

Niagara CAER Group
Community Awareness – Emergency Response

Chemical Companies

Emissions Report
(NERM)

2014 Report for 2013 Emissions

Niagara CAER Group Chemical Companies

2014 Emissions Report

(For 2013)

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

Introduction

- Issued annually by the Niagara CAER Group Chemical Companies.
- A commitment to being open with the public.
- This is the twenty first year of publication.
- Production levels have increased in 2013 over 2012 and continue to improve.
- Member companies strive to reduce chemical emissions and chemical waste.
- Results are presented as charts and tables.

Summary of Report

- 2013 Chemical emissions up slightly from previous year.
- Chemical emissions Per Kg. of production was 14% lower than the previous year.
- There is a continuous downward trend of emissions per Kg. of production.
- Combustion emission levels per kilogram of production continue to drop.
- Waste generation was up slightly from previous year.

**NIAGARA CAER
Member Companies**

Chemtrade Logistics Inc.

CYTEC Canada Inc.

Durez Canada Company Ltd.

Kemira Chemicals Canada Inc.

Mancuso Chemicals Limited

Oxy Vinyls Canada Co.

Phototech Environmental Solutions

Member Companies Contact Names

Company	Contact Name and Number	
Chemtrade Logistics Inc.	Dave Smith	905-356-4527
	Joe Iuliano	905-354-3233
CYTEC Canada Inc.	Rene Lemay	905 374-5944
	Gary Sommer	905-374-5812
Durez Canada Company Ltd.	Robert Hunt	905-346-8615
Kemira Chemicals Canada Inc.	Bruno Montpetit	905-688-6470
	Lynn Blanchard	905-688-6470
Mancuso Chemicals Ltd.	Dave Senior	905-357-3626
	Mike Davies	905-357-3626
Oxy Vinyls Canada Co.	Don Davidson	905-374-5601
	Ron Morettin	905-374-5669
Photech Environmental Solutions	John Dunker	877-938-9465

Chemicals Manufactured and Uses

- **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
2013 COMPOSITE PROFILE
For 2014 Emissions Report**

		2013	2012
Number of Employees		369	336
Payroll (Including Benefits)	\$	33,653,760	34,095,829
Taxes	\$	947,898	974,437
Utilities	\$	11,056,917	10,036,882
Value of Supplies and Services	\$	15,430,169	15,126,701
Value of Sales	\$	447,896,451	443,651,500
Percent of Products Exported	%	75	70
Production Levels,	kg	373,961,940	315,948,878
2014 Production Estimate,	kg	359,251,292	
Charity Support (United Way etc.)	\$	48,143	41,962

Explanations

Chemical Emissions

- **Chemical emissions per kilogram of production dropped by 14% from previous year**
- **Production levels were up by 18% over 2012.**
- **2013 emission levels increased by 3% which is good considering the production increased by 18%.**
- **Most chemical emissions were reduced while some increased due to product mix and calculations and formulas for the NPRI report.**
- **The trend of lower chemical emissions per kilogram of production continues to drop as production increases.**

