TRA ANNUAL SUMMARY REPORT

OPERATIONAL COMPARISON 2017-2018

BASIC FACILITY INFORMATION

Company Name:	Floradale Feed Mill Limited
Facility Address:	2131 Floradale Road Floradale, Ontario N0B 1V0
Contact Information:	Brian Chamberlain Operations Manager 519-669-5478 brianc@ffmltd.com
Certifying Official:	Craig Schwindt President 519-669-5478 craigs@ffmltd.com
Parent Company:	Floradale Feed Mill Limited 100% ownership
UTM Locator (NAD83):	Zone - 17 533851E; 4830854N
The facility's NPRI ID:	0000010220

In 2018, Floradale Feed Mill Ltd. employed about 90 full time employees (equivalent)

The NAICS codes applicable to the facility are:

31	- Manufacturing
3111	– Animal Food Manufacturing
311119	– Other Animal Food Manufacturing

TOXIC REDUCTION STRATEGY STATEMENT OF INTENT

Floradale does not intend to reduce the amount of phosphorous, manganese, zinc or cobalt used in its production of animal feeds nor is there any option at this time to reduce the creation of the particulate matter (PM10 or PM2.5) that results from the handling and processing of the bulk dry feed ingredients (whole grains).

However as Floradale is committed to protecting the environment, wherever feasible, the reduction of these substances will be implemented should alternatives that are both technically and economically feasible be identified. Our employees are encouraged to participate in all types of reduction activities but the toxic substances associated with Floradale operations are primary ingredients in our feeds to improve and maintain the health of livestock and companion animals or by-products created during the processing activities or supporting operations. An additional effort is also ongoing at the facility to reduce the discharge and disposal of these toxic substances as this is not only environmentally responsible operations it also indicates improved efficiencies in our processing operations.

REDUCTION OBJECTIVES

The toxic substances that Floradale uses and/or is created on-site is specific to the feed formulations they produce. The objective is not to reduce the amount of phosphorous, manganese, zinc or cobalt used as this will increase as production increases. The creation of particulate matter (PM10 and PM2.5) results from the handling of the bulk dry feed ingredients (whole grains). As production levels increase the creation of particulate matter will also increase due to the increased quantity of whole grains processed. Floradale has invested in raw material storage and handling to accommodate raw ingredients that can be purchased in a liquid phase and will continue this practice where applicable to their operations.

TOXIC SUBSTANCES

Two (2) substances were required to be tracked, quantified and reported for under TRA – Phase I requirements for the 2011 operational year. These substances were Manganese and Zinc.

The TRA Phase II reporting required tracking of all other NPRI substances for the 2012 operational year. Three (3) substances were required to be tracked, quantified and reported for under TRA-Phase II. This included Phosphorous, PM2.5 and PM10. The cobalt reporting threshold was reduced for the 2016 operating year from 10,000 kg to 50 kg. As a result, cobalt was added to the list of required substances to be reported. The four (4) substances were reported to the Ministry of the Environment and Climate Change under O. Reg. 455/09 through SWIM.

The mandatory reporting substances for the 2018 operational year include all 6 substances: Manganese, Phosphorous, Zinc, Cobalt, PM10, and PM2.5

TRACKING AND QUANTIFICATIONS

The method used to calculate the TRA quantifications was a mass balance approach based on purchase records and emission estimates were based on published AP-42 emission factors. This is the best available method as there is no site specific monitoring data available.

Table 1 is a summary of reported TRA quantities for the 2018 operational year. When compared to the last reported values, no change is noted as the facility is operating at peak capacity.

In the 2018 operational year, there were no out of the ordinary incidents or significant process changes at the facility.

