

Source Inspection Report

COMPANY: Rubicon Refractories, Inc.
5028 Columbia Avenue
Hammond, Indiana 46327
(219) 932-4152

*Violation(s) Observed (Y/N)?	
State	No
Local	No

SOURCE ID NUMBER: N/A

INSPECTION DATE: June 30, 2016

SOURCE CLASSIFICATION: Local

LEVEL: Annual

OPERATION PERMIT TYPE: Local

TYPE: 2

OPERATION PERMIT NO(s): 03723-03728

ISSUE DATE(s): February 4, 2016

INSPECTOR: Michael Zabrecky

PERMIT REVISION DATE: N/A

REPORT WRITTEN BY: Michael Zabrecky

FACILITIES INSPECTED: Entire Plant

PERSON(s) INTERVIEWED: Paul Lapradd, Plant Manager

INSPECTION OBJECTIVE(s):

To perform an unannounced inspection to evaluate Rubicon Refractories, Inc.'s compliance with applicable air pollution regulations specified in their local operation permits.

SUMMARY OF INSPECTION:

On June 30, 2016, an Annual Inspection was conducted at Rubicon Refractories, Inc. This facility holds six (6) local operation permits: one for a Precast Refractory Shapes Curing Oven "A", one for a Precast Refractory Shapes Curing Oven "B", one for a Portable Curing Oven (Oven #3), one for a Raw Materials Mixing Operation, one for two (2) Torpedo Oil-Fired Heaters, and one for a Welding/Cutting Operation.

The only permitted process operating at the time of inspection was the Welding/Cutting Operation.

No violations or excessive emissions observed.

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Rubicon Refractories, Inc. - 6/30/2016

Plant ID: N/A

ENTRY INTERVIEW:

Upon entry, I met with Paul LaPradd, Plant Manager for Rubicon Refractories, Inc. I informed him that this is an Annual Inspection and that I wanted to inspect the locally permitted items.

INSPECTION OBSERVATION(S)

1. Process Equipment: **Precast Refractory Shapes Curing Oven "A"**
2. Process Description:
The material from the mixing operation is poured into steel refractory shapes and then dried in this curing/drying oven. The maximum design rate of refractory shapes dried is 75,000 lbs per 65 hours (1,154 lbs/hr). The curing/drying oven has a maximum design capacity of 4.5 MMBtu/hr heat input, natural gas-fired only.
3. Pollutants Emitted:
Total suspended particulates (TSP), volatile organic compounds (VOC), sulfur dioxide (SO₂), nitrogen oxides (NO_x), and carbon monoxide (CO)
4. Control Equipment:
No control equipment is required.
5. Applicable Rules:
Provisions of Hammond Ordinance #7102 which incorporates by reference those standards found in 326 IAC and Hammond Ordinance #3522 (as Amended)
6. Emission Limitations:

TSP	= 0.150 lbs/hr	= 0.655 Tons Per Year (TPY)
VOC	= 0.602 lbs/hr	= 2.636 TPY
SO ₂	= 0.003 lbs/hr	= 0.012 TPY
NO _x	= 0.542 lbs/hr	= 2.375 TPY
CO	= 0.378 lbs/hr	= 1.656 TPY
7. Other Permit Requirements:
See the General Operation Permit Conditions for 2016.
8. Observations:
The oven was not in operation. No modifications were observed.
9. Records Review:
No records review is required.
10. Compliance Status:
No violations observed or determined during the plant inspection.

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Plant ID: N/A

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1. Process Equipment: Precast Refractory Shapes Curing Oven "B"
 2. Process Description:

The material from the mixing operation is poured into steel refractory shapes and then dried in this curing oven. The maximum design rate of refractory shapes dried is 60,000 lbs per 65 hours (923 lbs/hr). The curing/drying oven has a maximum design capacity of 1.2 MMBtu/hr heat input, natural gas-fired only.
 3. Pollutants Emitted:

Total suspended particulates (TSP), volatile organic compounds (VOC), sulfur dioxide (SO₂), nitrogen oxides (NOx), and carbon monoxide (CO)
 4. Control Equipment:

There is no control equipment.
 5. Applicable Rules:

Provisions of Hammond Ordinance #7102 which incorporates by reference those standards found in 326 IAC and Hammond Ordinance #3522 (as Amended)
 6. Emission Limitations:

TSP	= 0.101 lbs/hr	= 0.444 Tons Per Year (TSP)
VOC	= 0.468 lbs/hr	= 2.050 TPY
SO ₂	= 0.001 lbs/hr	= 0.003 TPY
NOx	= 0.194 lbs/hr	= 0.849 TPY
CO	= 0.101 lbs/hr	= 0.442 TPY
 7. Other Permit Requirements:

See the General Operation Permit Conditions for 2016.
 8. Observations:

The oven was not in operation. No modifications were observed.
 9. Records Review:

No record review is required.
 10. Compliance Status:

No violations observed or determined during the plant inspection.
 1. Process Equipment: Raw Materials Mixing Operation

Mixer #1
Mixer #2
Mixer #3
Two (2) FARR cartridge pulse jet dust collectors
 2. Process Description:

This operation consists of mixing cement, aggregate, and water in either mixers #1 and #2 or #3. The maximum design rate of mixers #1 and #2 combined is 6,600 lbs/hr. Particulate emissions are controlled

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by a FARR cartridge pulse jet collector rated at 99.9% control efficiency. The maximum design rate of mixer #3 is 10,000 lbs/hr. Particulate emissions are controlled by a FARR cartridge pulse jet collector rated at 99.9% control efficiency.

