
Toxics Reduction Plan

**Hydrotreated Heavy Naphtha
CAS # - 64742-48-9**

December 11th, 2018

Prepared for:
Welded Tube of Canada
50 Bowes Road
Concord, Ontario
L4H 1H3

Prepared by:
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1.0 Introduction

Welded Tube of Canada is a steel tube and pipe manufacturing facility. As part of the manufacturing process, the facility utilizes an anti-rust coating on final products created at the facility. The facility is required to prepare a plan under The Toxics Reduction Act (and O. Reg. 455/09).

The facility is required to account, report and prepare a plan on one TRA substance: Hydrotreated Heavy Naphtha (CAS# - 64742-48-9). This substance is contained within the anti-rust coating that is applied to the steel tubes and pipes produced at the facility prior to shipment to customers.

This plan was developed to meet the requirements under O. Reg. 455/09 for Hydrotreated Heavy Naphtha (CAS# - 64742-48-9). In addition to this document a plan summary will be submitted to the Ministry of the Environment, Conservation and Parks (MECP), and a plan summary will be posted on the internet for the public to view.

1.1. *General Information*

The facility is located at 50 Bowes Road, Concord, Ontario. This plan is for Hydrotreated Heavy Naphtha (CAS# - 64742-48-9).

Hydrotreated heavy naphtha is one of the main constituents of the anti-rust coating that is applied to the steel tubes and pipes produced at the facility before they are shipped to customers. The Facility manufactures steel tubes and pipes, where the rust inhibitor is used to prevent the formation of rust and help maintain the strength and durability of the final product.

Table 1-1 - General Facility Information

NPRI Number	5698
O Reg 127/01 Number	5838
Number of full time employee equivalents	221
NAICS Code (2 digit)	31-33 - Manufacturing
NAICS Code (4 digit)	3312 - Steel product manufacturing from purchased steel
NAICS Code (6 digit)	331210 - Iron and steel pipes and tubes manufacturing from purchased steel
UTM Coordinates	17 T 621076 m E 4851161 m N
Company Legal Name	Welded Tube of Canada Corp
Company Trade Name	Welded Tube of Canada Corp
Business Number	846263531

1.2. Plan Contacts

A list of the individuals involved in the planning process is provided below:

<p>Public Contact</p> <p>Antonietta Iozzo Quality Coordinator Tel: (905) 669-1111 ext 367 Fax: (905) 738-4070 Email: aiozzo@weldedtube.com</p>	<p>Highest ranking employee information</p> <p>John Young COO, Executive Vice President Tel: (905) 669-1111 ext 133 Fax: (905) 738-4070 Email: jyoung@weldedtube.com</p>
<p>Person Coordinating Preparation of Plan</p> <p>Antonietta Iozzo Quality Coordinator Tel: (905) 669-1111 ext 367 Fax: (905) 738-4070 Email: aiozzo@weldedtube.com</p>	<p>Person who prepared the plan</p> <p>Lucas Neil Airzone One Ltd. 222 Matheson Blvd E Mississauga, ON L4Z 1X1 Tel: (905) 890-6957 ext 111 Fax: (905) 890-8629 Email: lnil@airzoneone.com</p>

Technical Contact	Planner who certified the plan
Lucas Neil Airzone One Ltd. 222 Matheson Blvd E Mississauga, ON L4Z 1X1 Tel: (905) 890-6957 ext 111 Fax: (905) 890-8629 Email: neil@airzoneone.com	Franco DiGiovanni Airzone One Ltd. 222 Matheson Blvd E Mississauga, ON L4Z 1X1 Tel: (905) 890-6957 ext 102 Fax: (905) 890-8629 Email: fdi-giovanni@airzoneone.com TRA Licence #: TSRP0223

2.0 Facility's Intent, Objectives and Targets

2.1. Use

The act requires that a facility include a statement of intent to reduce the use of the prescribed toxic substance. If the facility does not provide a statement of intent it must provide a reason why it does not intend or why it is not possible to reduce the use of the toxic substance. In addition to this, the facility is required to provide a list of objectives.

