

TRA Public Annual Report and Public Report of Plan Summaries

2014 TRA Public Annual Report and Public
Report of Plan Summaries

B&W Heat Treating Canada
Kitchener ON

May 2015

BASIC FACILITY INFORMATION

Substances Included in the Plan	
<ul style="list-style-type: none"> • Ammonia (CAS NA-16) • Sodium Nitrite (CAS 7632-00-0) 	
Facility (legal) name	B&W Heat Treating Canada ULC
Facility address	60 Steckle Place, Kitchener, ON N2E 2C3
NPRI Identification number	00064
Two digit NAICS Code	33
Four digit NAICS Code	3328
Six Digit NAICS Code	332810
Number of full time Employees	44
UTM spatial coordinates:	
UTM Zone	38
UTM Easting	470483
UTM Northing	1066525
Facility Owner	Bluewater Thermal Solutions
Highest Ranking Official	Shawn Scott sscott@bluewaterthermal.com (519) 748-0769
Public Contact	Shawn Scott sscott@bluewaterthermal.com (519) 748-0769
Technical Contact	Shawn Scott
Coordinator of the TSRP	Erin Guo eguo@bluewaterthermal.com (519) 748-0769
Person preparing the TSRP	Lari Dakin LD – 50 Enterprises Inc. – Consultant/Planner Cell: (519) 575-8374; E-mail: ld50@execulink.com
Licensed Planner making recommendations	Lari Dakin LD – 50 Enterprises Inc. – Consultant/Planner Cell: (519) 575-8374; E-mail: ld50@execulink.com License number TSRP0270
Licensed Planner certifying the TSRP	Lari Dakin LD – 50 Enterprises Inc. – Consultant/Planner Cell: (519) 575-8374; E-mail: ld50@execulink.com License number TSRP0270
Parent Company information	Bluewater Thermal solutions Suite 302 – 6225 Sheridan Drive New York

Facility's Approach to Toxic Substance Accounting

The amount of each substance used, created, contained in the product, released, disposed, and/or transferred is contained in the 2014 NPRI Report, available on the government website.

<http://www.ec.gc.ca/inrp-npri/default.asp?lang=En&n=F6300E68-1>

1. Ammonia (CAS NA-16)

Statement of Intent			
Ammonia is currently used in the heat-treating furnaces to create a suitable carbon atmosphere. It assists in producing a carbon atmosphere, which is key in hardening of the parts. It is expected that the use of the substance will increase based on anticipated increased production. Reduction initiatives taken in the past included, increased efficiencies of the furnaces. Due to its criticality to the process, there is no intent to reduce the use of this substance.			
Objectives			
Although B&W Heat treating does not intend to reduce the use of ammonia at this time, it will continue to seek out further opportunities for reduction options, while maintaining industry standards and meeting customer requirements.			
Description of Why the Substance is Used:			
Ammonia (NA-16) is used at the chemical receiving process, where it is transferred to a 2500 US Gallon tank by the supplier, so no additional cost is incurred in receiving. A mixture of the ammonia/nitrogen/methanol is used in the furnaces to create a carbon rich atmosphere. There were no spills of ammonia reported in 2014. The ammonia is destroyed in the furnaces. A new furnace was added in 2013 (for a total of five), and the process changed, which increased the amount of ammonia used. The process generally relied on one furnace. However, the use of a second furnace was started in July – August 2014.			
Description of Options to be Implemented:			
No option chosen. Rationale: Option1: Substitute NH4 with N2. Not technically feasible at this time. The substance is a critical component in creating the proper atmosphere for hardening/carburizing of the parts, due to the chemistry with the methanol, also used in this process. Rationale: Option 2 – Replace valving and install a secondary monitoring system. Technically feasible. This option was implemented in 2012. Estimated Reductions for each Option: Not applicable Timeline for Achieving Estimated Reductions: Not applicable			
Projected Effectiveness of the Reduction Plan			
As there is no reduction plan in place at this time, this section is not applicable.			

This plan summary accurately reflects the Toxic Substance Reduction Plan that has been prepared by LD – 50 Enterprises Inc. and B&W Heat Treating Canada, for Ammonia, dated December 2013, and updated in 2014, for 2013.

Form of Involvement	Amount (kg)	Amount (kg)	Comparison
	2014	2013	2013 v 2014
Enters the facility	176,351	171,182	+3%
Created at the facility	0	0	0
Released (air) from the facility (spill)	0	0	0

Released (land) from the facility	0	0	0
Released (water) from the facility	0	0	0
Disposed (on-site) by the facility	0	0	0
Disposed (off-site) by the facility	0	0	0
Transferred (for recycling) from the facility	0	0	0
Contained in product that leaves the facility	0	0	0
Destroyed at the facility	176,351	171,182	+3%
Remains in storage at the facility	0**	0***	0

*considered negligible

** records of remaining storage were not kept in 2014, so it is estimated that all of the material purchased in 2014, was used in production

*** amount on-site at the end of 2013 was not tracked

Reason for Change
The amount of Ammonia purchased in 2013 increased significantly, due to increases in production.

