

National Pollutant Release Inventory (NPRI) and



Canada

Report Submission Management

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Report Preview

Report Details

Report Year

2015

Report Type:

NPRI,ON MOE TRA

Report Status:

Submitted

Modified Date/Time:

31/05/2016 1:23 PM

Company and Facility Details

Company Name:

Forterra Brick

Business Number:

881819189

Mailing Address:

Delivery Mode: GeneralDelivery
Address Line 1: 5155 Dundas Street
City, Province/Territory, Postal Code: Burlington Ontario L7R3Y2
Country: Canada

Facility Name:

Forterra Brick - Aldershot

NAICS Code:

327990

NPRI ID:

7005

Physical Address:

Address Line 1: 0 - 1570 Yorkton Court
City, Province/Territory, Postal Code: Aldershot Ontario L7P5B7
Country: Canada
UTM Zone: 17
UTM Easting: 593084
UTM Northing: 4797567

Parent Companies

Company Name:

Hanson Brick America

Business Number:

881819189

Mailing Address:

Delivery Mode: GeneralDelivery
Address Line 1: 555 - 15720 Delaney Drive
City, Province/Territory, Postal Code: Charlotte NorthCarolina 28277
Country: UnitedStates

Contacts Details

Contact Type

Technical Contact, Certifying Official, Person who prepared the report, Person who coordinated the preparation of the Toxics Reduction Plan

Name:

Jack Hewitt

Position:

Projects and Environmental Manager

Telephone:

9053353401

Fax:

9053320571

Email:

jack.hewitt@forterrabp.com

Contact Type

Contractor Contact

Name:

Erik Martinez

Position:

Environmental Consultant

Telephone:

5198840510

Email:

erik.martinez@ghd.com

Independent contractor/consultant company name:

GHD Limited

Contact Type

Highest Ranking Employee

Name:

Shane Egan

Position:

VP Production

Telephone:

9056337384

Email:

shane.egan@forterrabp.com

Mailing Address:

Address Line 1: 5155 Dundas Street
City, Province/Territory, Postal Code: Burlington Ontario L7R 3Y2
Country: Canada

General Information

Number of employees:

80

Activities for Which the 20,000-Hour Employee Threshold Does Not Apply:

None of the above

Activities Relevant to Reporting Dioxins, Furans and Hexacholorobenzene:

None of the above

Activities Relevant to Reporting of Polycyclic Aromatic Hydrocarbons (PAHs):

Wood preservation using creosote: No

Is this the first time the facility is reporting to the NPRI (under current or past ownership):

No

Is the facility controlled by another Canadian company or companies:

No

Did the facility report under other environmental regulations or permits:

No

Is the facility required to report one or more NPRI Part 4 substances (Criteria Air Contaminants):

Yes

Was the facility shut down for more than one week during the year:

Yes

Operating Schedule - Days of the Week:

Mon, Tue, Wed, Thu, Fri, Sat, Sun

Usual Number of Operating Hours per day:

24

Usual Daily Start Time (24h) (hh:mm):

00:00

Shutdown Periods:

From 2015-03-14 To 2015-05-18

Substance List

| CAS RN | Substance Name | Releases | Releases (Speciated VOCs) | Disposals | Recycling | Unit |
|------------|---|----------|---------------------------|-----------|-----------|--------|
| 7789-75-5 | Calcium fluoride | N/A | N/A | 82.7600 | N/A | tonnes |
| 630-08-0 | Carbon monoxide | 43.8600 | N/A | N/A | N/A | tonnes |
| NA - 09 | Manganese (and its compounds) | 0.0010 | N/A | N/A | N/A | tonnes |
| 11104-93-1 | Nitrogen oxides (expressed as NO2) | 24.2700 | N/A | N/A | N/A | tonnes |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | 21.4650 | N/A | N/A | N/A | tonnes |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | 2.3610 | N/A | N/A | N/A | tonnes |
| NA - M08 | Total Particulate Matter | 25.2500 | N/A | N/A | N/A | tonnes |

Applicable Programs

| CAS RN | Substance Name | NPRI | ON MOE TRA | ON MOE Reg 127/01 | First report for this substance to the ON MOE TRA |
|------------|---|------|------------|-------------------|---|
| 7789-75-5 | Calcium fluoride | Yes | Yes | | No |
| 630-08-0 | Carbon monoxide | Yes | Yes | | No |
| NA - 09 | Manganese (and its compounds) | No | No | | No |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | Yes | Yes | | No |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | Yes | Yes | | No |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | Yes | Yes | | No |
| NA - M08 | Total Particulate Matter | Yes | Yes | | No |