Statement of intent:

The facility does not have a statement of intent. However, Welded Tube of Canada does intend to continue to monitor current research on the availability and feasibility of alternative rust inhibitors.

Reason why the facility does not have a statement of intent: (if applicable)

Welded Tube of Canada does not intend to reduce hydrotreated heavy naphtha because there are no further reduction options possible at this time.

Objectives: (a list of objectives to reduce if any)

Although Welded Tube of Canada does not intend to reduce the use of hydrotreated heavy naphtha, they will continue to conduct further research to identify new reduction options (i.e., alternative rust inhibitors) and to keep up with industry standards with regards to hydrotreated heavy naphtha pollution prevention.

Quantity Target: (if any)

No target

Target Timeline: (if any can be expressed in years or described in text box, or no timeline can be selected)

No timeline

Reason why toxic substance is used at the facility: (from drop down menu options)

For on-site use/processing.

2.2. *Creation*

The act requires that a facility include a statement of intent to reduce the creation of the prescribed toxic substance. If the facility does not provide a statement of intent it must provide a reason why it does not intend or why it is not possible to reduce the creation of the toxic substance.

Statement of intent:

The facility does not have a statement of intent.

Reason why the facility does not have a statement of intent:

The facility does not create the subject substances at the facility; therefore it is not required to provide a statement of intent on the creation of this substance.

Objectives:

N/A

Quantity Target:

N/A

Target Timeline:

N/A

Reason why toxic substance is used at the facility:

N/A.

3.0 Facility's Stages and Processes

3.1. *Pipe Production Line*

Figure 1 demonstrates the stages that the hydrotreated heavy naphtha goes through in reference to the production of steel pipe at the facility. The Pipe Forming Stage can be conducted at one of three mills at the facility; however, the rust inhibitor is applied to products from two of the mills.

