

Niagara CAER Group

Community Awareness – Emergency Response

Chemical Companies

Emissions Report

(NERM)

2017 Report for 2016 Emissions

Niagara CAER Group Chemical Companies

2017 Emissions Report

(For 2016)

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 fourth year of publication.
- Production levels have increased slightly in 2016 from 2015.
- Member companies strive to reduce chemical emissions and chemical waste.
- Results are presented as charts and tables.

Summary of Report

- 2016 Chemical emissions have increased slightly from previous year.
- Chemical emissions Per Kg. of production have leveled out the past 3 years.
- Combustion emission levels per kilogram of production were unchanged from previous year as production levels increased slightly.
- Waste generation has decreased 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.	Mike Kill	419 234-0138
	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
2016 COMPOSITE PROFILE
For 2017 Emissions Report

		2016	2015
Number of Employees		338	387
Payroll (Including Benefits)	\$	40,330,097	40,140,113
Taxes	\$	1,361,522	1,288,165
Utilities	\$	13,992,981	12,327,104
Value of Supplies and Services	\$	19,791,175	17,726,201
Value of Sales	\$	517,311,227	524,976,538
Percent of Products Exported	%	78	67
Production Levels,	kg	296,647,683	295,190,370
2017 Production Estimate,	kg	311,896,094	
Charity Support (United Way etc.)	\$	40,900	48,255

Explanations

Chemical Emissions

- Chemical emissions for 2016 increased by 6% from 2015 levels
- Production levels were up by slightly from 2015.
- 2016 emission levels increased by 6% despite only slightly higher production levels
- Most significant chemical emissions were reduced while others increased due to product mix and calculations and formulas for the NPRI report.