TRA Exit Record

| CAS RN | Substance Name | Circumstance(s) that apply | Describe the circumstances that lead to the criteria no longer being met | Describe the information and any quantifications relied upon for making the determination |
|---------|-------------------------------|--|--|---|
| NA - 09 | Manganese (and its compounds) | The substance did not meet the criteria to provide information to NPRI | Decreased use of manganese | Material tracking and composition of manganese in the product |

General Information about the Substance - Releases and Transfers of the Substance

| CAS RN | Substance Name | Was the substance released on-site | The substance will be reported as the sum of releases to all media (total of 1 tonne or less) | 1 tonne or more of a Part 5 Substance (Speciated VOC) was released to air |
|-----------|-------------------------------|------------------------------------|---|---|
| 7789-75-5 | Calcium fluoride | No | No | No |
| NA - 09 | Manganese (and its compounds) | Yes | Yes | No |

General Information about the Substance - Disposals and Off-site Transfers for Recycling

| CAS RN | Substance Name | Was the substance disposed of (on-site or off-site), or transferred for treatment prior to final disposal | Is the facility required to report on disposals of tailings and waste rock for the selected reporting period | Was the substance transferred off-site for recycling |
|-----------|-------------------------------|---|--|--|
| 7789-75-5 | Calcium fluoride | Yes | No | No |
| NA - 09 | Manganese (and its compounds) | No | No | No |

General Information about the Substance - Nature of Activities

| CAS RN | Substance Name | Manufacture the Substance | Process the Substance | Otherwise Use of the Substance |
|-----------|-------------------------------|---------------------------|----------------------------|--------------------------------|
| 7789-75-5 | Calcium fluoride | As a by-product | | |
| NA - 09 | Manganese (and its compounds) | | As a formulation component | |

Substances added to/removed from the report

| CAS RN | Substance Name | Added/Removed | Comment |
|-----------|-------------------|---------------|---------------------------------|
| 7647-01-0 | Hydrochloric acid | Removed | Did not meet reporting criteria |

TRA Quantifications

| CAS RN | Substance Name | Use, Creation, Contained in Product | Quantity | Use ranges for public reporting |
|------------|---|-------------------------------------|---------------|---------------------------------|
| 7789-75-5 | Calcium fluoride | Use | 0 tonnes | Yes |
| 7789-75-5 | Calcium fluoride | Creation | 82.76 tonnes | Yes |
| 7789-75-5 | Calcium fluoride | Contained in Product | 0 tonnes | Yes |
| 630-08-0 | Carbon monoxide | Use | 0 tonnes | Yes |
| 630-08-0 | Carbon monoxide | Creation | 43.86 tonnes | Yes |
| 630-08-0 | Carbon monoxide | Contained in Product | | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | Use | 0 tonnes | Yes |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | Creation | 24.27 tonnes | Yes |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | Contained in Product | | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | Use | 0 tonnes | Yes |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | Creation | 21.465 tonnes | Yes |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | Contained in Product | | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | Use | 0 tonnes | Yes |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | Creation | 2.361 tonnes | Yes |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | Contained in Product | | |
| NA - M08 | Total Particulate Matter | Use | 0 tonnes | Yes |

| CAS RN | Substance Name | Use, Creation, Contained in Product | Quantity | Use ranges for public reporting |
|----------|--------------------------|-------------------------------------|--------------|---------------------------------|
| NA - M08 | Total Particulate Matter | Creation | 25.25 tonnes | Yes |
| NA - M08 | Total Particulate Matter | Contained in Product | | |

TRA Quantifications - Others

| CAS RN | Substance Name | Change in Method of Quantification | Reasons for Change | Description of how the change impact tracking and quantification of the substance | Description of how an incident(s) affected quantifications | Significant Process Change |
|------------|---|------------------------------------|--------------------|---|--|----------------------------|
| 7789-75-5 | Calcium fluoride | | | | | No |
| 630-08-0 | Carbon monoxide | | | | | No |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | | | | | No |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | | | | | No |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | | | | | No |
| NA - M08 | Total Particulate Matter | | | | | No |

