 | ppm PM | P2 2006 | 0.0009 | 1.8 | 0.0019 | 3.7 | |
| | | | | | | | | Zinc | 77 | ppm PM | P2 2006 | 0.0009 | 1.9 | 0.0020 | 4.0 | |
| | | | | | | | | Mercury | 0.007 | ppm PM | P2 2006 | 8.5E-08 | 1.7E-04 | 1.8E-07 | 0.0 | |
| | | | | | | | | Cadmium | 7 | ppm PM | P4 NR445 | 0.0001 | 0.2 | 0.0002 | 0.4 | |
| | | | | | | | | Chromium | 190 | ppm PM | P4 NR445 | 0.0023 | 4.6 | 0.0049 | 9.8 | |
| | | | | | | | | Cobalt | 20 | ppm PM | P2 NR438 | 0.0002 | 0.5 | 0.0005 | 1.0 | |
| | | | | | | | | Copper | 850 | ppm PM | P4 NR445 | 0.0104 | 20.7 | 0.0220 | 44.0 | |
| | | | | | | | | Mn | 344 | ppm PM | P4 NR445 | 0.0042 | 8.4 | 0.0089 | 17.8 | |
| | | | | | | | | Nickel | 145 | ppm PM | P4 NR445 | 0.0018 | 3.5 | 0.0037 | 7.5 | |
| | | | | | | | | Selenium | 10 | ppm PM | P2 NR438 | 0.0001 | 0.2 | 0.0003 | 0.5 | |
| | | | | | | | | Acrolein | 0.0034 | lbs/ton | P4 NR438 | 0.5600 | 1120.0 | 0.5600 | 1120.0 | |
| | | | | | | | | Benzene | 0.066 | lbs/ton | P4 NR438 | 10.8702 | 21740.3 | 10.8702 | 21740.3 | |
| | | | | | | | | CHOH | 0.005 | lbs/ton | P4 NR438 | 0.8235 | 1647.0 | 0.8235 | 1647.0 | |
| | | | | | | | | Phenol | 0.0153 | lbs/ton | P2 NR438 | 2.5199 | 5039.8 | 2.5199 | 5039.8 | |
| | | | | | | | | MDI | 0.0000014 | lbs/ton | P4 NR445 | 0.0002 | 0.5 | 0.0002 | 0.5 | |
| | | | | | | | | NH4 | | | | | | | | |
| | | | | | | | | H2SO4 | | | | | | | | |
| | | | | | | | | 2378TCDD | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 011 | P62-P77 Lines 5 - 8 CC/CG | S16 | 130,762 | 155,473 | 188,838 | 172,155 | 172,155 | PM | 0.1590 | lbs/ton | 09 P5 Test | 13.7 | 27,373 | 13.7 | 27,373 | 0 |
| | | | | | | | | PM10 | 0.1590 | lbs/ton | 09 P5 Test | 13.7 | 27,373 | 13.7 | 27,373 | 0 |
| | | | | | | | | PM2.5 | 0.1590 | lbs/ton | 09 P5 Test | 13.7 | 27,373 | 13.7 | 27,373 | 0 |

| Group ID | New Name | Stack | 2009 Thruput (tons) | 2010 Thruput (tons) | 2011 Thruput (tons) | Baseline 2010-11 Thruput (tons) | Future Thruput (tons) | Air Pollutant | Emission Factor | Factor Units | Factor Basis | Baseline Emission (tpy) | Baseline Emission (lbs/yr) | Future Emission (tpy) | Future Emission (lbs/yr) | Future Minus Baseline Emissions (tpy) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | SO2 | | | | | | | | |
| | | | | | | | | NOx | | | | | | | | |
| | | | | | | | | VOC | | | | | | | | |
| | | | | | | | | CO | | | | | | | | |
| | | | | | | | | Pb | 9.8039E-05 | lbs/ton | 09 P5 Test | 0.0084 | 17 | 0.0084 | 17 | 0 |
| | | | | | | | | Be | 1.7647E-06 | lbs/ton | 09 P5 Test | 0.0002 | 0.3 | 0.0002 | 0.3 | 0 |
| | | | | | | | | Antimony | 665 | ppm PM | P4 NR445 | 0.0081 | 16.2 | 0.0091 | 18.2 | |
| | | | | | | | | Arsenic | 14 | ppm PM | P4 NR445 | 0.0002 | 0.3 | 0.0002 | 0.4 | |
| | | | | | | | | Barium | 72 | ppm PM | P2 2006 | 0.0009 | 1.8 | 0.0010 | 2.0 | |
| | | | | | | | | Zinc | 77 | ppm PM | P2 2006 | 0.0009 | 1.9 | 0.0011 | 2.1 | |
| | | | | | | | | Mercury | 0.007 | ppm PM | P2 2006 | 8.5E-08 | 1.7E-04 | 9.6E-08 | 0.0 | |
| | | | | | | | | Cadmium | 7 | ppm PM | P4 NR445 | 0.0001 | 0.2 | 0.0001 | 0.2 | |
| | | | | | | | | Chromium | 190 | ppm PM | P4 NR445 | 0.0023 | 4.6 | 0.0026 | 5.2 | |
