

Niagara CAER Group
Community Awareness – Emergency Response

Chemical Companies
Emissions Report
(NERM)

2016 Report for 2015 Emissions

Niagara CAER Group Chemical Companies

2016 Emissions Report

(For 2015)

Index

Page	Description
1	Index
2	Introduction and Summary
3	CAER Member Companies
4	Company Contact List
5	Chemicals Manufactured and Uses
6	CAER Group Impact on Communities
7	Explanations
8	Chart No.1 – Chemical Emissions
9	Chart No.2 – Production Volumes
10	Chart No.3 – Chemical Emissions per 1000 Kg. Production
11	Chart No.4 – Chemical Wastes
12	Chart No.5 – Chemical Wastes per 1000 Kg. Production
13	Chart No.6 – Combustion Emissions
14	Chart No.7 – Combustion Emissions per 10000 Kg. Production
15	Table 1 – Chemical Emissions to Air and Water
16	Table 2 – Chemical Wastes
17	Table 3 – Combustion Emissions
18	Non Plant and Associate Members
19	Web Site and Contact information

Introduction

- Issued annually by the Niagara CAER Group Chemical Companies.
- A commitment to being open with the public.
- This is the twenty third year of publication.
- Production levels have decreased by 2% in 2015 from 2014.
- Member companies strive to reduce chemical emissions and chemical waste.
- Results are presented as charts and tables.

Summary of Report

- 2015 Chemical emissions have decreased from previous year.
- Chemical emissions Per Kg. of production were lower than the previous year.
- Combustion emission levels per kilogram of production were unchanged from previous year as production levels dropped slightly.
- Waste generation was up slightly from previous year.

**NIAGARA CAER
Member Companies**

Chemtrade Logistics Inc.

Solvay/Cytec Canada Inc.

Durez Canada Company Ltd.

Kemira Chemicals Canada Inc.

Mancuso Chemicals Limited

Oxy Vinyls Canada Co.

Photech Environmental Solutions

Member Companies Contact Names

Company	Contact Name and Number	
Chemtrade Logistics Inc.	Tim Haniford	905-356-8763
	Joe Iuliano	905-354-3233
CYTEC Canada Inc.	Amy Mather	905 374-5786
	Christine Mariotti	905 374-5849
Durez Canada Company Ltd.	Robert Hunt	905 346-8615
	Kevin Rady	905 346-8625
Kemira Chemicals Canada Inc.	Bruno Montpetit	905-688-6470
	Lynn Blanchard	905-688-6470
Mancuso Chemicals Ltd.	Dave Senior	905-357-3626
	Bob Montgomery	905-357-3626
Oxy Vinyls Canada Co.	Jim Segada	905-374-5601
	Jane Perz	905-374-5629
Photech Environmental Solutions	Dan Platakis	905 328-7826

Chemicals Manufactured and Uses

- **Solvay/Cytec: Phosphine, Fumigants, Mineral Extractants, Speciality Phosphine Chemicals**
Electronics Industry, Metal Recovery, Mining industry, Fumigation, Biocides
- **Durez: Phenolic Resins and Compounds,**
Automotive, Brake pistons, Clutch Facings, Electrical Applications.
- **Chemtrade Logistics: Distributes Sulphur Products, Sulphur Dioxide and Molten Sulphur.**
Pulp and paper, Electronics, mines and cyanide destruction.
- **Oxy Vinyls: PVC Resins**
Construction: Pipe & fittings, House Siding, Window Frames, Floors, Wallpaper, Fencing, roof and pool membranes. Packaging, Medical Tubing, Wire and Cable, Automotive dashes, bumpers and trim.
- **Kemira: Defoamers, Dyes and specialty Chemicals.**
Water treatment and allied processes in pulp and paper production; oil & mining processes, and paint formulation.
- **Mancuso: Phenolic, Furan and Alkyd Resins, Aryl Sulfonic Acids,**
Binder systems for foundries and Alkyds for Industrial Coatings.
- **Photech: Recycle paint, Recover Hydrocarbons.**

