April 14, 2016

TRA Phase II Annual Comparison – Niagara Energy Products

Prepared by Oakhill Environmental Inc.

The Toxic Reduction Plan (TRA) for Niagara Energy Products (NEP) was prepared in August 2014 for particulate matter (PM_{10}), for the 2013 production year. As part of the overall plan, two technically and economically feasible reduction options were identified. These were to be implemented in the following four years.

Implementation Schedule of Reduction Options

TRA plan describes reduction options involving 'equipment or process modifications' under Category 3 of the Plan. The details of these Category 3 reduction options are represented in the below table with the estimated decrease in PM_{10}.

Category 3 – Equipment or Process Modifications; Time Table for Implementation

Options	Description	Estimated Timeline	Estimated Reduction in Air Release (MT/yr)
1	Upgrading Emission Control Equipment	2-4 years	0.72
2	Acquiring Electrostatic Spray guns	1-2 years	0.02

Toxic Substance Reduction Options Implemented

Implementation of the aforementioned options is expensive and therefore it deemed beneficial to implement them in stages. In April, 2016, NEP completed the final upgrades on emission control equipment, meeting its deadline (Step 1). These upgrades included the following:

- Installation of FiltAir fume exhaust system, for eleven welding stations in the Low-Bay;
- Installation of FiltAir fume exhaust system, for two welding stations in the High-Bay;
- Installation of FiltAir fume exhaust system, for two welding stations in the Paint-Bay;

- Installation of FiltAir fume exhaust system and magnetic covering, for two welding stations in the High-Bay;
- Removal of exhaust fans in the Low-Bay and Concrete-Bay; and
- Redesign and upgrade of the cement silo dust collector system.

Due to the expense of acquiring Electrostatic Spray guns (Step 2), this goal has been revaluated and deemed impractical for NEP. Oakhill and NEP are exploring additional reductions options.

Achieved Reduction in PM_{10}

The following tabled details the yearly creation and air emissions of PM_{10} in 2015 after implementing reduction options in comparison with the previous years.

PM_{10}	2014 (tonnes/year)	2015 (tonnes/year)	Reduction (tonnes/year)
Created	7.18	2.23	**5.98**
Air Release	1.129	0.405	**0.724**

NEP successfully achieved significant reductions in creation of PM_{10} and thus releasing considerably low air emissions. The PM_{10} emissions from the facility are below the annual air release criteria prescribed by federal and provincial regulations.

NEP will continue to strive toward emissions reductions, producing environmentally sustainable products.