Explanations

Chemical Wastes

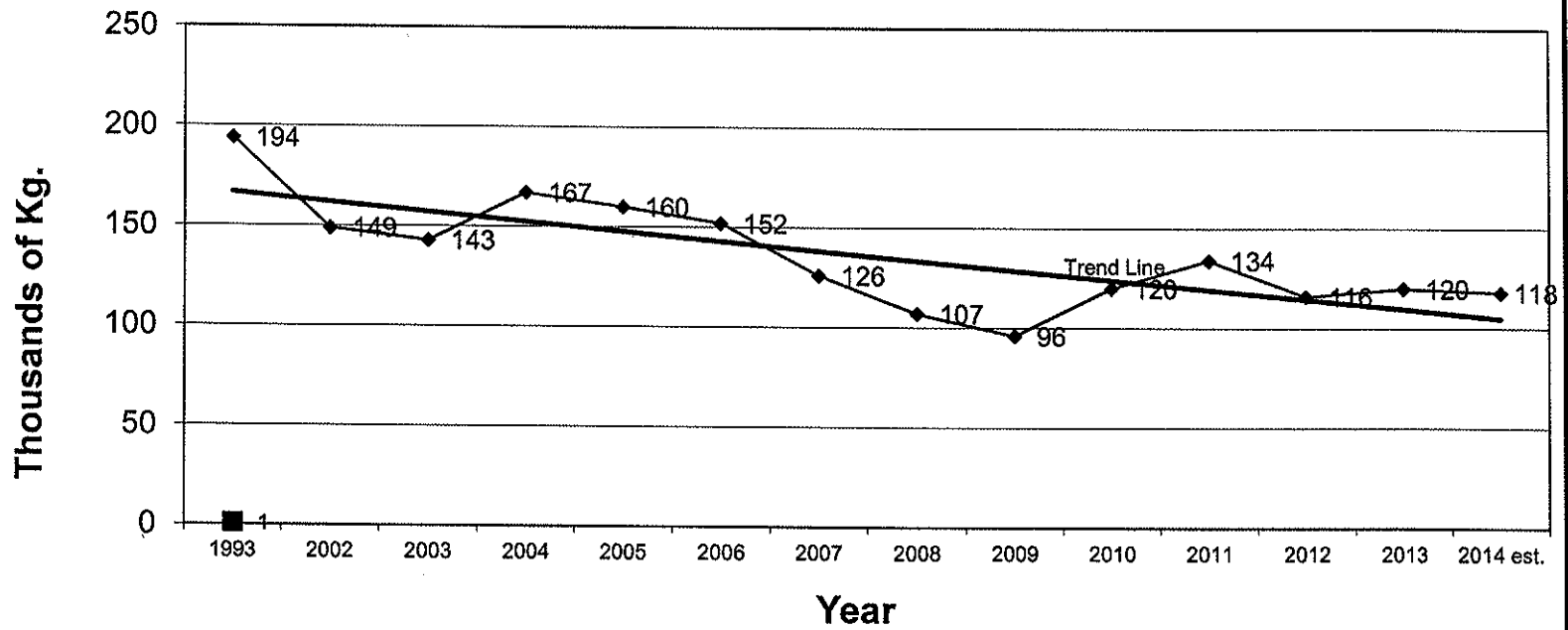
- **Chemical wastes were increased by 3% from 2012 levels.**
- **Chemical wastes per kg of production were lower by 13% from the previous year**
- **Chemical wastes are sometimes accumulated over time and sent for treatment.**
- **Plants are doing a great job in controlling waste to landfill, incineration and water.**
- **More recycling is being done to reduce waste materials.**
- **The majority of wastes are recycled/treated waste.**

Explanations

Combustion Emissions

- Greenhouse gases per kilogram of product were reduced by 19% from 2012.
- Combustion emissions are tied directly to production levels and heating requirements, however decreased by 3% from previous year despite higher production levels.
- Combustion emission levels are 27% below the base year.
- Combustion levels are variable due to weather conditions.

**Chart No. 1
Chemical Emissions**



Overall Chemical Emissions increased slightly (3%) from 2112 levels.