NIAGARA CAER GROUP
2015 COMPOSITE PROFILE
For 2016 Emissions Report

		2015	2014
Number of Employees		387	389
Payroll (Including Benefits)	\$	40,140,113	36,927,080
Taxes	\$	1,288,165	963,379
Utilities	\$	12,327,104	12,518,922
Value of Supplies and Services	\$	17,726,201	16,259,200
Value of Sales	\$	524,976,538	508,358,916
Percent of Products Exported	%	67	79
Production Levels,	kg	295,190,370	302,515,809
2015 Production Estimate,	kg	302,467,447	
Charity Support (United Way etc.)	\$	48,255	44,283

Explanations

Chemical Emissions

- Chemical emissions for 2015 decreased by 15% from 2014 levels
- Production levels were down by 2% from 2014.
- 2015 emission levels decreased by 15% despite only slightly lower production levels
- Most significant chemical emissions were reduced while others increased due to product mix and calculations and formulas for the NPRI report.

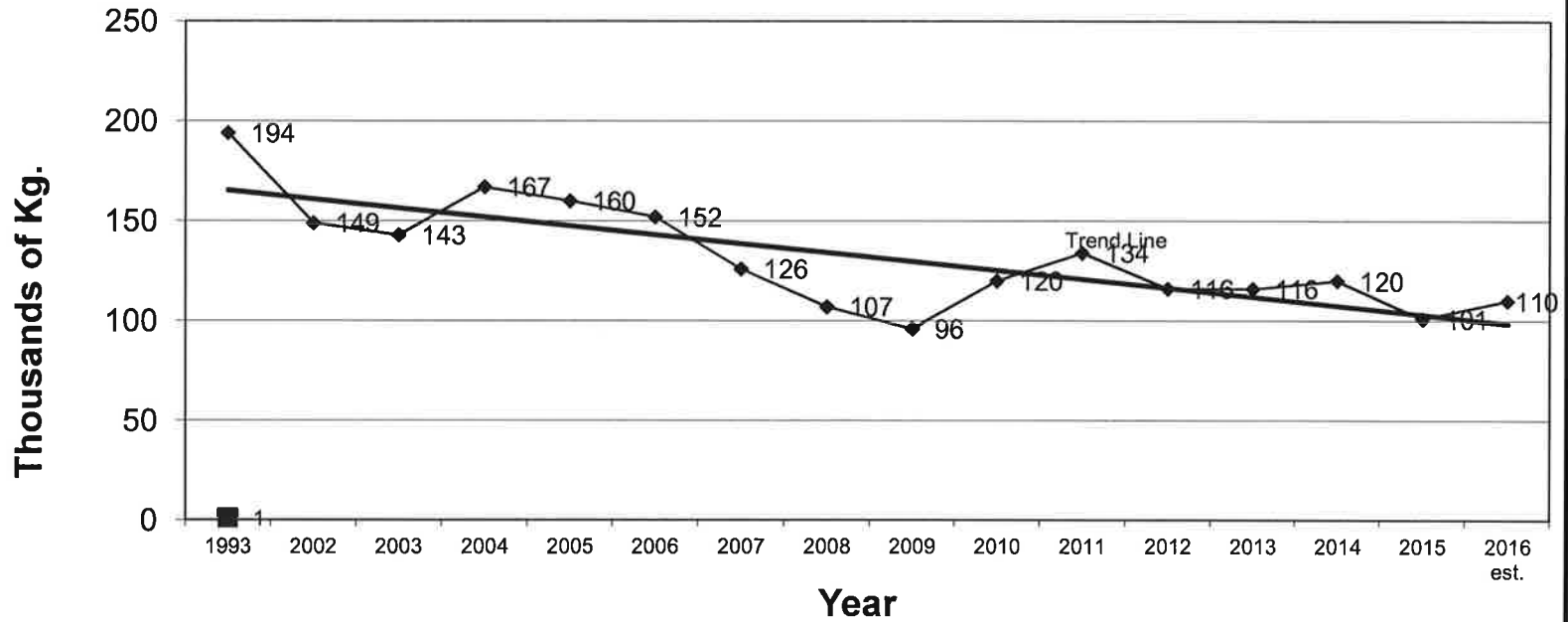
Chemical Wastes

- Chemical wastes increased by 3% from 2014 levels.
- Chemical wastes per kg of production increased slightly over the previous year due to lower production levels
- Chemical wastes are sometimes accumulated over time and sent for treatment.
- Plants are doing a great job in controlling waste to landfill, incineration and water.
- More recycling is being done to reduce waste materials.
- The majority of wastes are recycled/treated waste.