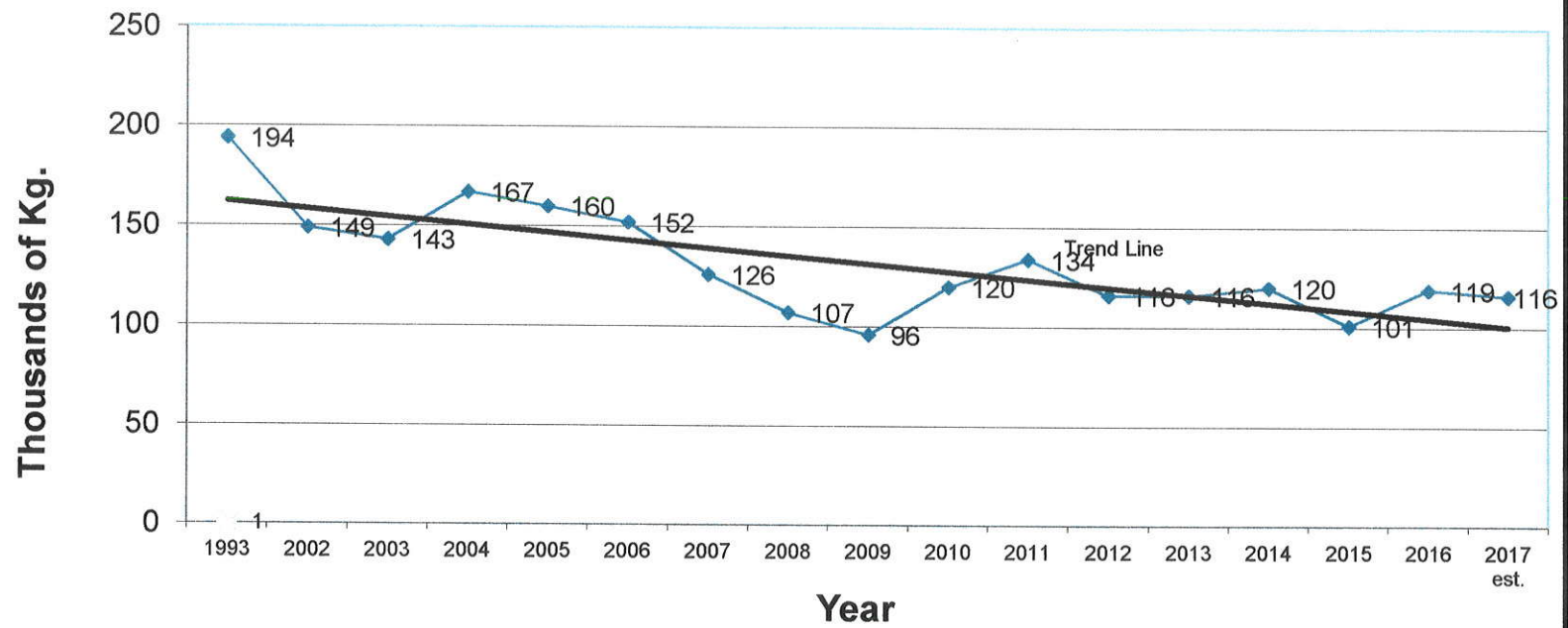
Chemical Wastes

- Chemical wastes decreased by 13% from 2015 levels.
- Chemical wastes per kg of production decreased from the previous year despite higher 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 lower from 2015 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