| | | | | | | | | Cobalt | 20 | ppm PM | P2 NR438 | 0.0002 | 0.5 | 0.0003 | 0.5 | |
| | | | | | | | | Copper | 850 | ppm PM | P4 NR445 | 0.0104 | 20.7 | 0.0116 | 23.3 | |
| | | | | | | | | Mn | 344 | ppm PM | P4 NR445 | 0.0042 | 8.4 | 0.0047 | 9.4 | |
| | | | | | | | | Nickel | 145 | ppm PM | P4 NR445 | 0.0018 | 3.5 | 0.0020 | 4.0 | |
| | | | | | | | | Selenium | 10 | ppm PM | P2 NR438 | 0.0001 | 0.2 | 0.0001 | 0.3 | |
| | | | | | | | | Acrolein | | | | | | | | |
| | | | | | | | | Benzene | | | | | | | | |
| | | | | | | | | CHOH | | | | | | | | |
| | | | | | | | | Phenol | | | | | | | | |
| | | | | | | | | MDI | | | | | | | | |
| | | | | | | | | NH4 | | | | | | | | |
| | | | | | | | | H2SO4 | | | | | | | | |
| | | | | | | | | 2378TCDD | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 012 | Ladle Cleaning with Burn Bars (new for 2009) | Fugitive | 118,000 | 76 | 87 | 82 | 82 | PM | 200 | lbs/ton | P2 NR438 | 8.2 | 16,310 | 8.2 | 16,310 | 0 |
| | | | | | | | | PM10 | 200 | lbs/ton | P2 NR438 | 8.2 | 16,310 | 8.2 | 16,310 | 0 |
| | | | | | | | | PM2.5 | 200 | lbs/ton | P2 NR438 | 8.2 | 16,310 | 8.2 | 16,310 | 0 |
| | | | | | | | | SO2 | | | | | | | | |
| | | | | | | | | NOx | | | | | | | | |
| | | | | | | | | VOC | | | | | | | | |
| | | | | | | | | CO | | | | | | | | |
| | | | | | | | | Pb | | | | | | | | |
| | | | | | | | | Be | | | | | | | | |
| | | | | | | | | Antimony | | | | | | | | |
| | | | | | | | | Arsenic | | | | | | | | |
| | | | | | | | | Barium | | | | | | | | |
| | | | | | | | | Zinc | | | | | | | | |
| | | | | | | | | Mercury | | | | | | | | |
| | | | | | | | | Cadmium | | | | | | | | |
| | | | | | | | | Chromium | | | | | | | | |
| | | | | | | | | Cobalt | | | | | | | | |
| | | | | | | | | Copper | | | | | | | | |
| | | | | | | | | Mn | | | | | | | | |
| | | | | | | | | Nickel | | | | | | | | |
| | | | | | | | | Selenium | | | | | | | | |
| | | | | | | | | Acrolein | | | | | | | | |
| | | | | | | | | Benzene | | | | | | | | |

| Group ID | New Name | Stack | 2009 Thruput (tons) | 2010 Thruput (tons) | 2011 Thruput (tons) | Baseline 2010-11 Thruput (tons) | Future Thruput (tons) | Air Pollutant | Emission Factor | Factor Units | Factor Basis | Baseline Emission (tpy) | Baseline Emission (lbs/yr) | Future Emission (tpy) | Future Emission (lbs/yr) | Future Minus Baseline Emissions (tpy) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | CHOH | | | | | | | | |
| | | | | | | | | Phenol | | | | | | | | |
| | | | | | | | | MDI | | | | | | | | |
| | | | | | | | | NH4 | | | | | | | | |
| | | | | | | | | H2SO4 | | | | | | | | |
| | | | | | | | | 2378TCDD | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 013 | P88 Scrap Iron, Coke & Limestone Receiving | Fugitive | 532,469 | 740,389 | 842,217 | 791,303 | 791,303 | PM | 0.00180 | lbs/ton | IDEM | 0.7 | 1,424 | 0.7 | 1,424 | 0 |
| | | | | | | | | PM10 | 0.00180 | lbs/ton | IDEM | 0.7 | 1,424 | 0.7 | 1,424 | 0 |
| | | | | | | | | PM2.5 | 0.000630 | lbs/ton | IDEM | 0.2 | 499 | 0.2 | 499 | 0 |
| | | | | | | | | SO2 | | | | | | | | |
| | | | | | | | | NOx | | | | | | | | |