On-site Releases - Releases to air

| CAS RN | Substance Name | Category | Basis of Estimate | Detail Code | Quantity |
|------------|---|-------------------------|-------------------------------------|-------------|---------------|
| 630-08-0 | Carbon monoxide | Stack or Point Releases | E1 - Site Specific Emission Factors | | 43.86 tonnes |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | Stack or Point Releases | E1 - Site Specific Emission Factors | | 24.27 tonnes |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | Stack or Point Releases | E1 - Site Specific Emission Factors | | 21.465 tonnes |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | Stack or Point Releases | E1 - Site Specific Emission Factors | | 2.361 tonnes |
| NA - M08 | Total Particulate Matter | Stack or Point Releases | E1 - Site Specific Emission Factors | | 25.25 tonnes |

On-site Releases - Releases to air - Total

| CAS RN | Substance Name | Total - Releases to Air |
|------------|---|-------------------------|
| 630-08-0 | Carbon monoxide | 43.86 tonnes |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | 24.27 tonnes |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | 21.465 tonnes |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | 2.361 tonnes |
| NA - M08 | Total Particulate Matter | 25.25 tonnes |

Total Quantity Released (All Media)

| CAS RN | Substance Name | Category | Basis of Estimate | Detail Code | Quantity |
|---------|-------------------------------|-------------------------|-------------------|-------------|---------------|
| NA - 09 | Manganese (and its compounds) | Total Quantity Released | C - Mass Balance | | 0.0010 tonnes |

On-site Releases - Total

On-site Releases - Monthly Breakdown of Annual Releases

| CAS RN | Substance Name | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
|------------|---|-------|------|------|-----|-----|------|-------|-------|------|-------|-----|-------|
| 630-08-0 | Carbon monoxide | 10.23 | 9.24 | 5.61 | 0 | 4.3 | 9.9 | 10.23 | 10.23 | 9.9 | 10.23 | 9.9 | 10.23 |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | 10.23 | 9.24 | 5.61 | 0 | 4.3 | 9.9 | 10.23 | 10.23 | 9.9 | 10.23 | 9.9 | 10.23 |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | 10.23 | 9.24 | 5.61 | 0 | 4.3 | 9.9 | 10.23 | 10.23 | 9.9 | 10.23 | 9.9 | 10.23 |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | 10.23 | 9.24 | 5.61 | 0 | 4.3 | 9.9 | 10.23 | 10.23 | 9.9 | 10.23 | 9.9 | 10.23 |
| NA - M08 | Total Particulate Matter | 10.23 | 9.24 | 5.61 | 0 | 4.3 | 9.9 | 10.23 | 10.23 | 9.9 | 10.23 | 9.9 | 10.23 |

On-site Releases - Reasons for Changes in Quantities Released from Previous Year

| CAS RN | Substance Name | Reasons for Changes in Quantities from Previous Year | Comments |
|------------|---|--|----------|
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | No significant change (i.e. < 10%) or no change | |

| CAS RN | Substance Name | Reasons for Changes in Quantities from Previous Year | | | | Comments |
|-----------|---|--|--|--|--|----------|
| 630-08-0 | Carbon monoxide | No significant change (i.e. < 10%) or no change | | | | |
| 7789-75-5 | Calcium fluoride | No significant change (i.e. < 10%) or no change | | | | |
| NA - 09 | Manganese (and its compounds) | Changes in production levels | | | | |
| NA - M08 | Total Particulate Matter | No significant change (i.e. < 10%) or no change | | | | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | No significant change (i.e. < 10%) or no change | | | | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | No significant change (i.e. < 10%) or no change | | | | |

Disposals - Off-site Disposal (excluding Tailings and Waste Rock)

| CAS RN | Substance Name | Category | Basis of Estimate | Detail Code | Quantity |
|-----------|------------------|----------|-------------------------------------|-------------|--------------|
| 7789-75-5 | Calcium fluoride | Landfill | E1 - Site Specific Emission Factors | | 82.76 tonnes |

Disposals - Off-site Disposal (excluding Tailings and Waste Rock) - Total

| CAS RN | Substance Name | Total - Off-site Disposals |
|-----------|------------------|----------------------------|
| 7789-75-5 | Calcium fluoride | 82.76 tonnes |

Disposals - Off-site Disposal (excluding Tailings and Waste Rock) - By Facilities

| CAS RN | Substance Name | Category | Off-site Name | Off-site Address | Quantity |
|-----------|------------------|----------|--------------------------------------|--|--------------|
| 7789-75-5 | Calcium fluoride | Landfill | Capital Environmental Resources Ltd. | 306 Lake Ave. N., Hamilton, ON, Canada | 82.76 tonnes |