Figure 1 - Pipe Production Stages Diagram

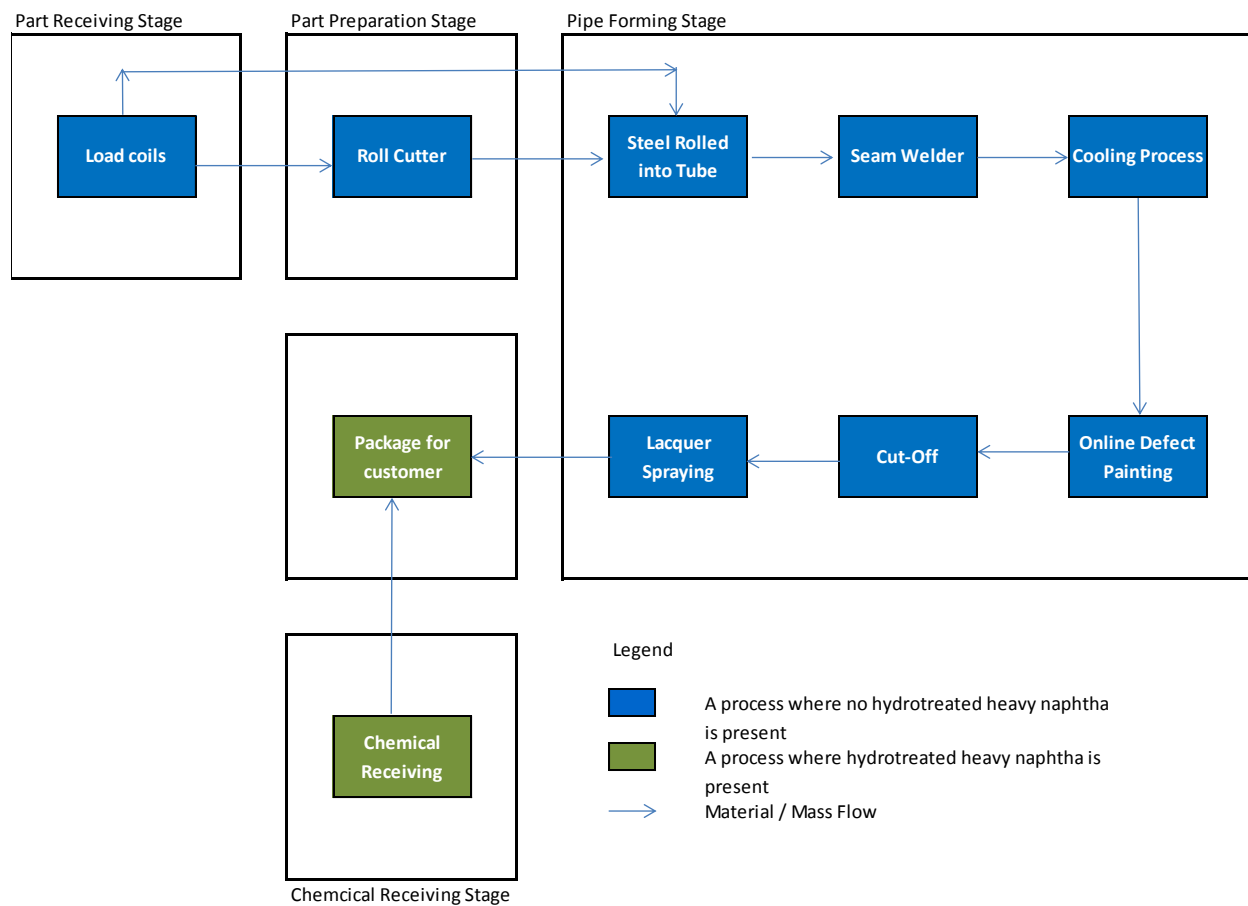
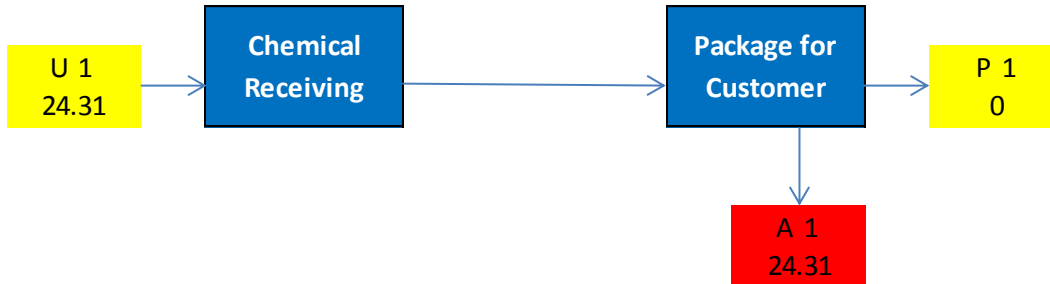


Figure 2 shows a process flow diagram for hydrotreated heavy naphtha for producing steel pipe at the facility.

Figure 2 - Hydrotreated Heavy Naphtha Process Flow Diagram



Process Flow Diagram Description

Step	Description	DQL
U1	Hydrotreated Heavy Naphtha contained within the anti-rust coating.	AA
A1	Fugitive ventilation emissions of Hydrotreated Heavy Naphtha after application to final steel tube product.	A
P1	Hydrotreated Heavy Naphtha coating retained on final steel tube product.	A

4.0 Information on Toxic Substance Accounting

The following methods were chosen because they were determined to be the best based on industry standards.

The amount of substance that is input into the system (U1) is based on usage amounts tracked by Welded Tube.

The amount of substance that escapes to air via volatilization (A1) is determined by mass balance.

The amount of substance that goes to the treated part (P1) is determined via mass balance.