| | | | | | | | | VOC | | | | | | | | |
| | | | | | | | | CO | | | | | | | | |
| | | | | | | | | Pb | | | | | | | | |
| | | | | | | | | Be | | | | | | | | |
| | | | | | | | | Antimony | | | | | | | | |
| | | | | | | | | Arsenic | | | | | | | | |
| | | | | | | | | Barium | | | | | | | | |
| | | | | | | | | Zinc | | | | | | | | |
| | | | | | | | | Mercury | | | | | | | | |
| | | | | | | | | Cadmium | | | | | | | | |
| | | | | | | | | Chromium | | | | | | | | |
| | | | | | | | | Cobalt | | | | | | | | |
| | | | | | | | | Copper | | | | | | | | |
| | | | | | | | | Mn | | | | | | | | |
| | | | | | | | | Nickel | | | | | | | | |
| | | | | | | | | Selenium | | | | | | | | |
| | | | | | | | | Acrolein | | | | | | | | |
| | | | | | | | | Benzene | | | | | | | | |
| | | | | | | | | CHOH | | | | | | | | |
| | | | | | | | | Phenol | | | | | | | | |
| | | | | | | | | MDI | | | | | | | | |
| | | | | | | | | NH4 | | | | | | | | |
| | | | | | | | | H2SO4 | | | | | | | | |
| | | | | | | | | 2378TCDD | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| 014 | P92 Vehicular Traffic | Fugitive | 25,468 | 35,367 | 40,042 | 37,705 | 37,705 | PM | 0.02000 | lbs/VMT | IDEM | 0.4 | 754 | 0.4 | 754 | 0 |
| | | | | | | | | PM10 | 0.02000 | lbs/VMT | IDEM | 0.4 | 754 | 0.4 | 754 | 0 |
| | | | | | | | | PM2.5 | 0.00678 | lbs/VMT | IDEM | 0.1 | 256 | 0.1 | 256 | 0 |
| | | | | | | | | SO2 | | | | | | | | |
| | | | | | | | | NOx | | | | | | | | |
| | | | | | | | | VOC | | | | | | | | |
| | | | | | | | | CO | | | | | | | | |
| | | | | | | | | Pb | | | | | | | | |
| | | | | | | | | Be | | | | | | | | |
| | | | | | | | | Antimony | | | | | | | | |
| | | | | | | | | Arsenic | | | | | | | | |
| | | | | | | | | Barium | | | | | | | | |
| | | | | | | | | Zinc | | | | | | | | |

| Group ID | New Name | Stack | 2009 Thruput (tons) | 2010 Thruput (tons) | 2011 Thruput (tons) | Baseline 2010-11 Thruput (tons) | Future Thruput (tons) | Air Pollutant | Emission Factor | Factor Units | Factor Basis | Baseline Emission (tpy) | Baseline Emission (lbs/yr) | Future Emission (tpy) | Future Emission (lbs/yr) | Future Minus Baseline Emissions (tpy) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Mercury | | | | | | | | |
| | | | | | | | | Cadmium | | | | | | | | |
| | | | | | | | | Chromium | | | | | | | | |
| | | | | | | | | Cobalt | | | | | | | | |
| | | | | | | | | Copper | | | | | | | | |
| | | | | | | | | Mn | | | | | | | | |
| | | | | | | | | Nickel | | | | | | | | |
| | | | | | | | | Selenium | | | | | | | | |
| | | | | | | | | Acrolein | | | | | | | | |
| | | | | | | | | Benzene | | | | | | | | |
| | | | | | | | | CHOH | | | | | | | | |
| | | | | | | | | Phenol | | | | | | | | |
| | | | | | | | | MDI | | | | | | | | |
| | | | | | | | | NH4 | | | | | | | | |
| | | | | | | | | H2SO4 | | | | | | | | |
| | | | | | | | | 2378TCDD | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| ALL | FACILITY TOTAL | | | | | | | PM | | | | 62.6 | 125215 | 90.3 | 180639 | 0 |
| | | | | | | | | PM10 | | | | 62.6 | 125192 | 90.3 | 180639 | 0 |
| | | | | | | | | PM2.5 | | | | 62.1 | 124233 | 89.6 | 179215 | 0 |