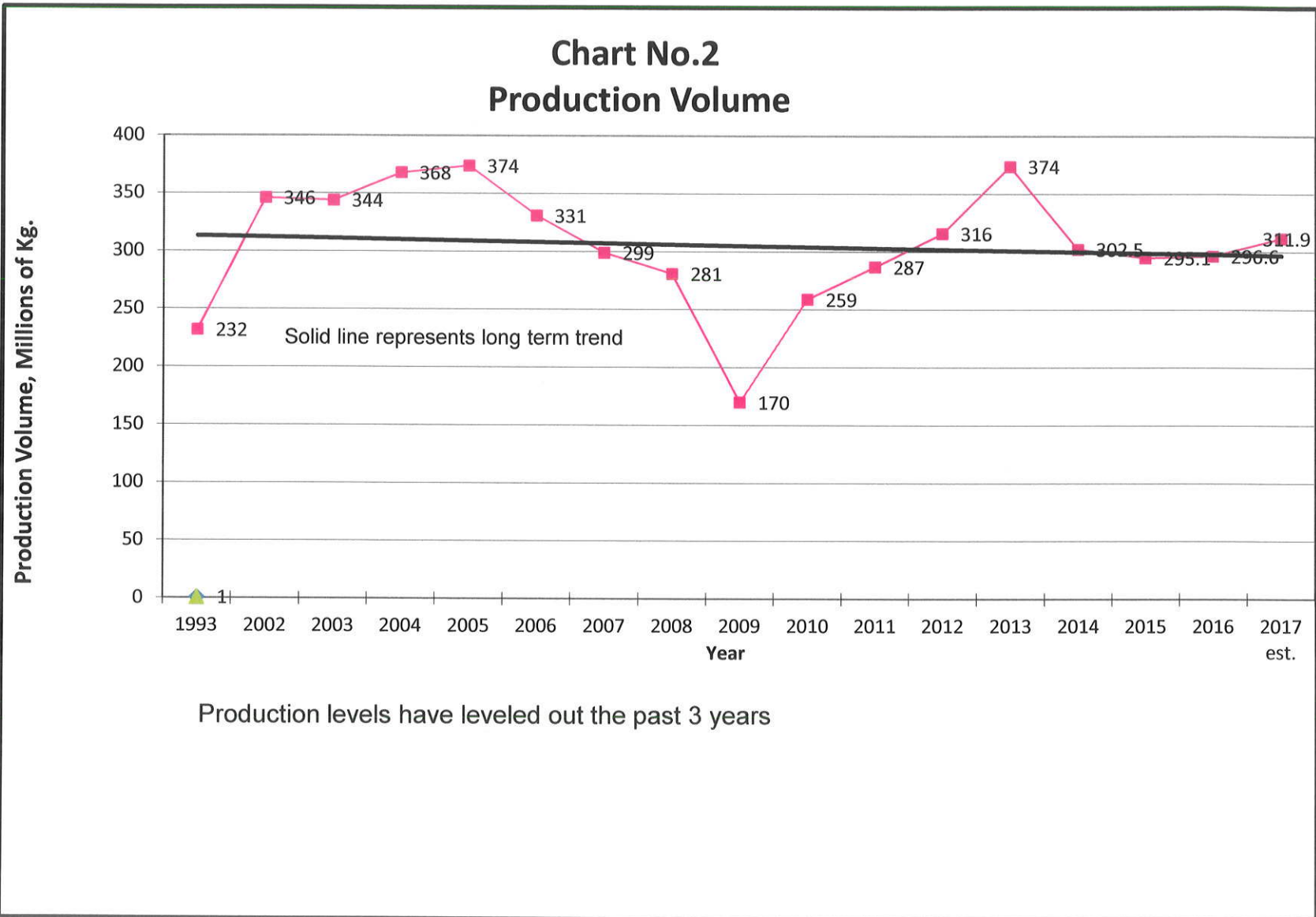
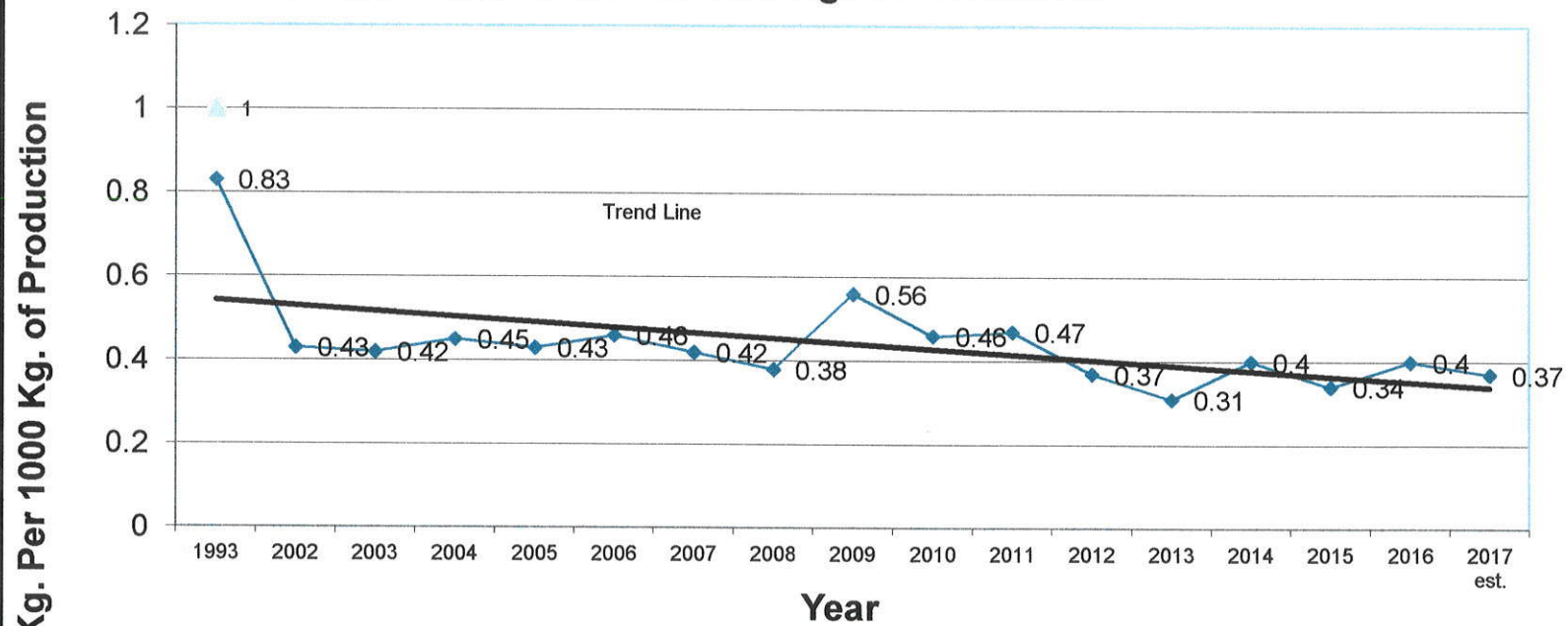