Combustion Emissions

- Greenhouse gases were unchanged from 2014 levels
- Combustion emissions are tied directly to production levels and heating requirements.
- Combustion levels are variable due to weather conditions.

**Chart No. 1
Chemical Emissions**



Overall Chemical Emissions decreased 15% from 2014 levels.

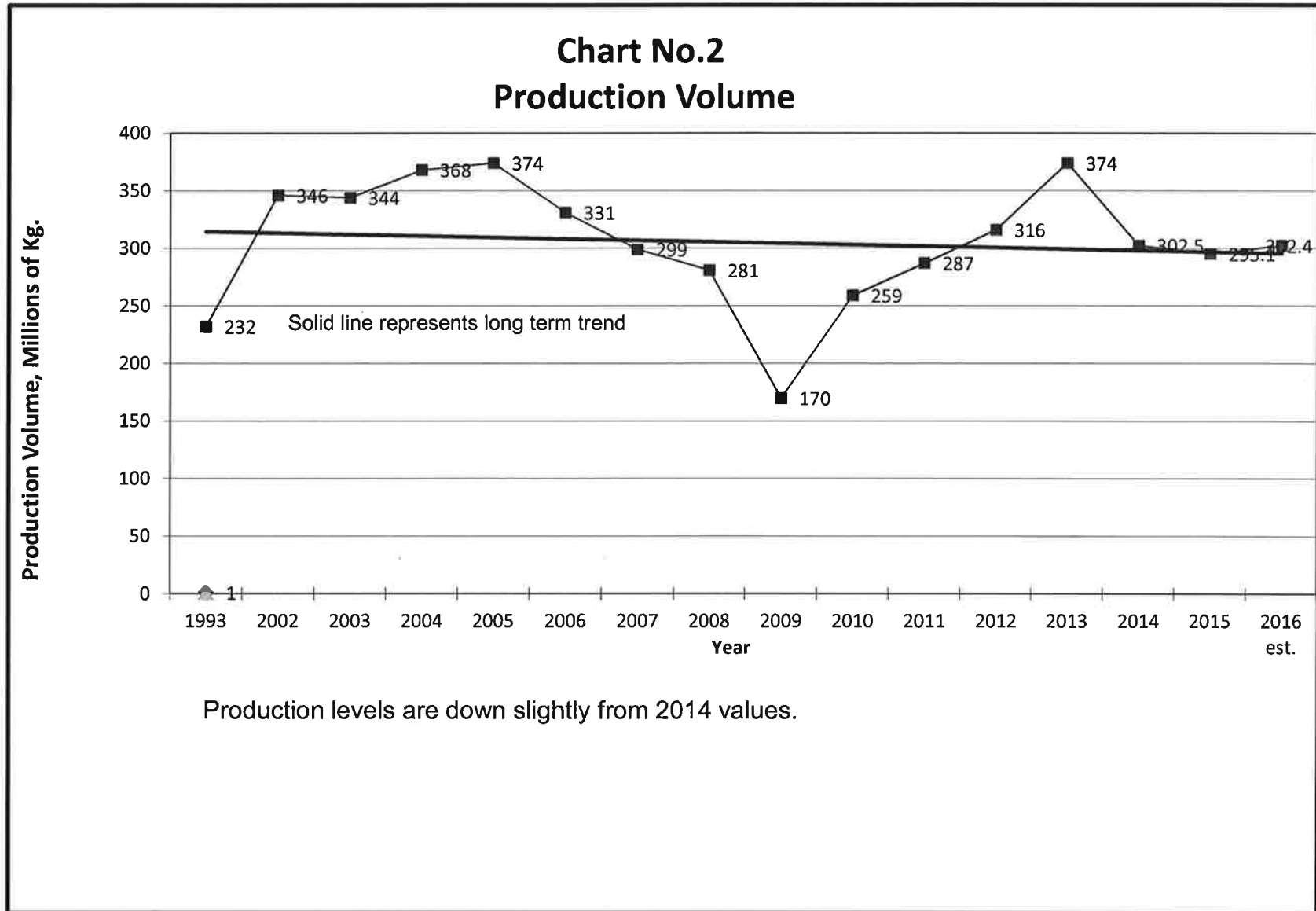
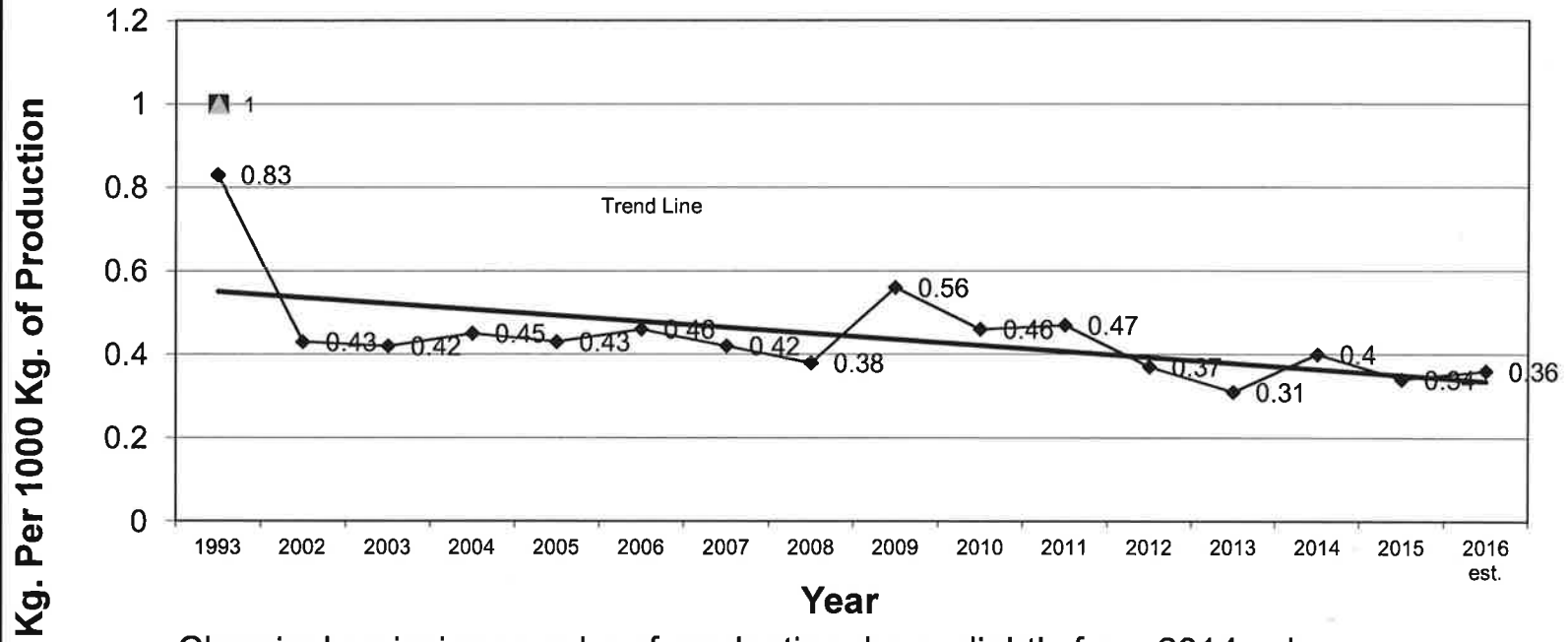
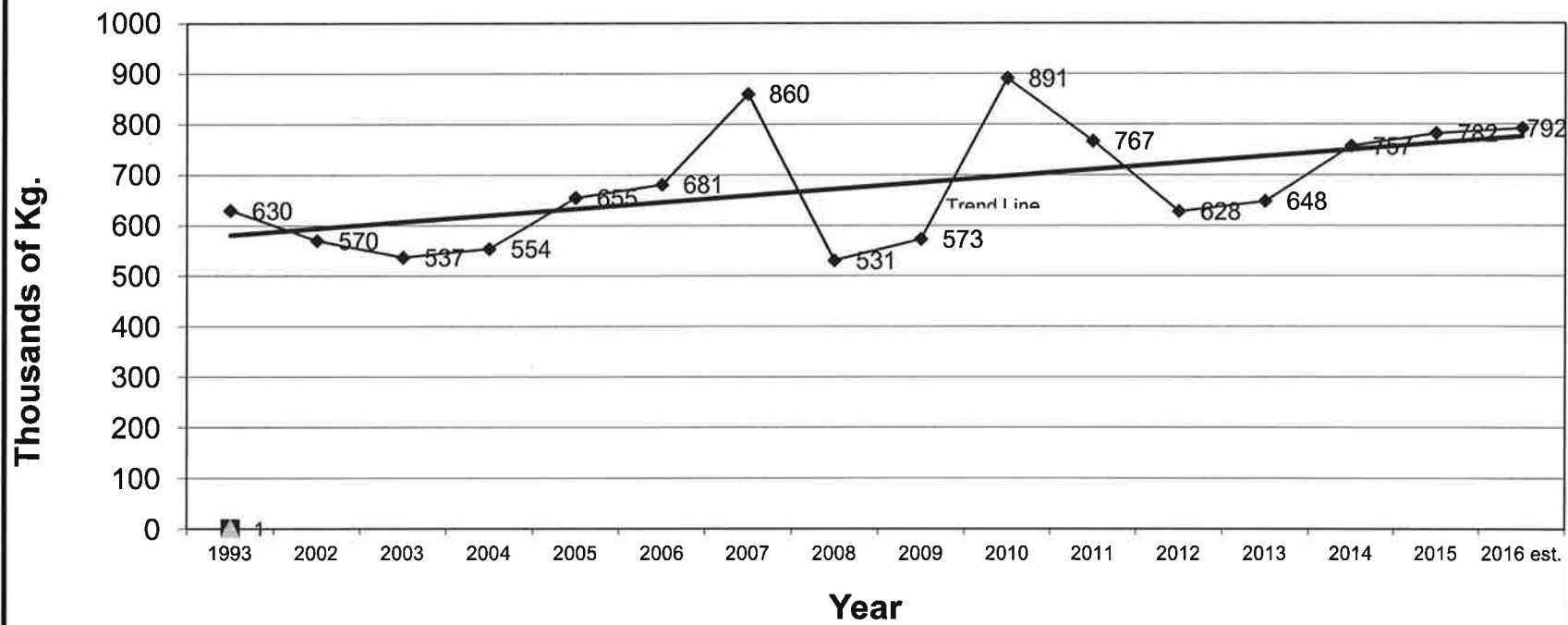