| | | | | | | | | SO2 | | | | 58.1 | 116269 | 86.0 | 172076 | 0 |
| | | | | | | | | NOx | | | | 69.0 | 138098 | 102.361 | 204723 | 0 |
| | | | | | | | | VOC | | | | 233.8 | 467557 | 361.0 | 722048 | 0 |
| | | | | | | | | CO | | | | 1410.0 | 2819912 | 2078.2 | 4156419 | 0 |
| | | | | | | | | Pb | | | | 0.0192 | 38.3 | 0.0274 | 54.8 | 0 |
| | | | | | | | | Be | | | | 0.0005 | 1.0 | 0.0007 | 1.4 | 0 |
| | | | | | | | | Antimony | | | | 0.0336 | 67.1 | 0.0485 | 96.9 | |
| | | | | | | | | Arsenic | | | | 0.0007 | 1.4 | 0.0010 | 2.0 | |
| | | | | | | | | Barium | | | | 0.0050 | 9.9 | 0.0072 | 14.5 | |
| | | | | | | | | Zinc | | | | 0.2378 | 475.7 | 0.3520 | 704.0 | |
| | | | | | | | | Mercury | | | | 0.0000 | 0.015 | 0.0000 | 0.022 | |
| | | | | | | | | Cadmium | | | | 0.0004 | 0.7 | 0.0005 | 1.0 | |
| | | | | | | | | Chromium | | | | 0.0096 | 19.2 | 0.0138 | 27.7 | |
| | | | | | | | | Cobalt | | | | 0.0010 | 2.0 | 0.0015 | 2.9 | |
| | | | | | | | | Copper | | | | 0.0429 | 85.8 | 0.0619 | 123.9 | |
| | | | | | | | | Mn | | | | 0.0174 | 34.7 | 0.0251 | 50.1 | |
| | | | | | | | | Nickel | | | | 0.0073 | 14.6 | 0.0106 | 21.1 | |
| | | | | | | | | Selenium | | | | 0.0005 | 1.0 | 0.0007 | 1.5 | |
| | | | | | | | | Acrolein | | | | 0.7812 | 1562 | 1.1513 | 2303 | |
| | | | | | | | | Benzene | | | | 15.3103 | 30621 | 22.5640 | 45128 | |
| | | | | | | | | CHOH | | | | 1.6382 | 3276 | 2.3548 | 4710 | |
| | | | | | | | | Phenol | | | | 3.5154 | 7031 | 5.1807 | 10361 | |
| | | | | | | | | MDI | | | | 0.0003 | 1 | 0.0005 | 1 | |
| | | | | | | | | NH4 | | | | 0.2688 | 538 | 0.4027 | 805 | |
| | | | | | | | | H2SO4 | | | | 1.3372 | 2674 | 1.9798 | 3960 | |
| | | | | | | | | 2378TCDD | | | | 9.7E-08 | 0.0002 | 1.4E-07 | 0.0003 | |
| | | | | | | | | | | | | | | | | |
| ALL | FACILITY TOTAL (FUGITIVES ONLY) | | | | | | | PM | | | | 7.3 | 14545 | 10.2 | 20401 | 0 |
| | | | | | | | | PM10 | | | | 7.3 | 14545 | 10.2 | 20401 | 0 |
| | | | | | | | | PM2.5 | | | | 6.8 | 13585 | 9.5 | 18977 | 0 |

| Group ID | New Name | Stack | 2009 Thruput (tons) | 2010 Thruput (tons) | 2011 Thruput (tons) | Baseline 2010-11 Thruput (tons) | Future Thruput (tons) | Air Pollutant | Emission Factor | Factor Units | Factor Basis | Baseline Emission (tpy) | Baseline Emission (lbs/yr) | Future Emission (tpy) | Future Emission (lbs/yr) | Future Minus Baseline Emissions (tpy) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | SO2 | | | | 0.1 | 101 | 0.1 | 151 | 0 |
| | | | | | | | | NOx | | | | 8.4 | 16800 | 12.6 | 25172 | 0 |
| | | | | | | | | VOC | | | | 0.5 | 924 | 0.7 | 1384 | 0 |
| | | | | | | | | CO | | | | 7.1 | 14112 | 10.6 | 21144 | 0 |
| | | | | | | | | Pb | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | 0 |
| | | | | | | | | Be | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | 0 |