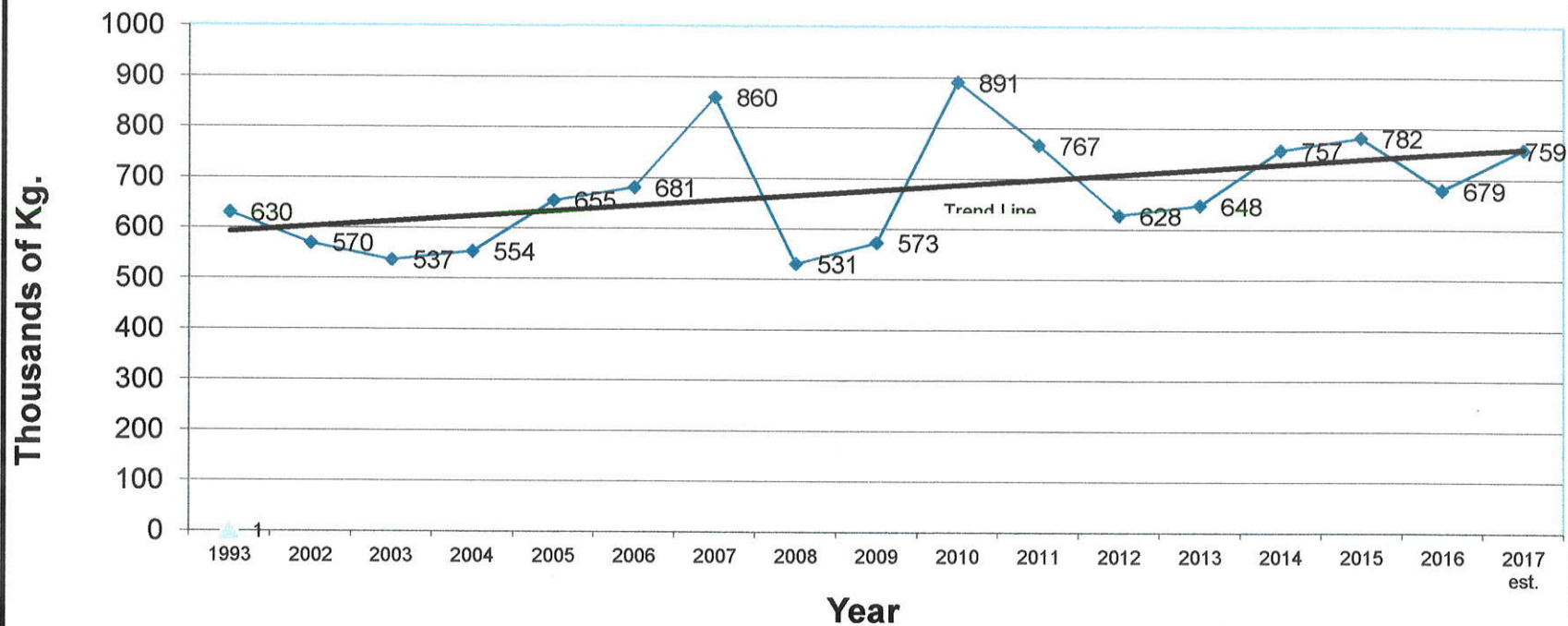