Chart No. 3
Chemical Emissions Per 1000 Kg. Of Production



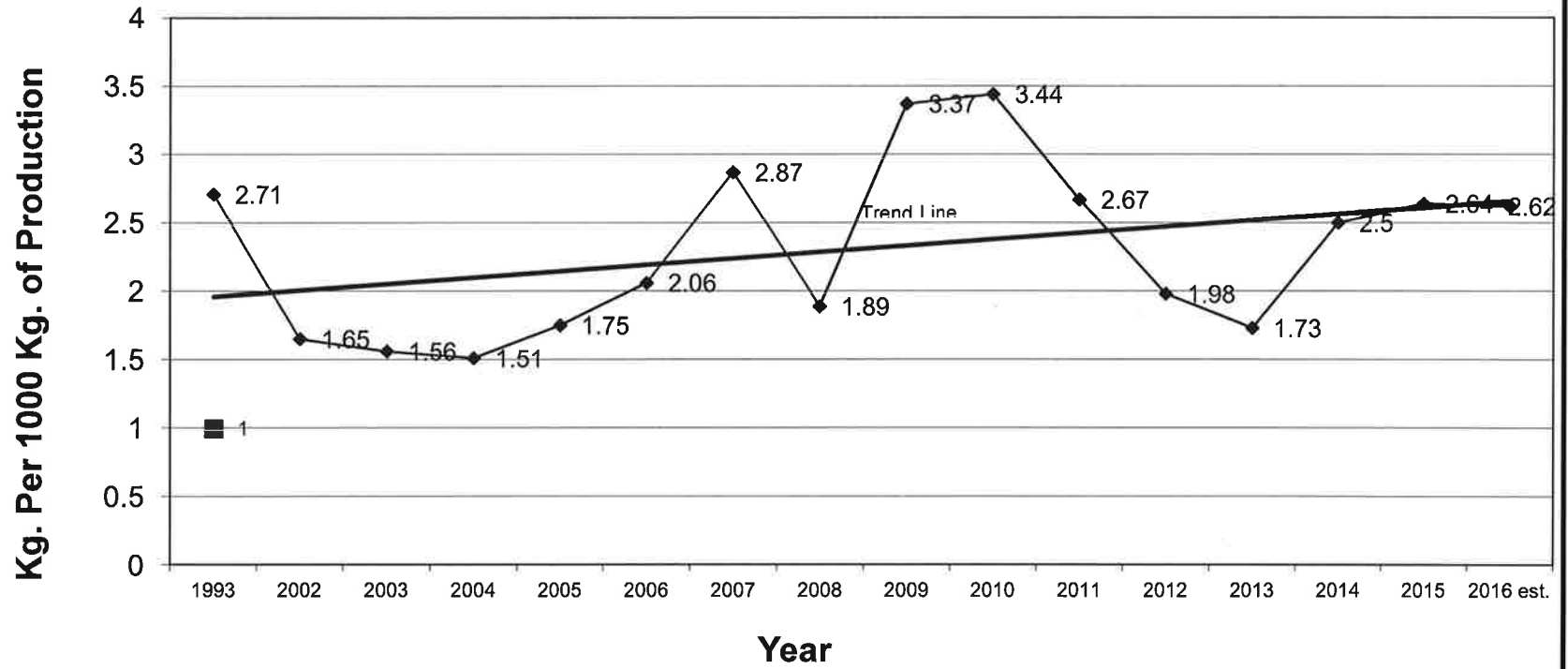
Chemical emissions per kg of production down slightly from 2014 values..