Disposals - Total Quantity Disposed (All Media)

| CAS RN | Substance Name | Total Quantity Disposed (All Media) |
|-----------|------------------|-------------------------------------|
| 7789-75-5 | Calcium fluoride | 82.76 tonnes |

Disposals - Reasons and Comments

| CAS RN | Substance Name | Reasons Why Substance Was Disposed | Reasons for Changes in Quantities from Previous Year | Comments |
|-----------|-------------------------------|------------------------------------|--|----------|
| 7789-75-5 | Calcium fluoride | Pollution abatement residues | No significant change (i.e. < 10%) or no change | |
| NA - 09 | Manganese (and its compounds) | | No significant change (i.e. < 10%) or no change | |

Recycling - Reasons and Comments

| CAS RN | Substance Name | Reasons Why Substance Was Recycled | Reasons for Changes in Quantities Recycled from Previous Year | Comments |
|-----------|-------------------------------|------------------------------------|---|----------|
| 7789-75-5 | Calcium fluoride | | No significant change (i.e. < 10%) or no change | |
| NA - 09 | Manganese (and its compounds) | | No significant change (i.e. < 10%) or no change | |

Comparison Report - Enters, Creation, Contained in Product

| CAS RN | Substance Name | Is Breakdown | Category | Quantity | Last Reported Quantity | Reporting Period of Last Reported Quantity | Change | % Change |
|------------|---|--------------|---------------------------|---------------|------------------------|--|--------|----------|
| 7789-75-5 | Calcium fluoride | No | Enters the facility (Use) | 0 tonnes | 0 tonnes | 2014 | 0 | |
| 7789-75-5 | Calcium fluoride | No | Creation | 82.76 tonnes | 80.58 tonnes | 2014 | 2.18 | 2.71 |
| 7789-75-5 | Calcium fluoride | No | Contained in Product | 0 tonnes | 0 tonnes | 2014 | 0 | |
| 630-08-0 | Carbon monoxide | No | Enters the facility (Use) | 0 tonnes | 0 tonnes | 2014 | 0 | |
| 630-08-0 | Carbon monoxide | No | Creation | 43.86 tonnes | 42.71 tonnes | 2014 | 1.15 | 2.69 |
| 11104-93-1 | Nitrogen oxides (expressed as NO2) | No | Enters the facility (Use) | 0 tonnes | 0 tonnes | 2014 | 0 | |
| 11104-93-1 | Nitrogen oxides (expressed as NO2) | No | Creation | 24.27 tonnes | 23.63 tonnes | 2014 | 0.64 | 2.71 |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | No | Enters the facility (Use) | 0 tonnes | 0 tonnes | 2014 | 0 | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | No | Creation | 21.465 tonnes | 20.900 tonnes | 2014 | 0.565 | 2.70 |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | No | Enters the facility (Use) | 0 tonnes | 0 tonnes | 2014 | 0 | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | No | Creation | 2.361 tonnes | 2.299 tonnes | 2014 | 0.062 | 2.70 |
| NA - M08 | Total Particulate Matter | No | Enters the facility (Use) | 0 tonnes | 0 tonnes | 2014 | 0 | |
| NA - M08 | Total Particulate Matter | No | Creation | 25.25 tonnes | 24.59 tonnes | 2014 | 0.66 | 2.68 |

Comparison Report - Enters, Creation, Contained in Product : Reason(s) for Change

| CAS RN | Substance Name | Reason(s) for Change | | | Other Reason |
|------------|---|--|--|--|--------------|
| 7789-75-5 | Calcium fluoride | No reasons - quantities approximately the same | | | |
| 630-08-0 | Carbon monoxide | No reasons - quantities approximately the same | | | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | No reasons - quantities approximately the same | | | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | No reasons - quantities approximately the same | | | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | No reasons - quantities approximately the same | | | |
| NA - M08 | Total Particulate Matter | No reasons - quantities approximately the same | | | |