Chart No. 3
Chemical Emissions Per 1000 Kg. Of Production



Chemical emissions per kg of production have leveled out for 2 yrs...

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

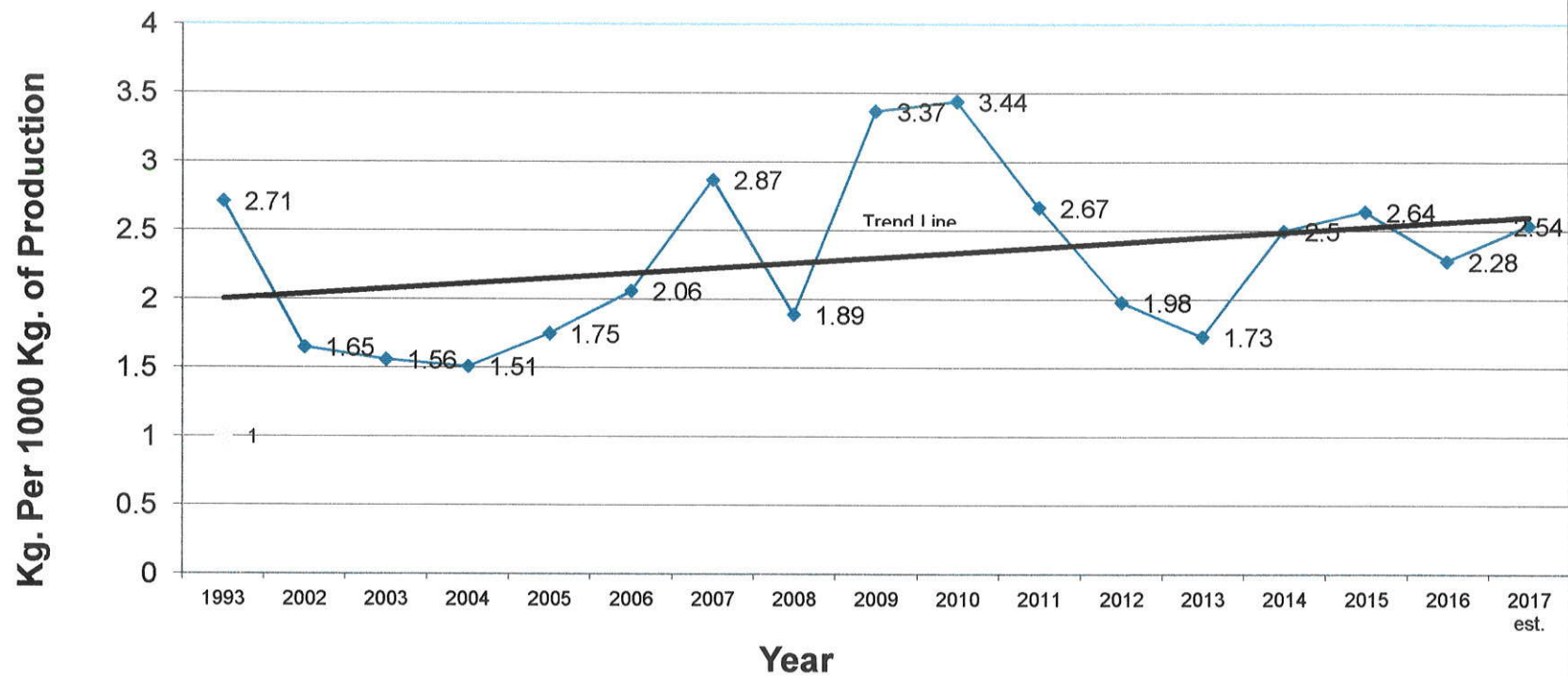


Chart No. 6
Combustion Emissions

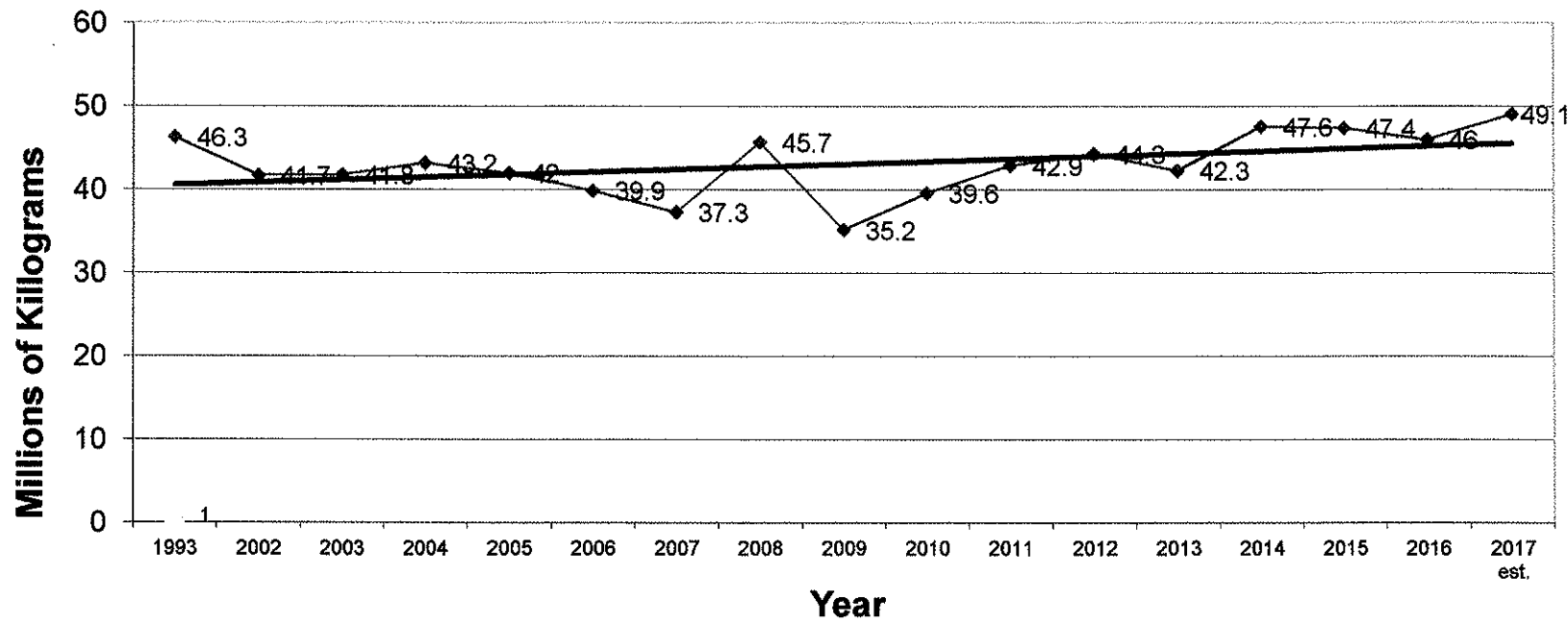
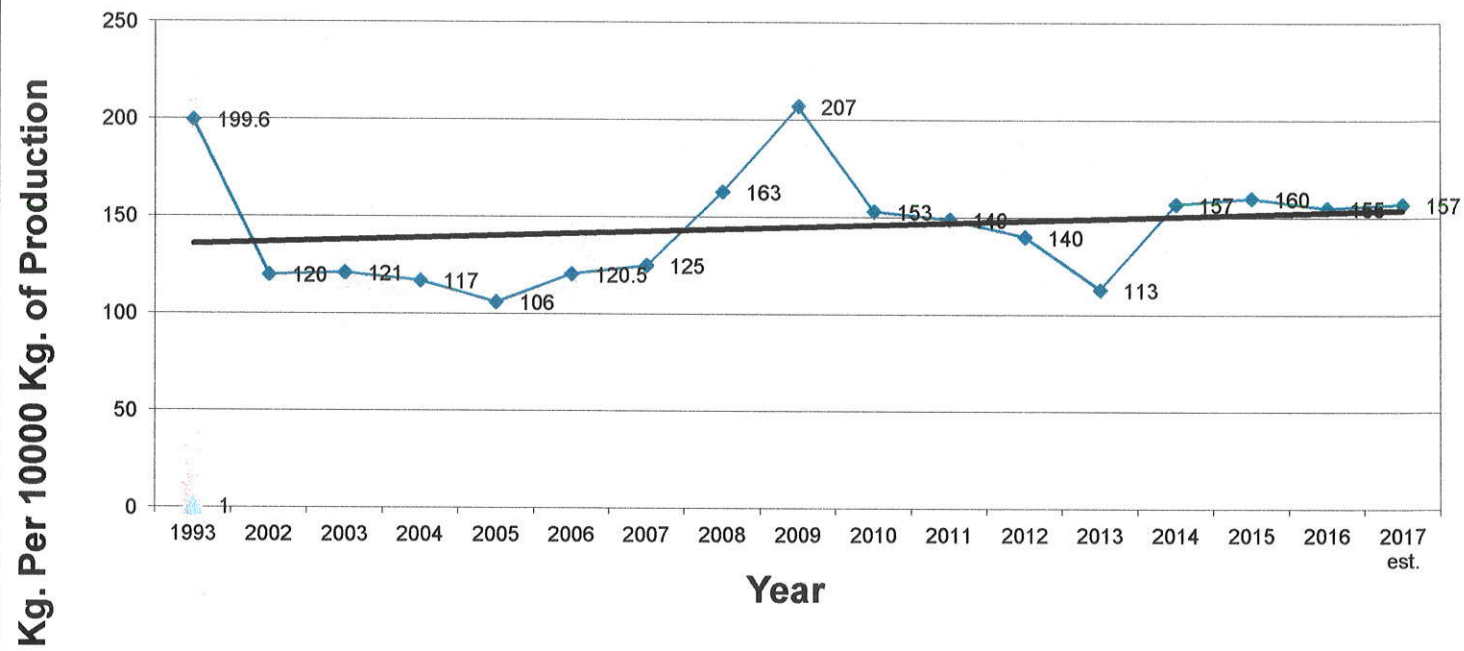