Table 1: Comparison of Quantities Reported

CAS	Substance	Description of Processes that Use or Create Substance	Reporting under NPRI Part	NPRI Threshold (tonnes)	2018 Used (tonnes)	2017 Used – Last Reported Value (tonnes)	% Change	2018 Created (tonnes)	Created 2017 - Last Reported Value	% Change	2018 Contained In Product (tonnes)	Contained in Product 2017- Last Reported Value	% Change	Reason for Changes
NA-09	Manganese (and its compounds)	Used as a formulation component	Part 1	10 (MPO)	>10-100	>10-100	0.00%	0.00	0.00	0.00%	>10-100	>10-100	0%	No significant change
NA-22	Phosphorous (total)	Used as a formulation component	Part 1	10 (MPO)	>100-1000	>100-1000	0.00%	0.00	0.00	0.00%	>100-1000	>100-1000	0%	No significant change
NA-14	Zinc (and its compounds)	Used as a formulation component	Part 1	10 (MPO)	>10-100	>10-100	0.00%	0.00	0.00	0.00%	>10-100	>10-100	0%	No significant change
7440-48-4	Cobalt (and its compounds)	Used as a formulation component	Part 1	0.05 (MPO)	>0.100-10	>0.100-10	0.00%	0.00	0.00	0.00%	>0.100-10	-	0%	No significant change
NA-M10	PM2.5 - Particulate Matter	Grain Processing, Supporting Operations	Part 4	0.3 (Release)	0.00	0.00	0.00%	>10-100	>10-100	-0.98%	0.00	0.00	0%	No significant change
NA-M09	PM10 - Particulate Matter	Grain Processing, Supporting Operations	Part 4	0.5 (Release)	0.00	0.00	0.00%	>100-1000	>100-1000	-0.98%	0.00	0.00	0%	No significant change

COMPARISION OF TRACKING AND QUANTIFICATION

No changes were made in the quantification and tracking methodology from 2017 to 2018.

DESCRIPTION OF STEPS TAKEN TO ACHIEVE OBJECTIVE AND ASSESS EFFECTIVNESS

There was no technologically feasible reduction strategy objectives identified for the Floradale facility and as such there was no economic feasibility study completed for any of the prescribed substances.

There are no objectives to track or reduction targets to evaluate.

Table 2 provides a summary of the facility TRA changes and updates which took place in 2018.

Table 2:	Changes in Quantifications, Quantities and Plan Updates								
CAS	**Substance**	**Quantification Method(s) Used**	**Change in Quantification Method Used**	**Rationale for Using Selected Method(s)**	**Incidents out of the Ordinary**	**Significant Process Change**	**Objectives, Descriptions, Targets**	**Actions**	**Amendments**
NA-09	Manganese (and its compounds)	Mass Balance/Emission Factors	No change	No site specific monitoring data available	No	No	No reduction options were identified to be both technically and economically feasible. Therefore, no options were chosen for implementation.	None	None
NA-02	Phosphorous (total)	Mass Balance/Emission Factors	No change	No site specific monitoring data available	No	No	No reduction options were identified to be both technically and economically feasible. Therefore, no options were chosen for implementation.	None	None
NA-14	Zinc (and its compounds)	Mass Balance/Emission Factors	No change	No site specific monitoring data available	No	No	No reduction options were identified to be both technically and economically feasible. Therefore, no options were chosen for implementation.	None	None
7440-48-4	Cobalt (and its compounds)	Mass Balance/Emission Factors	First year of reporting	No site specific monitoring data available	No	No	No reduction options were identified to be both technically and economically feasible. Therefore, no options were chosen for implementation	None	None
NA-M10	PM2.5 - Particulate Matter	Mass Balance/Emission Factors	No change	No site specific monitoring data available	No	No	No reduction options were identified to be both technically and economically feasible. Therefore, no options were chosen for implementation.	None	None
NA-M09	PM10 - Particulate Matter	Mass Balance/Emission Factors	No change	No site specific monitoring data available	No	No	No reduction options were identified to be both technically and economically feasible. Therefore, no options were chosen for implementation.	None	None

CONFIRMATION STATEMENT OF THE HIGHEST RANKING EMPLOYEE

As of 20 December 2013, I, Craig Schwindt, confirm 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 deadline, the plan meets all other requirements of the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act.

Manganese (and its compounds)	NA-09
Zinc (and its compounds)	NA-14

Craig Schwindt
President
Floradale Feed Mill Limited

CERTIFICATION OF HIGHEST RANKING EMPLOYEE

As of 20 December 2013, I, Craig Schwindt, 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 complies with the Toxics Reduction Act, 2009 and Ontario Regulation 455/09 (General) made under that Act.

Phosphorous (total)	NA-22
Particulate Matter <= 10 microns (PM_{10})	NA-M09
Particulate Matter <= 2.5 microns ($PM_{2.5}$)	NA-M10

Craig Schwindt
President
Floradale Feed Mill Limited