Comparison Report - On-site Releases

| CAS RN | Substance Name | Is Breakdown | Category | Quantity | Last Reported Quantity | Reporting Period of Last Reported Quantity | Change | % Change |
|------------|---|--------------|-----------------------------|---------------|------------------------|--|--------|----------|
| 630-08-0 | Carbon monoxide | No | Total Releases to Air | 43.86 tonnes | 42.71 tonnes | 2014 | 1.15 | 2.69 |
| 630-08-0 | Carbon monoxide | No | Total Releases to Water | 0 tonnes | 0 tonnes | 2014 | 0 | |
| 630-08-0 | Carbon monoxide | No | Total Releases to Land | 0 tonnes | 0 tonnes | 2014 | 0 | |
| 630-08-0 | Carbon monoxide | No | Total Releases to All Media | 0 tonnes | 0 tonnes | 2014 | 0 | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | No | Total Releases to Air | 24.27 tonnes | 23.63 tonnes | 2014 | 0.64 | 2.71 |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | No | Total Releases to Water | 0 tonnes | 0 tonnes | 2014 | 0 | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | No | Total Releases to Land | 0 tonnes | 0 tonnes | 2014 | 0 | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | No | Total Releases to All Media | 0 tonnes | 0 tonnes | 2014 | 0 | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | No | Total Releases to Air | 21.465 tonnes | 20.900 tonnes | 2014 | 0.565 | 2.70 |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | No | Total Releases to Water | 0 tonnes | 0 tonnes | 2014 | 0 | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | No | Total Releases to Land | 0 tonnes | 0 tonnes | 2014 | 0 | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | No | Total Releases to All Media | 0 tonnes | 0 tonnes | 2014 | 0 | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | No | Total Releases to Air | 2.361 tonnes | 2.299 tonnes | 2014 | 0.062 | 2.70 |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | No | Total Releases to Water | 0 tonnes | 0 tonnes | 2014 | 0 | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | No | Total Releases to Land | 0 tonnes | 0 tonnes | 2014 | 0 | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | No | Total Releases to All Media | 0 tonnes | 0 tonnes | 2014 | 0 | |
| NA - M08 | Total Particulate Matter | No | Total Releases to Air | 25.25 tonnes | 24.59 tonnes | 2014 | 0.66 | 2.68 |
| NA - M08 | Total Particulate Matter | No | Total Releases to Water | 0 tonnes | 0 tonnes | 2014 | 0 | |
| NA - M08 | Total Particulate Matter | No | Total Releases to Land | 0 tonnes | 0 tonnes | 2014 | 0 | |
| NA - M08 | Total Particulate Matter | No | Total Releases to All Media | 0 tonnes | 0 tonnes | 2014 | 0 | |

Comparison Report - On-site Releases - Reason(s) for Change

| CAS RN | Substance Name | Reason(s) for Change | | | Other Reason |
|------------|---|--|--|--|--------------|
| 630-08-0 | Carbon monoxide | No reasons - quantities approximately the same | | | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | No reasons - quantities approximately the same | | | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | No reasons - quantities approximately the same | | | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | No reasons - quantities approximately the same | | | |
| NA - M08 | Total Particulate Matter | No reasons - quantities approximately the same | | | |

Comparison Report - Disposals On-site, Off-site and Tailings and Waste Rock

| CAS RN | Substance Name | Is Breakdown | Category | Quantity | Last Reported Quantity | Reporting Period of Last Reported Quantity | Change | % Change |
|-----------|------------------|--------------|--------------------------|--------------|------------------------|--|--------|----------|
| 7789-75-5 | Calcium fluoride | No | Total On-site Disposals | 0 tonnes | 0 tonnes | 2014 | 0 | |
| 7789-75-5 | Calcium fluoride | No | Total Off-site Disposals | 82.76 tonnes | 80.58 tonnes | 2014 | 2.18 | 2.71 |

| CAS RN | Substance Name | Is Breakdown | Category | Quantity | Last Reported Quantity | Reporting Period of Last Reported Quantity | Change | % Change |
|-----------|------------------|--------------|---|----------|------------------------|--|--------|----------|
| 7789-75-5 | Calcium fluoride | No | Total Off-site transfer for treatment Prior to Final Disposal | 0 tonnes | 0 tonnes | 2014 | 0 | |
| 7789-75-5 | Calcium fluoride | No | Total On-site Disposal of Tailings and Waste Rock | 0 tonnes | 0 tonnes | 2014 | 0 | |
| 7789-75-5 | Calcium fluoride | No | Total Off-site Disposal of Tailings and Waste Rock | 0 tonnes | 0 tonnes | 2014 | 0 | |

Comparison Report - Disposals On-site, Off-site and Tailings and Waste Rock - Reason(s) for Change

| CAS RN | Substance Name | Reason(s) for Change | Other Reason |
|-----------|------------------|--|--------------|
| 7789-75-5 | Calcium fluoride | No reasons - quantities approximately the same | |

Pollution Prevention

Does the facility have a documented pollution prevention plan?