Figure 3 shows a summary of the process flow diagram from Figure 2 with totals of inputs, amounts transformed and amounts escaping to air. The difference between the input and the output is 0.00 kg or 0.0% of the input amount. After reviewing the input/output balance results, no missing sources of data or calculations errors were found. The input/output balance of 0.00 kg is therefore considered “approximately equal.”

Figure 3 – Sum of amounts from Figure 2 for Hydrotreated Heavy Naphtha

Report Amounts		Quantify Amounts		NPRI Reportable	
Use	24.31	Transform	0	Air	24.31
Creation	0	Destruction	0	Land	0
Product	0	Intermediate	0	Water	0
				Disposal	0
				Transfer	0
Mass balance check = 0					
U + C = T + D + P + A + L + W + DIS + TR					
Mass balance check : 0.00					

5.0 Cost Estimates

The toxic substance reduction plan for a toxic substance shall contain estimates of the direct and indirect annual costs related to the toxic substance.

5.1. *Cost of use or creation of toxic substance at the facility*

Cost of material:

Welded Tube of Canada spent \$209,920.00 for the rust inhibitor for 2017. This cost can be prorated to hydrotreated heavy naphtha (HTHN) based on its average weight percent content of the rust inhibitor (85%).

$$\text{HTHN Cost} = \text{Total Cost of Rust Inhibitor} * \% \text{ wt HTHN}$$

$$\text{HTHN Cost} = \$209,920.00 * 85\% \text{ HTHN Content}$$

$$\text{HTHN Cost} = \mathbf{\$178,432.00}$$

Cost of health and safety compliance:

Welded Tube of Canada spent \$4,000.00 in consultant fees for occupational exposure assessments regarding the rust inhibitor. The consultant tested for three (3) chemicals, one of which was hydrotreated heavy naphtha. Therefore, the cost can be prorated to hydrotreated heavy naphtha based on the number of chemicals tested.

$$\text{HTHN Cost} = \text{Total Cost of Testing} * (1 \text{ chemical} / 3 \text{ total chemicals})$$

$$\text{HTHN Cost} = \$4,000.00 * (1 \text{ chemical} / 3 \text{ total chemicals})$$

$$\text{HTHN Cost} = \mathbf{\$1,333.33}$$

Costs of equipment maintenance:

Welded Tube of Canada spent \$2,000 to repair/maintain the equipment at the facility that is used for the following purposes:

1. Apply rust inhibitor to final products
2. Store rust inhibitor on site

3. Any other equipment used to handle the rust inhibitor or apply it to final products

Hydrotreated heavy naphtha costs can be assumed equal to the total maintenance costs.

HTHN Cost = Total Cost of Repairs/Maintenance

HTHN Cost = **\$2,000.00**

5.2. *Cost of release of toxic substance from the facility*

Cost for regulatory requirements:

ECA:

Welded Tube of Canada spent \$10,000.00 in consultant fees to assemble an application for an Environmental Compliance Approval (ECA). This involved assessment of 29 chemicals used at 50 Bowes Road, one of which is hydrotreated heavy naphtha. This assessment can be divided over 5 years.

Therefore, the amount prorated to hydrotreated heavy naphtha is:

HTHN Cost = Total Cost of Reporting * (1 chemical / 29 total chemicals) * 1/5
years

HTHN Cost = \$10,000.00 * (1 chemical / 29 total chemicals) * 1/5 years

HTHN Cost = **\$68.97**

NPRI:

Welded Tube of Canada spent \$3,240.00 in consultant fees for NPRI reporting for four facilities. Across the four facilities, a total of 1 chemical was reported to NPRI, which is hydrotreated heavy naphtha at 50 Bowes Road.

Therefore, the amount prorated to hydrotreated heavy naphtha is:

HTHN Cost = Total Cost of Reporting * (1 chemical / 1 total chemicals)

HTHN Cost = \$3,240.00 * (1 chemical / 1 total chemicals)

HTHN Cost = **\$3,240.00**

5.3. *Cost of disposal of toxic substance by the facility*

There are no costs associated with this category.