3. Pollutants Emitted:
Particulate matter (PM)
4. Control Equipment:
Two (2) FARR cartridge pulse jet dust collectors.
5. Applicable Rules:
Provisions of Hammond Ordinance #7102 which incorporates by reference those standards found in 326 IAC and Hammond Ordinance #3522 (as Amended)
6. Emission Limitations:
PM = 0.0003 lbs/hr = 0.0015 Tons Per Year
7. Other Permit Requirements:
See the General Operation Permit Conditions for 2016.
8. Observations:
None of the units were in operation. No modifications were observed.
9. Records Review:
No records review is required.
10. Compliance Status:
No violations observed or determined during the plant inspection.
1. Process Equipment: Portable Curing Oven #3
2. Process Description:
This Portable Curing Oven heat cures castable refractory shapes in eighty hour batches with an average loading of 280 lbs (0.14 tons) per operating hour. The curing oven has a maximum heat input rate of 4 MMBtu/hr and shall burn natural gas only.
3. Pollutants Emitted:
Particulate emissions (PM), sulfur dioxide (SO_x), Nitrogen oxides (NO_x), volatile organic compounds (VOC), and carbon monoxide (CO)
4. Control Equipment:
There is no control equipment.
5. Applicable Rules:
Provisions of Hammond Ordinance #7102 which incorporates by reference those standards found in 326 IAC and Hammond Ordinance #3522 (as Amended)

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6. Emission Limitations:

PM	= 0.058 lbs/hr	= 0.256 Tons Per Year (TPY)
SOx	= 0.002 lbs/hr	= 0.011 TPY
NOx	= 0.422 lbs/hr	= 1.850 TPY
VOC	= 0.162 lbs/hr	= 0.710 TPY
CO	= 0.336 lbs/hr	= 1.472 TPY

7. Other Permit Requirements:

See the General Operation Permit Conditions for 2016.

8. Observations:

The oven was not in operation. No modifications were observed.

9. Records Review:

No records review is required.

10. Compliance Status:

No violations observed or determined during the plant inspection.

1. Process Equipment: Two (2) Torpedo Oil-Fired Heaters

2. Process Description:

These two (2) "Torpedo" Oil-Fired Heaters have a combined maximum heat input rate of 720,000 Btu/hr (5 gph - #2 Fuel Oil). They are used for space heating.

3. Pollutants Emitted:

Particulate matter (PM), sulfur dioxide (SOx), nitrogen oxides (NOx), volatile organic compounds (VOC), and carbon monoxide (CO)

4. Control Equipment:

There is no control equipment.

5. Applicable Rules:

Provisions of Hammond Ordinance #7102 which incorporates by reference those standards found in 326 IAC and Hammond Ordinance #3522 (as Amended)

6. Emission Limitations:

PM	= 0.010 lbs/hr	= 0.044 Tons Per Year (TPY)
SOx	= 0.718 lbs/hr	= 3.145 TPY
NOx	= 0.100 lbs/hr	= 0.438 TPY
VOC	= 0.001 lbs/hr	= 0.004 TPY
CO	= 0.025 lbs/hr	= 0.110 TPY

7. Other Permit Requirements:

See the General Operation Permit Conditions for 2016.

8. Observations:

Both heaters were not in operation. No modifications were observed.

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9. Records Review:
No records review is required.
 10. Compliance Status:
No violations observed or determined during the plant inspection.
 1. Process Equipment: Welding/Cutting Operation
Six (6) welding stations
Seven (7) Oxyacetylene cutting stations
One (1) plasma cutting station, and one (1) handheld plasma machine
 2. Process Description:
The welding/cutting operation includes six (6) welding stations, each with a maximum electrode consumption of 0.511 lbs/hr; seven (7) oxyacetylene cutting stations, each with an average metal thickness cut of 0.75 inches at a maximum cutting rate of 24 inches per minute; and one (1) plasma cutting station and one (1) handheld plasma machine, each with an average metal thickness cut of 0.375 inches at a maximum cutting rate of 150 inches per minute.
 3. Pollutants Emitted:
Particulate matter/particulate matter_{10 microns} (PM/PM₁₀)
 4. Control Equipment:
There is no control equipment.
 5. Applicable Rules:
Provisions of Hammond Ordinance #7102 which incorporates by reference those standards found in 326 IAC and Hammond Ordinance #3522 (as Amended)
 6. Emission Limitations:
PM/PM₁₀ = 1.36 lbs/hr = 1.42 Tons Per Year
 7. Other Permit Requirements:
See the General Operation Permit Conditions for 2016.
 8. Observations:
Five (5) welding stations were in operation. No modifications or excessive visible emissions observed.
 9. Records Review:
No record review is required.
 10. Compliance Status:
No violations observed or determined during the plant inspection.

CONCLUSION(s)/RECOMMENDATION(s):

During this inspection the entire plant was inspected. No problems, visible

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emissions, or new sources of air emissions were observed.