No

Did the facility complete any pollution prevention activities in the current NPRI reporting year

No

Progress on TRA Plan - Objectives

| CAS RN | Substance Name | Objectives |
|------------|---|---|
| 7789-75-5 | Calcium fluoride | Hanson Brick Ltd. will continue to explore options that reduce its emissions of calcium fluoride. |
| 630-08-0 | Carbon monoxide | Hanson Brick Ltd. Produces fired clay brick primarily for the Greater Toronto Area using locally sourced raw materials. Carbon Monoxide is created in the manufacturing process. Hanson Brick Ltd. will continue to control the emissions on a unit production basis and examine means to reduce emissions in the future. |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | Hanson Brick Ltd. Produces fired clay brick primarily for the Greater Toronto Area using locally sourced raw materials. Nitrous Oxides are created in the manufacturing process. Hanson Brick Ltd. will continue to control the emissions on a unit production basis and examine means to reduce emissions in the future. |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | Hanson Brick Ltd. will continue to operate the plant in full compliance with Environmental Standards and Certificate of Approval (C of A) 8-3729-98-996. We will reduce the emissions of PM10 by more frequent and thorough inspection of our dust collectors and by installation of an electronic particulate monitor in one of the dust collectors. |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | Hanson Brick Ltd. will continue to operate the plant in full compliance with Environmental Standards and Certificate of Approval (C of A) 8-3729-98-996. We will reduce the emissions of PM2.5 by more frequent and thorough inspection of our dust collectors and by installation of an electronic particulate monitor in one of the dust collectors. |
| NA - M08 | Total Particulate Matter | Hanson Brick Ltd. will continue to operate the plant in full compliance with Environmental Standards and Certificate of Approval (C of A) 8-3729-98-996. We will reduce the emissions of particulate matter by more frequent and thorough inspection of our dust collectors and by installation of an electronic particulate monitor in one of the dust collectors. |

Progress on TRA Plan - Use Targets

| CAS RN | Substance Name | Quantity | Years | Description of Target |
|------------|---|--------------------|--------------------|-----------------------|
| 7789-75-5 | Calcium fluoride | No quantity target | No timeline target | |
| 630-08-0 | Carbon monoxide | No quantity target | No timeline target | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | No quantity target | No timeline target | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | No quantity target | No timeline target | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | No quantity target | No timeline target | |
| NA - M08 | Total Particulate Matter | No quantity target | No timeline target | |

Progress on TRA Plan - Creation Targets

| CAS RN | Substance Name | Quantity | Years | Description of Target |
|------------|---|--------------------|--------------------|---|
| 7789-75-5 | Calcium fluoride | No quantity target | No timeline target | Hanson Brick will continue the monitoring of the facility as required in our operations permits and will examine opportunities to reduce emissions of calcium fluoride. |
| 630-08-0 | Carbon monoxide | No quantity target | No timeline target | Hanson Brick Ltd. will explore opportunities to reduce CO. |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | No quantity target | No timeline target | Hanson Brick Ltd. will explore opportunities to reduce NO _x . |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | 39.02 kg | 2 | Hanson Brick will improve the capture of all PM10 by increased inspection and implementation of continuous on-line monitoring of a dust collector prior to the year end of 2015. |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | 4.29 kg | 2 | Hanson Brick will improve the capture of all PM2.5 by increased inspection and implementation of continuous on-line monitoring of a dust collector prior to the year end of 2015 |
| NA - M08 | Total Particulate Matter | 45.9 kg | 2 | Hanson Brick will improve the capture of all particulate matter by increased inspection and implementation of continuous on-line monitoring of a dust collector prior to the year end of 2015 |

Progress on TRA Plan - Toxic Reduction Options Implemented

| CAS RN | Substance Name | Activity | Steps that were taken in the reporting period to implement the toxic reduction option | Public summary of the description of the steps | Comparison of the steps that were described in the plan for implementation with the actual steps taken during the reporting period | Public summary of the comparison of the steps |
|-----------|---|---|---|--|--|---|
| 7789-75-5 | Calcium fluoride | Substituted materials | No steps taken during 2015 | No steps taken during 2015 | No steps taken during 2015 | No steps taken during 2015 |
| 7789-75-5 | Calcium fluoride | Implemented inspection or monitoring program of potential spill or leak sources | No steps taken during 2015 | No steps taken during 2015 | No steps taken during 2015 | No steps taken during 2015 |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | Implemented inspection or monitoring program of potential spill or leak sources | No steps taken during 2015 | No steps taken during 2015 | No steps taken during 2015 | No steps taken during 2015 |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | Implemented inspection or monitoring program of potential spill or leak sources | No steps taken during 2015 | No steps taken during 2015 | No steps taken during 2015 | No steps taken during 2015 |
| NA - M08 | Total Particulate Matter | Implemented inspection or monitoring program of potential spill or leak sources | No steps taken during 2015 | No steps taken during 2015 | No steps taken during 2015 | No steps taken during 2015 |