Chart No. 7
Combustion Emissions per 10000 Kg. of Production



Chemical Emissions to Air and Water
Year 2016 Emissions and Comparisons with 2015 Results
Table 1

Plant No.	Chemical Name	Amount Released in 2016 Kilograms		Total 2016 kg.	Total 2015 kg.	% Change From 2015	Estimate 2017 kg.
		Waterway	Air				
2	Nitrogenous Material	855	0	855	887	-4	1,500
1,2,3	Ammonia	711	27,377	28,088	27,068	+4	28,250
2,3,5,6	Methanol	0	196	196	439	-55	400
2	Iso Octane	0	2,400	2,400	3,000	-20	5,500
2	Vinyl Chloride	1	352	353	387	-7	500
3	White Mineral Oil**	0	104	104	0	+100	100
3,5	Ethyl Alcohol	0	59,627	59,627	52,214	+14	50,000
1,2	Nitrate Ion	21,110	0	21,110	20,003	+5.5	23,500
1,5	Isopropanol	0	48	48	38	+26	50
2,3,6	Phenol	00	3,794	3,794	4,507	-17	4,000
1,3,6	Formaldehyde	0	55	55	66	+16	60
5	Sodium Metasilicate**	0	122	122	0	+100	125
2	Oil and Grease	909	0	909	890	+2	980
2	Phosphorus Salts	234	0	234	215	+9	250
2	Aluminum Ion	316	0	316	137	+130	100
5	Sodium Gluconate**	0	133	133	0	+100	150
4	Sulphur Dioxide	0	0	0	178	-100	0
5	Acetic Acid	0	0	0	951	-100	0
5	Glycol Ether	0	0	0	318	-100	0
	Emissions less than 100 kg./yr.*	5	303	308	120	+156	300
	Total Emissions, kg.	24,141	94,511	118,652	111,418	+6.5	115,765

Identification of Companies: (1) Solvay/Cyttec (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

** New Chemicals added to the list

Chemical Wastes

Year 2016 Data and Comparisons with 2015 and 2017 Estimates

Table 2

Plant No.	Chemical Name	Amount Transferred in 2016 Kilograms		Total 2016 Kg	Total 2015 Kg	% Change From 2015	Estimate 2017 kg.
		Landfill	Recycled/Treated				
1	Tributyl-Phosphine Sulfide	6,240	0	6,240	0	+100	15,000
3,6	Phenol*	1,196	62,056	63,252	80,607	-20	65,000
1,2,5,6	Liquid Industrial Waste (Oils,etc)	0	207,613	207,613	256,925	-19	175,250
2	Vinyl Resins*	62,785	0	62,785	73,883	-18	70,000
1	Phosphorus Salts	0	2,612	2,612	2,115	+23	2,700
1,2,4,5	Waste Misc. Haz. Prod. & Rinses	7,695	285,076	292,771	350,678	-16	375,400
3	Formaldehyde*	74	4,372	4,446	4,759	-6	5,000
4	Sodium Hydroxide		16,798	16,798	6,330	+265	2,500
6	Polymer Resin Solutions ***		22,560	22,560	6,300	+358	48,000
6	Chromic acid Solutions ***		0		0		0
6	Isocyanate Solution ***		0		0		0
Chemicals with wastes of 100 Kg. or less per year **							
Total Chemical Wastes		77,990	601,087	679,077	781,597	-13	758,850

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 2016 and 2015 and Estimates for 2017

Table 3

Combustion Product Component		Amount Released		
		2016	2015	2017 Estimate
Carbon Dioxide	1000 Metric tonnes	45.95	47.3	49.0
Nitrogen Dioxide	Metric tonnes	40.4	54.	44.3
Carbon Monoxide	Metric tonnes	28.3	30.0	30.9
Sulfur Oxides	Metric tonnes	0.367	1.80	1.6
Methane	Metric tonnes	1.062	2.07	1.34
Volatile Organic Carbon	Metric tonnes	2.28	3.38	2.64
Totals	1000 Metric tonnes	46.0	47.4	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

For more information visit the web site at

www.niagaracaer.com

or contact the Niagara CAER Group

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