5.4. *Cost of transfer of toxic substance from the facility*

There are no costs associated with this category.

5.5. *Cost of toxic substance contained in product that leaves the facility*

There are no costs associated with this category.

5.6. *Total Direct and Indirect Costs*

The costs from Sections 5.1-5.5 were summed to determine the total costs. The total estimated direct and indirect annual costs related to hydrotreated heavy naphtha at the Facility are **\$185,074.30**.

6.0 Options to Reduce

The act requires that the facility include at least one option for each of the seven categories of toxics reduction listed in the act. If an option is not listed under each option, a reason must be given why an option could not be identified for the specific category. This section describes the option chosen for each category.

6.1. *Materials or Feedstock Substitution*

Potential alternatives to the current rust inhibitor being used by Welded Tube have been previously identified and tested. However, testing found that the alternative rust inhibitor did not perform to the specifications required by Welded Tube to meet customer standards. Consequently, the alternative was not deemed to be technically feasible to implement.

There are no further reduction options available at this time.

6.2. *Product Design or Reformulation*

Given the nature of the product produced at the Facility, product design or reformulation is not an applicable reduction option. Hydrotreated heavy naphtha is not used in the production of the products produced by Welded Tube. There are no options to reduce under this category.

6.3. *Equipment or Process Modifications*

In general, processes at the facility have been optimized to minimize waste (i.e., overspray of applied rust inhibitor).

In general, it is Welded Tube's continuous goal to minimize wasteful use of the rust inhibitor as this also maximizes profit. Process modifications have occurred over the years and there are no further options at this time.

6.4. *Spill and Leak Prevention*

The area for all chemical storage is contained in a specific zone with provisions made to capture spills. All employees are trained annually on WHMIS, safe handling procedures for all chemicals and spill procedures. Documentation of such is retained by the training co-ordinator. No further actions are possible; and there are no options to reduce under this category at the present time.

6.5. *On-Site Reuse or Recycling*

The rust inhibitor cannot usefully be reused or recycled on-site, as it is sprayed, and retained, on the final product.

There are not any other available options for recycling this material.

6.6. *Improved Inventory Management or Purchasing Techniques*

The facility holds minimal inventory and purchases the rust inhibitor based on actual usage demand. Inventory is kept to a minimum through just-in-time purchasing.

Welded Tube has also implemented improved inventory and tracking systems, AS400 and Cognos. These tracking systems are used to maintain better usage and stock levels to minimize purchased amounts.

6.7. *Training or Improved Operating Practices*

Welded Tube over the years has implemented industry standards for training and improved operating practises that are relevant for employees operating processes that apply the rust inhibitor to the final products, such as spraying techniques, proper handling of drums and totes, etc.

6.8. *Overview*

Is there a statement that no option will be implemented?

YES

Explanation of the reasons why no option will be implemented:

There are no reasonable substitutions for this substance and many of the reduction options possible have already been implemented in the past.

7.0 Implementation Plan (if applicable)

There is no implementation plan or timetable. The reason there is no plan is that any reasonable reduction possibilities have already been implemented.

8.0 Recommendations by Planner

The planner was also involved in developing the plan. There are no planner recommendations, at this time.

9.0 Certifications

Certification by highest ranking employee

As of December 11th, 2018 [date], I, John Young, certify that I have read the toxic substance reduction plan for the toxic substance referred to below and am familiar with its contents, and to my knowledge the plan is factually accurate and the plan complies with the *Toxics Reduction Act, 2009* and Ontario Regulation 455/09 (General) made under that Act.

Hydrotreated Heavy Naphtha

Signed:



John Young

Certification by toxic substance reduction planner

As of December 11th, 2018 [*date*], I, Franco DiGiovanni, certify that I am familiar with the processes at Welded Tube of Canada that use or create 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 11th, 2018 [*version date*] and that the plan complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

Hydrotreated Heavy Naphtha

Signed:



Franco DiGiovanni
Airzone One Ltd.