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## Toxic Reduction Plan

for

OxyVinyls Canada Co.  
Niagara PVC Plant  
8800 Thorold Townline Rd.  
Thorold, ON L2E 6V9

per

O.Reg. 455/09

# 1. Carbon Monoxide

July 24, 2015

### **Statement of Intent**

Oxy Vinyls Canada Co. is required under O.Reg. 455/09 to develop Toxic Reduction Plans.

Oxy Vinyls Canada Co. is committed to reducing the use, creation, or transfer of toxic substances in its processes where feasible and economically viable.

### **Objective**

The objective of this Toxic Reduction Plan is to identify the toxic substances used, created, or transferred, how they are used, created, or transferred, where they are used, created, or transferred, and how their use, creation, or transfer can be reduced or eliminated.



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## **Identification of Reduction Options**

### **Material or Feedstock Substitution - No option identified**

CO is not raw materials or feedstock. Alternatives to natural gas and/or fuel oil (i.e. electricity) are very expensive and technically unfeasible.

### **Product Design or Reformulation - No option identified**

CO is cannot be redesigned or reformulated.

### **Equipment or Process Modifications – One option identified.**

Minimization of use of No. 2 fuel oil in boilers in place of natural gas will reduce emission due to natural gas being a cleaner fuel source. An estimate of reductions is not able to be determined as the use of No. 2 fuel oil is used only during curtailment periods when natural gas is no longer available. Gas curtailment periods vary from year to year. Gas curtailments occur infrequently, typically less than 5 day per year and none in some years therefore the reduction in emissions if any would be variable from year to year dependent and the length of the curtailment. Based on the calculated emission data, between 2012-2014 there is approximately a 2-3 tonne (10-14% reduction). The estimate of future emissions and emission reductions is likely to be within this range however influenced by the frequency of gas curtailments and production demands.

### **Spill and Leak Prevention - No option identified.**

There are no leaks and/or spills associated with CO.

### **On-site Reuse or Recycling - No option identified**

Inventory levels/material management activities do not impact CO creation or releases.

### **Improved Inventory Management or Purchasing Techniques - No option identified**

Inventory level and material management activities do not impact creation or release.

### **Training or Improved Operating Practices – One option identified**

All operating personnel in the plant are fully trained to operate the boilers, heaters, and diesel engines and are required to maintain up to date training by periodic recertification on the procedures. As operating practices are improved, procedures are updated and the operating personnel are required to train and complete certification on the new procedures.

Boilers, heaters, and diesel engines are maintained on a preset schedule to ensure maximum operating efficiency and minimum emissions. Reduced testing of emergency diesel engine driven generators and pumps will reduce emissions proportionally.

## **Feasibility of Reduction Options**

### **Equipment or Process Modifications**

No. 2 fuel oil is burned in the boiler only during curtailment periods when natural gas is no longer available. No. 2 fuel oil as a backup fuel could be all but eliminated by altering the plant natural gas supply from Enbridge to a non-interruptible contract. Gas curtailments occur infrequently, typically less than 5 day per year and none in some years.

### **Training or Improved Operating Practices**

Testing frequency of the emergency diesel engines could be reduced from weekly to bi-weekly, thus reducing the hours of operation of this equipment. However, this would compromise the reliability of this critical emergency equipment, which could result in an environmental incident that would have a great emission impact. Therefore, this option is not desirable.

## PLAN CERTIFICATION FOR CARBON MONOXIDE

As of July 27, 2015, I, Jim Segada, 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, with the exception of the regulatory deadline, complies with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act. The regulatory deadline of December 31, 2013 was not met due to environmental expertise resource constraints.

  
\_\_\_\_\_: 7/27/15  
Jim Segada, Plant Manager  
Oxy Vinyls Canada Co.

As of July 24, 2015, I, Scott Manser certify that I am familiar with the processes at Oxy Vinyls 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 July 24, 2015 and that the plan, with the exception of the regulatory deadline, complies with that Act and Ontario Regulation 455/09 (General) made under that Act.

- Carbon Monoxide, cas#630-08-0

  
\_\_\_\_\_: July 24, 2015  
Scott Manser, Toxic Reduction Planner  
TSRP0071