Progress on TRA Plan - Reductions due to Options Implemented - Materials or feedstock substitution

| CAS RN | Substance Name | Activity | Reductions due to Options Implemented | Quantity |
|-----------|------------------|-----------------------|--|-----------|
| 7789-75-5 | Calcium fluoride | Substituted materials | The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Substituted materials | The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Substituted materials | The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Substituted materials | The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Substituted materials | The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Substituted materials | The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Substituted materials | The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Substituted materials | The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Substituted materials | The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the steps described: | No Amount |

Progress on TRA Plan - Reductions due to Options Implemented - Spill or leak prevention

| CAS RN | Substance Name | Activity | Reductions due to Options Implemented | Quantity |
|-----------|---|---|--|-----------|
| 7789-75-5 | Calcium fluoride | Implemented inspection or monitoring program of potential spill or leak sources | The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Implemented inspection or monitoring program of potential spill or leak sources | The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Implemented inspection or monitoring program of potential spill or leak sources | The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Implemented inspection or monitoring program of potential spill or leak sources | The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Implemented inspection or monitoring program of potential spill or leak sources | The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Implemented inspection or monitoring program of potential spill or leak sources | The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Implemented inspection or monitoring program of potential spill or leak sources | The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Implemented inspection or monitoring program of potential spill or leak sources | The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the steps described: | No Amount |
| 7789-75-5 | Calcium fluoride | Implemented inspection or monitoring program of potential spill or leak sources | The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the steps described: | No Amount |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | Implemented inspection or monitoring program of potential spill or leak sources | The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the steps described: | No Amount |

| CAS RN | Substance Name | Were there any additional actions outside the plan taken during the reporting period to reduce the use and/or creation of the substance? | Describe any additional actions that were taken during the reporting period to achieve the plan's objectives | Provide a public summary of the description of the additional action taken |
|------------|---|--|--|--|
| 7789-75-5 | Calcium fluoride | No | | |
| 630-08-0 | Carbon monoxide | No | | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | No | | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | No | | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | No | | |
| NA - M08 | Total Particulate Matter | No | | |

Progress on TRA Plan - Reductions due to additional actions taken

| CAS RN | Substance Name | Reductions due to additional actions taken | Quantity |
|------------|---|---|----------|
| 7789-75-5 | Calcium fluoride | The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| 7789-75-5 | Calcium fluoride | The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| 7789-75-5 | Calcium fluoride | The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions. | |
| 7789-75-5 | Calcium fluoride | The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| 7789-75-5 | Calcium fluoride | The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| 7789-75-5 | Calcium fluoride | The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions. | |
| 7789-75-5 | Calcium fluoride | The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions. | |
| 7789-75-5 | Calcium fluoride | The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions. | |
| 7789-75-5 | Calcium fluoride | The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions. | |
| 630-08-0 | Carbon monoxide | The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| 630-08-0 | Carbon monoxide | The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| 630-08-0 | Carbon monoxide | The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions. | |
| 630-08-0 | Carbon monoxide | The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| 630-08-0 | Carbon monoxide | The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| 630-08-0 | Carbon monoxide | The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions. | |
| 630-08-0 | Carbon monoxide | The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions. | |
| 630-08-0 | Carbon monoxide | The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions. | |
| 630-08-0 | Carbon monoxide | The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions. | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions. | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions. | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions. | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions. | |

| CAS RN | Substance Name | Reductions due to additional actions taken | Quantity |
|------------|---|---|----------|
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions. | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions. | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns | The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M08 | Total Particulate Matter | The amount of reduction in use of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M08 | Total Particulate Matter | The amount of reduction in creation of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M08 | Total Particulate Matter | The amount of reduction in the substance contained in product at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M08 | Total Particulate Matter | The amount of reduction in release to air of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M08 | Total Particulate Matter | The amount of reduction in release to water of the substance at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M08 | Total Particulate Matter | The amount of reduction in release to land of the substance at the facility during the reporting period that resulted due to additional actions. | |
| NA - M08 | Total Particulate Matter | The amount of reduction in the substance disposed on-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M08 | Total Particulate Matter | The amount of reduction in the substance disposed off-site (including tailings and waste rocks) at the facility during the reporting period that resulted due to the additional actions. | |
| NA - M08 | Total Particulate Matter | The amount of reduction in the substance recycled off-site at the facility during the reporting period that resulted due to the additional actions. | |