**Chart No. 4
Chemical Wastes**

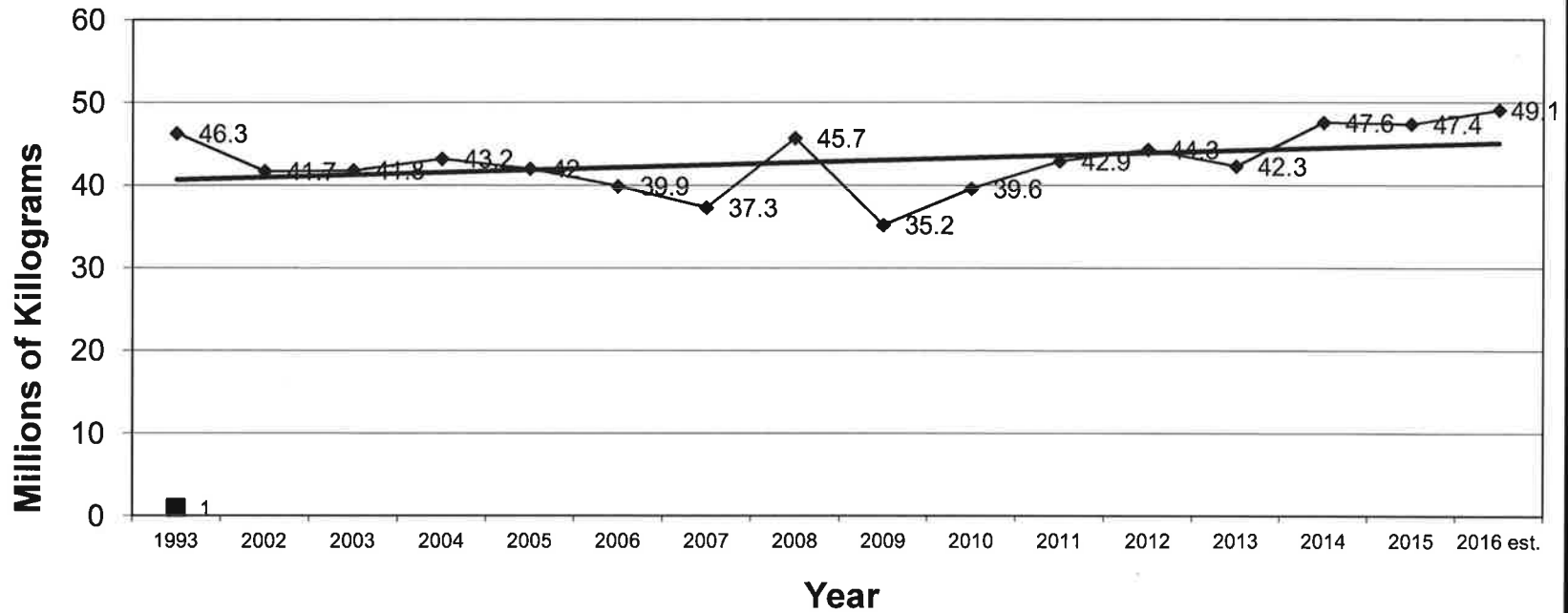


Chemical Wastes are accumulated over time and periodically shipped out for treatment. As a result, depending on the shipping dates, there can be big swings in "apparent" generation of wastes.