| | | | | | | | | Antimony | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | Arsenic | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | Barium | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | Zinc | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | Mercury | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | Cadmium | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | Chromium | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | Cobalt | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | Copper | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | Mn | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | Nickel | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | Selenium | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | Acrolein | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | Benzene | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | CHOH | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | Phenol | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | MDI | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | NH4 | | | | 0.2688 | 537.6 | 0.4027 | 805.5 | |
| | | | | | | | | H2SO4 | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | 2378TCDD | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | | | | | | | | | |
| ALL | FACILITY TOTAL (STACK ONLY) | | | | | | | PM | | | | 55.3 | 110671 | 80.1 | 160238 | 0 |
| | | | | | | | | PM10 | | | | 55.3 | 110648 | 80.1 | 160238 | 0 |
| | | | | | | | | PM2.5 | | | | 55.3 | 110648 | 80.1 | 160238 | 0 |
| | | | | | | | | SO2 | | | | 58.1 | 116168 | 86.0 | 171925 | 0 |
| | | | | | | | | NOx | | | | 60.6 | 121298 | 89.8 | 179551 | 0 |
| | | | | | | | | VOC | | | | 233.3 | 466633 | 360.3 | 720664 | 0 |
| | | | | | | | | CO | | | | 1402.9 | 2805800 | 2067.6 | 4135275 | 0 |
| | | | | | | | | Pb | | | | 0.0192 | 38.3 | 0.0274 | 54.8 | 0 |
| | | | | | | | | Be | | | | 0.0005 | 1.0 | 0.0007 | 1.4 | 0 |
| | | | | | | | | Antimony | | | | 0.0336 | 67.1 | 0.0485 | 96.9 | |
| | | | | | | | | Arsenic | | | | 0.0007 | 1.4 | 0.0010 | 2.0 | |
| | | | | | | | | Barium | | | | 0.0050 | 9.9 | 0.0072 | 14.5 | |
| | | | | | | | | Zinc | | | | 0.2378 | 475.7 | 0.3520 | 704.0 | |
| | | | | | | | | Mercury | | | | 0.0000 | 0.015 | 0.0000 | 0.022 | |
| | | | | | | | | Cadmium | | | | 0.0004 | 0.7 | 0.0005 | 1.0 | |
| | | | | | | | | Chromium | | | | 0.0096 | 19.2 | 0.0138 | 27.7 | |
| | | | | | | | | Cobalt | | | | 0.0010 | 2.0 | 0.0015 | 2.9 | |
| | | | | | | | | Copper | | | | 0.0429 | 85.8 | 0.0619 | 123.9 | |
| | | | | | | | | Mn | | | | 0.0174 | 34.7 | 0.0251 | 50.1 | |
| | | | | | | | | Nickel | | | | 0.0073 | 14.6 | 0.0106 | 21.1 | |
| | | | | | | | | Selenium | | | | 0.0005 | 1.0 | 0.0007 | 1.5 | |
| | | | | | | | | Acrolein | | | | 0.7812 | 1562.4 | 1.1513 | 2302.5 | |
| | | | | | | | | Benzene | | | | 15.3103 | 30620.7 | 22.5640 | 45128.1 | |

| Group ID | New Name | Stack | 2009 Thruput (tons) | 2010 Thruput (tons) | 2011 Thruput (tons) | Baseline 2010-11 Thruput (tons) | Future Thruput (tons) | Air Pollutant | Emission Factor | Factor Units | Factor Basis | Baseline Emission (tpy) | Baseline Emission (lbs/yr) | Future Emission (tpy) | Future Emission (lbs/yr) | Future Minus Baseline Emissions (tpy) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | CHOH | | | | 1.6382 | 3276.4 | 2.3548 | 4709.7 | |
| | | | | | | | | Phenol | | | | 3.5154 | 7030.8 | 5.1807 | 10361.4 | |
| | | | | | | | | MDI | | | | 0.0003 | 0.6 | 0.0005 | 0.9 | |