Progress on TRA Plan - Amendments

| CAS RN | Substance Name | Were any amendments made to the toxic substance reduction plan during the reporting period | Description any amendments that were made to the toxic substance reduction plan during the reporting period | Provide a public summary of the description of any amendments that were made to the toxic substance reduction plan during the reporting period |
|------------|---|--|---|--|
| 7789-75-5 | Calcium fluoride | No | | |
| 630-08-0 | Carbon monoxide | No | | |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) | No | | |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns | No | | |
| | PM2.5 - | | | |

| CAS RN | Substance Name | Were any amendments made to the toxic substance reduction plan during the reporting period | Description any amendments that were made to the toxic substance reduction plan during the reporting period | Provide a public summary of the description of any amendments that were made to the toxic substance reduction plan during the reporting period |
|----------|-----------------------------------|--|---|--|
| NA - M10 | Particulate Matter <= 2.5 Microns | No | | |
| NA - M08 | Total Particulate Matter | No | | |

Report Submission and Electronic Certification

NPRI - Electronic Statement of Certification

Specify the language of correspondence

English

Comments (optional)

I hereby certify that I have exercised due diligence to ensure that the submitted information is true and complete. The amounts and values for the facility(ies) identified below are accurate, based on reasonable estimates using available data. The data for the facility(ies) that I represent are hereby submitted to the programs identified below using the Single Window Reporting Application.

I also acknowledge that the data will be made public.

Note: Only the person identified as the Certifying Official or the authorized delegate should submit the report(s) identified below.

Company Name

Forterra Brick

Certifying Official (or authorized delegate)

Jack Hewitt

Report Submitted by

Shane Egan

I, the Certifying Official or authorized delegate, agree with the statements above and acknowledge that by pressing the "Submit Report(s)" button, I am electronically certifying and submitting the facility report(s) for the identified company to its affiliated programs.

ON MOE TRA - Electronic Certification Statement

Annual Report Certification Statement

As of 31/05/2016, I, Shane Egan, certify that I have read the reports on the toxic substance reduction plans for the toxic substances referred to below and am familiar with their contents, and to my knowledge the information contained in the reports is factually accurate and the reports comply with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act.

TRA Substance List

| CAS RN | Substance Name |
|------------|---|
| 7789-75-5 | Calcium fluoride |
| 630-08-0 | Carbon monoxide |
| 11104-93-1 | Nitrogen oxides (expressed as NO ₂) |
| NA - M09 | PM10 - Particulate Matter <= 10 Microns |
| NA - M10 | PM2.5 - Particulate Matter <= 2.5 Microns |
| NA - M08 | Total Particulate Matter |

Exit Record Certification Statement

As of 31/05/2016, I, Shane Egan, certify that I have read the records created for the purposes of section 11.2 of Ontario Regulation 455/09 (General) made under the Toxics Reductions Act, (2009) in respect of the use and creation of the toxic substances referred to below at Forterra Brick - Aldershot and am familiar with their contents and to my knowledge they are factually accurate.

TRA Exit Record Substances

| CAS RN | Substance Name |
|---------|-------------------------------|
| NA - 09 | Manganese (and its compounds) |

Company Name

Forterra Brick

Highest Ranking Employee

Shane Egan

Report Submitted by

Shane Egan

I, the highest ranking employee, agree with the certification statement(s) above and acknowledge that by checking the box I am electronically signing the statement(s). I also acknowledge that by pressing the 'Submit Report(s)' button I am submitting the facility record(s)/report(s) for the identified facility to the Director under the Toxics Reduction Act, 2009. I also acknowledge that the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 provide the authority to the Director under the Act to make certain information as specified in subsection 27(5) of Ontario Regulation 455/09 available to the public.

Submitted Report

| Period | Submission Date | Facility Name | Province | City | Programs |
|--------|-----------------|----------------------------|----------|-----------|-----------------|
| 2015 | 31/05/2016 | Forterra Brick - Aldershot | Ontario | Aldershot | NPRI,ON MOE TRA |

Note: If there is a change in the contact information for the facility, a change in the owner or operator of the facility, if operations at the facility are terminated, or if information submitted for any previous year was mistaken or inaccurate, please update this information through SWIM or by contacting the National Pollutant Release Inventory directly.

Version: 3.11.4



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