Chart No. 5
Chemical Wastes Per 1000 Kg. of Production

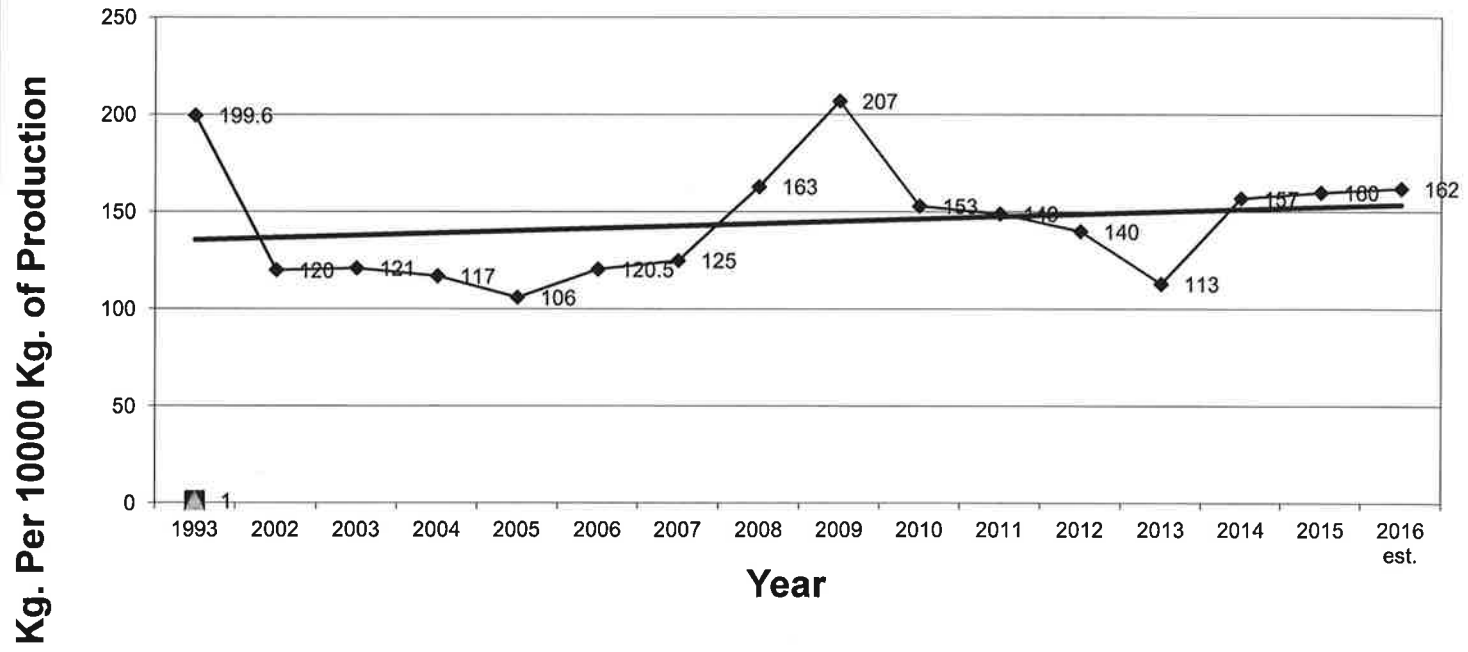


**Chart No. 6
Combustion Emissions**



Combustion Emissions were up unchanged from 2014 levels.

Chart No. 7
Combustion Emissions per 10000 Kg. of Production



Chemical Emissions to Air and Water
Year 2015 Emissions and Comparisons with 2014 Results
Table 1