| | | | | | | | | NH4 | | | | 0.0000 | 0.0 | 0.0000 | 0.0 | |
| | | | | | | | | H2SO4 | | | | 1.3372 | 2674.4 | 1.9798 | 3959.5 | |
| | | | | | | | | 2378TCDD | | | | 9.7E-08 | 0.0002 | 1.4E-07 | 0.0003 | |

| Stack | Process | Air Pollutant | Basis for Estimate | Approved Capacity (tph) | 2004 S01 Test (lbs/hr) | 1999 S04 Test (lbs/hr) | Combined S01/S04 (lbs/hr) | Controlled Factor (lbs/ton) | Controlled Factor (ppm PM) |
|---|---|---|---|---|---|---|---|---|---|
| S01/S04 | P01-P24 Lines 1 to 4 Casting Lines | PM | 04 P5 Test | 80 | 9.1 | 0.24 | 9.34 | 0.11675 | |
| | | Pb | 04 P5 Test | 80 | 0.0025 | 0.0000361 | 0.0025361 | 0.00003 | 272 |
| | | Be | 04 P5 Test | 80 | 0.0001 | 0 | 0.0001 | 0.000001 | 11 |
| | | | | | | | | | |
| S07 | P05-P25 Lines 1 to 4 Cleaning/Grinding | PM | 09 P5 Test | 67 | 3.1 | | | 0.04627 | |
| | | Pb | 09 P5 Test | | 0.0017 | | | 2.54E-05 | 548 |
| | | Be | 09 P5 Test | | 0.000011 | | | 1.64E-07 | 4 |
| | | | | | | | | | |
| S09 | P33 Phase 1 & 2 Cupolas | PM | 04 P5 Test | | 3.1 | | | 0.021 | |
| | | Pb | 04 P5 Test | | 0.001 | | | 6.77E-06 | 323 |
| | | Be | 04 P5 Test | | 0.00003 | | | 2.03E-07 | 10 |
| | | NOx | 04 P5 Test | | | | | 0.24 | |
| | | CO | 04 P5 Test | | | | | 0.1 | |
| | | VOC | 05 P5 Test | | | | | 0.00066 | |
| | | | | | | | | | |
| S44 | P32 Melt Center Baghouse | PM | 02 P5 Test | 150 | 2.83 | | | 0.019 | |
| | | | | | | | | | |
| S08 | P40/P42 Core Sand Handling | PM | 0.003 gr/acf | 150 | 0.36 | | | 0.002 | |
| | | | | | | | | | |
| S15 | P60-P84 Lines 5 - 8 P/MC/S/PS/Sand Handling | PM | 04 P5 Test | 70 | 11 | | | 0.157 | |
| | | Pb | 04 P5 Test | 70 | 0.0034 | | | 4.86E-05 | 309 |
| | | Be | 04 P5 Test | 70 | 0.00011 | | | 1.57E-06 | 10 |
| | | | | | | | | | |
| S16 | P62-P77 Lines 5 - 8 CC/CG | PM | 09 P5 Test | 51 | 8.1 | | | 0.159 | |
| | | Pb | 09 P5 Test | 51 | 0.005 | | | 9.80E-05 | 617 |
| | | Be | 09 P5 Test | 51 | 0.00009 | | | 1.76E-06 | 11 |

# Mail Code 61-53

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|---|---|---|---|---|
| IDEM Staff | MIDENNEY 4/19/2012<br>ThyssenKrupp Waupaca, Inc. 123-3167900019 (final) | | | AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING |
| Name and address of Sender | ▶ | Indiana Department of Environmental Management<br>Office of Air Quality – Permits Branch<br>100 N. Senate<br>Indianapolis, IN 46204 | Type of Mail:<br>**CERTIFICATE OF MAILING ONLY** | |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | Bryant Esch ThyssenKrupp Waupaca, Inc. PO Box 249 Waupaca WI 54981 (Source CAATS) | | | | | | | | | |
| 2 | | Bruce E Tesch Plant Mgr ThyssenKrupp Waupaca, Inc. 9856 State Hwy 66 Tell City IN 47586 *(RO CAATS)* | | | | | | | | | |
| 3 | | Perry County Health Department Courthouse Annex Cannelton IN 47520-1251 *(Health Department)* | | | | | | | | | |
| 4 | | Tell City - City Council and Mayors Office PO Box 515 Tell City IN 47586 *(Local Official)* | | | | | | | | | |
| 5 | | Perry County Commissioners Court House, 2219 Payne Street Tell City IN 47586 *(Local Official)* | | | | | | | | | |
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