2. Sodium Nitrite (CAS No. 7632-00-0)

Statement of Intent
The use of this substance in 2012 was based on a rare start-up of the draw pots, due to product contamination. This resulted in an ~100% increase in the amount of the substance used at the facility. Generally, the use of this substance is well below threshold values.
Objectives
In 2012, there was a rare start-up of the draw tanks, due to a product contamination. As such, the use of this material is generally well below reporting thresholds. Therefore, there is no objective to reduce the use of this material, based on regular use, in subsequent years.
Description of Why the Substance is Used
The substance is used to create ductility in the metal. This ductility is a safety critical component to the process.
Description of Options to be Implemented
No option chosen. Rationale Option1: Substitute salt with high Sodium Nitrite concentration with lower concentration. Not technically feasible at this time. The lower concentration of the substance was tried earlier in the process and led to quality problems. As the use of this substance is a quality critical component in the effective hardening of the parts, this option was tried and is not feasible. Also, the use of this substance in 2012 was not indicative of the

regular use. There was an emergency situation, which led to a higher use of the substance. This situation is not anticipated to happen again

Rationale: Option 2 – Reuse the contaminated salt
 Not technically feasible. The contamination in the salt would create quality issues. As the use of this substance is a quality critical component of the process, this option is not feasible. The parts must have the required hardness to maintain safety of the product.

Estimated Reductions for each Option: Not applicable
 Timeline for Achieving Estimated Reductions: Not applicable

Projected Effectiveness of the Reduction Plan

As there is no reduction plan in place at this time, this section is not applicable.

This plan summary accurately reflects the Toxic Substance Reduction Plan that has been prepared by LD – 50 Enterprises Inc. and B&W Heat Treating for Sodium Nitrite dated December 2013, and updated in 2015, for 2014.

Tracking and Quantification of Sodium Nitrite at the Facility Level

Table 1: Tracking of Sodium Nitrite at the Facility Level

Form of Involvement	Amount (kg)		Comparison
	2014	2013	
Enters the facility	6,860	8,722	-21%
Created at the facility	0	0	0
Released (air) from the facility (spill)	0	0	0
Released (land) from the facility	0	0	0
Released (water) from the facility	175	222	-21%
Disposed (on-site) by the facility	0	0	0
Disposed (off-site) by the facility	6,500	8,500	-23.5%
Transferred (for recycling) from the facility	0	0	0
Contained in product that leaves the facility	0	0	0
Destroyed at the facility	0	0	0
Remains in storage at the facility	0*	0**	0

* records of remaining storage were not kept in 2014, so it is estimated that all of the material purchased in 2014, was used in production

* amount stored at end of 2013 was unknown


Reason for Change

It was reported in the initial Toxic Substance Reduction Plan that there was a high volume of sodium nitrite, due to a one-time oven cleanout. The reduction in use of the substance in 2013, to levels below the reporting threshold, shows this to be accurate. The amount purchased in 2013 was slightly higher than anticipated in the future, due to a new supplier. This was confirmed in 2014, where the purchase of the material was reduced by 21%. These levels remain below reporting thresholds, are anticipated to do so in the future. The amount of the salt sent out as waste and discharged to sewer (in the water) decreased. This occurred since steps were taken to eliminate/reduce the salt use in processes that would allow it into the rinse water. It now goes out as a waste, predominantly, rather than being dissolved and discharged into the sanitary sewer.

Certification Statement (Licensed Planner)

As of May 24, 2015, I, Lari Dakin certify that I am familiar with the processes at B&W Heat Treating that uses the toxic substance referred to below, that I agree with the estimates referred to in subparagraphs 7 iii, iv and v of subsection 4 (1) of the Toxics Reduction Act, 2009 that are set out in the plan dated [December 30, 2013] and that the plans comply with that act and Ontario Regulation 455/09 (General) made under that act, and the plans meets all other requirements of the act and regulation.


Ammonia NA-16 & Sodium Nitrite – 7632-00-0

Name:	Lari Dakin
Signature:	
License Number:	TSRP0270

Certification Statement (Highest Ranking Employee)

As of May 24, 2015, I, Shawn Scott certify that I have read the toxic substance reduction plans for the toxic substances referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

Ammonia NA-16 & Sodium Nitrite – 7632-00-0

Name:	Shawn Scott
Signature:	
Title:	General Manager