Plant No.	Chemical Name	Amount Released in 2015 Kilograms		Total 2015 kg.	Total 2014 kg.	% Change From 2014	Estimate 2016 kg.
		Waterway	Air				
2	Nitrogenous Material	887		887	1218	-27	1500
1,2,3	Ammonia	706	26,362	27,068	30,692	-12	29,500
2,3,5,6	Methanol		439	439	767	-43	500
2	Iso Octane		3,000	3000	4800	-37	5,500
2	Vinyl Chloride	1	386	387	403	-4	500
6	Hydrochloric Acid			0	0		0
3,5	Kerosene Type Solvents		1,905	1905		+100	2020
3,5	Ethyl Alcohol		40,052	40,052	55,081	-27	42,000
1,2	Nitrate Ion	20,003		20,003	18,813	+6	21,500
1,5	Isopropanol		38	38	73	-48	100
2,3,6	Phenol	2	4,505	4,507	4,032	+12	3,902
1,3,6	Formaldehyde		66	66	67	0	68
5	Glycol Ether		318	318	269	+18	277
2	Oil and Grease	890		890	988	-11	980
2	Phosphorus Salts	215		215	211	+2	225
2	Aluminum Ion	137		137	94	+45	100
5	Acetic acid		951	951	2168	-56	1,000
4	Sulphur Dioxide		178	178	178	0	150
	Emissions less than 100 kg./yr.*		120	120	168	-4	160
	Total Emissions, kg.	22,841	78,320	101,161	120,022	-15.7	109,982

Identification of Companies: (1) Solvay/Cytec (2) Oxy Vinyls (3) Durez (4) Chemtrade Logistics (5) Kemira Chemicals (6) Mancuso Chemicals

*Includes: zinc; HCFC; cyanide; calcium hydroxide; ferric oxide; carbon black; naphthalene; 1,2,4-trimethyl benzene; furfuryl alcohol; ethyl benzene; gasoline, Toluene, Xylene

Chemical Wastes

Year 2015 Data and Comparisons with 2014 and 2016 Estimates

Table 2

Plant No.	Chemical Name	Amount Transferred in 2015 Kilograms		Total 2015 Kg	Total 2014 Kg	% Change From 2014	Estimate 2016 kg.
		Landfill	Recycled/Treated				
1	Tributyl-Phosphine Sulfide	0	0	0	42,698	-100	15,000
3,6	Phenol*	1,462	79,145	80,607	41,079	+96	77,623
1,2,5,6	Liquid Industrial Waste (Oils,etc)		256,925	256,925	211,586	+21	210,952
2	Vinyl Resins*	73,883		73,883	77,088	-4	75,000
1	Phosphorus Salts	0	2,115	2,115	2,479	-15	2,700
1,2,4,5	Waste Misc. Haz. Prod. & Rinses	6,477	344,231	350,678	347,322	+1	385,000
3	Formaldehyde*	84	4,675	4,759	12,432	-61	15,000
4	Sodium Hydroxide		6,330	6,330	6,330	0	5,500
6	Polymer Resin Solutions ***		6,300	6,300	15,667	-60	5,670
6	Chromic acid Solutions ***			0	132	-100	0
6	Isocyanate Solution ***			0	272	-100	0
Chemicals with wastes of 100 Kg. or less per year **							
Total Chemical Wastes		81,906	699,721	781,627	757,180	+3	792,445

Identification of Companies: (1) Solvay/Cytec (2) Oxy Vinyls (3) Durez (4) Chemtrade Logistics (5) Kemira Chemicals (6) Mancuso Chemical

*Amounts shown do not include material recycled into a customer's process stream and converted into a finished product or sold as scrap for reuse.

** Includes: Mercury and Batteries.

*** Not reported in previous years.

Combustion Emissions

Burning Fuel For Steam Generation And Drying Emissions for 2015 and 2014 and Estimates for 2016

Table 3

Combustion Product Component	Amount Released		
	2015	2014	2016 Estimate
Carbon Dioxide 1000 tonnes	47.3	46.9	49.0
Nitrogen Dioxide tonnes	53.965	41.3	41.60
Carbon Monoxide tonnes	30.0	27.7	29.2
Sulfur Oxides tonnes	1.80	1.64	1.60
Methane tonnes	2.07	1.12	1.38
Volatile Organic Carbon tonnes	3.38	1.6	2.87
Totals 1000 tonnes	47.4	47.6	49.1

Non Plant CAER Members

Fire Departments From

Fort Erie, Niagara Falls, Thorold, St Catharines

Niagara Region Police

CN Police

Niagara Region EMS

Niagara Health System

Niagara College

Associate CAER Members

First Response Environmental

Terrapure Emergency Response Services

Quantum Murray Emergency Response and Training

GHD Incident Response Services

Niagara CAER Group
Community Awareness – Emergency Response

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