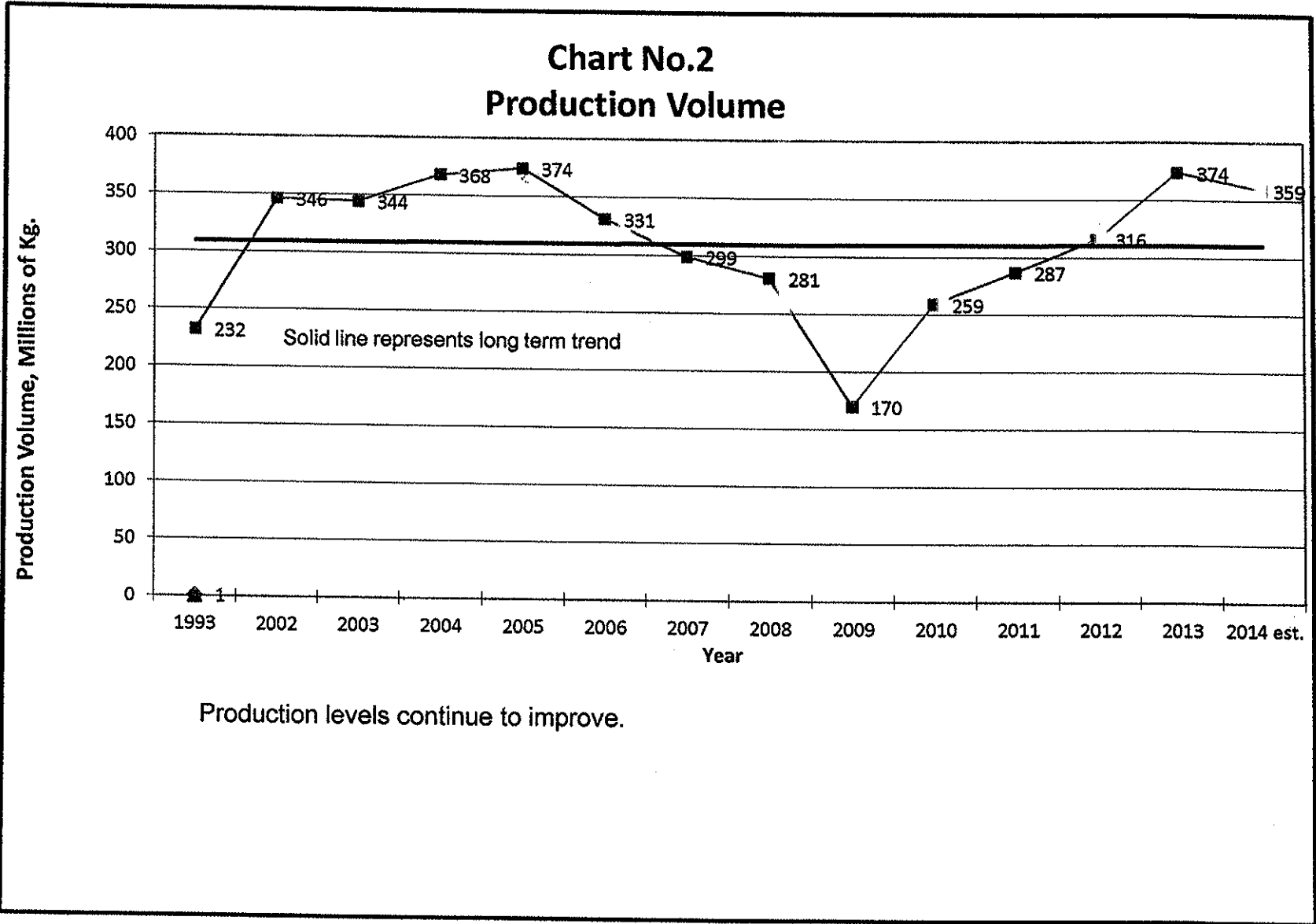
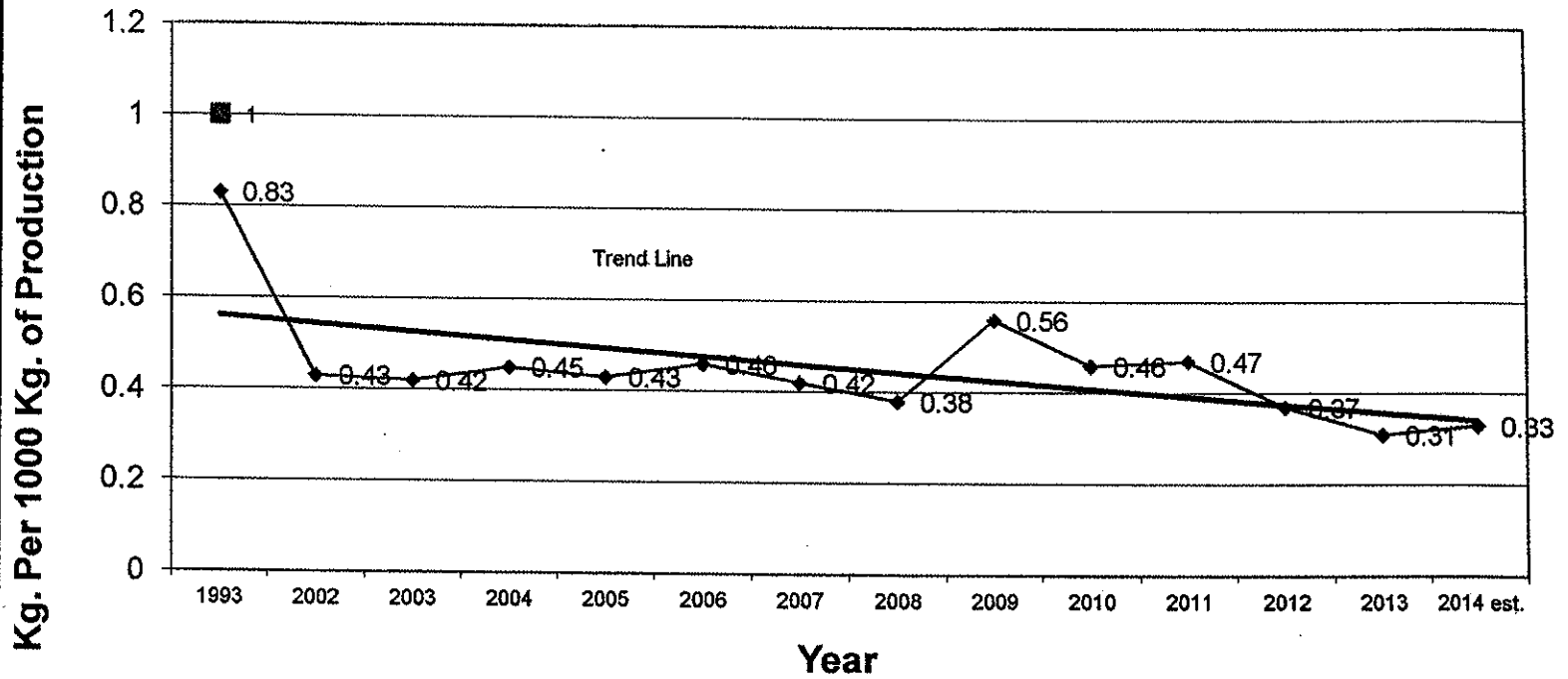
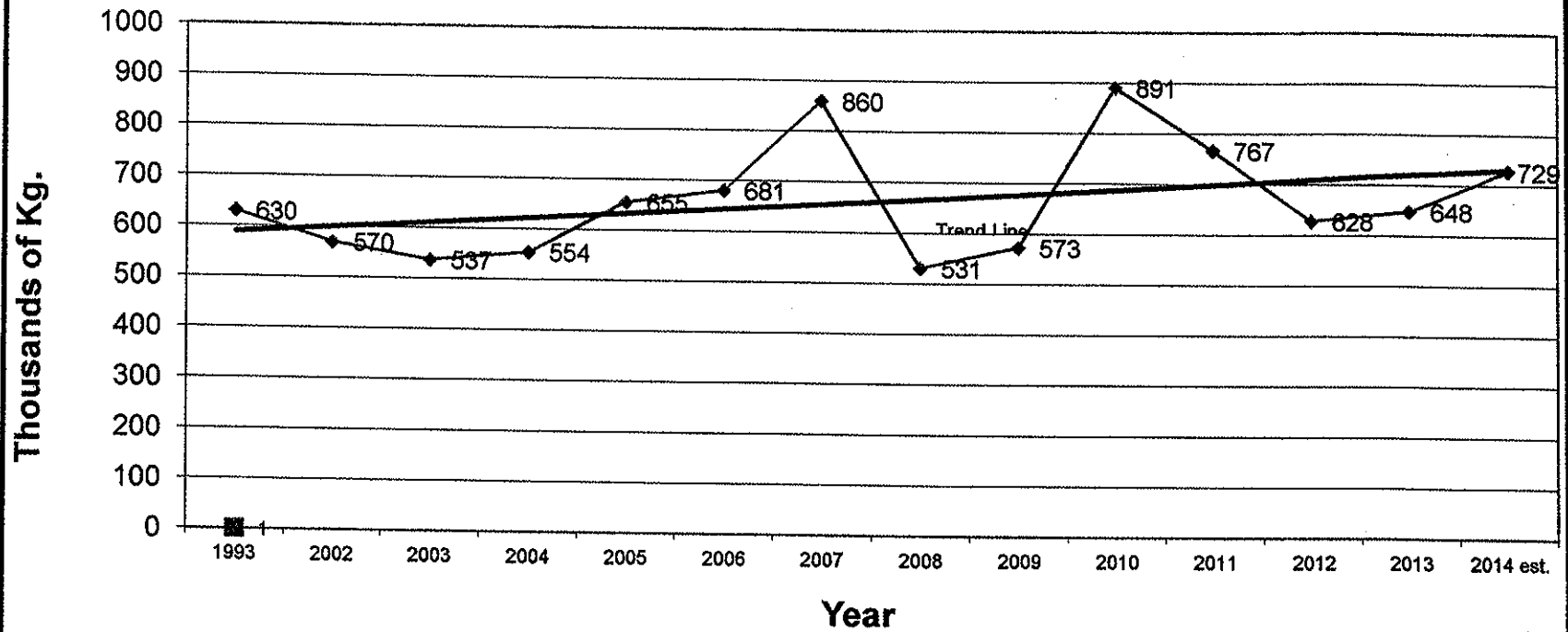


Chart No. 3
Chemical Emissions Per 1000 Kg. Of Production



The trend to lower emissions continues. Chemical emissions per kg of production was 14% lower then 2012.

**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. Chemical wastes increased by 3% over 2012.

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

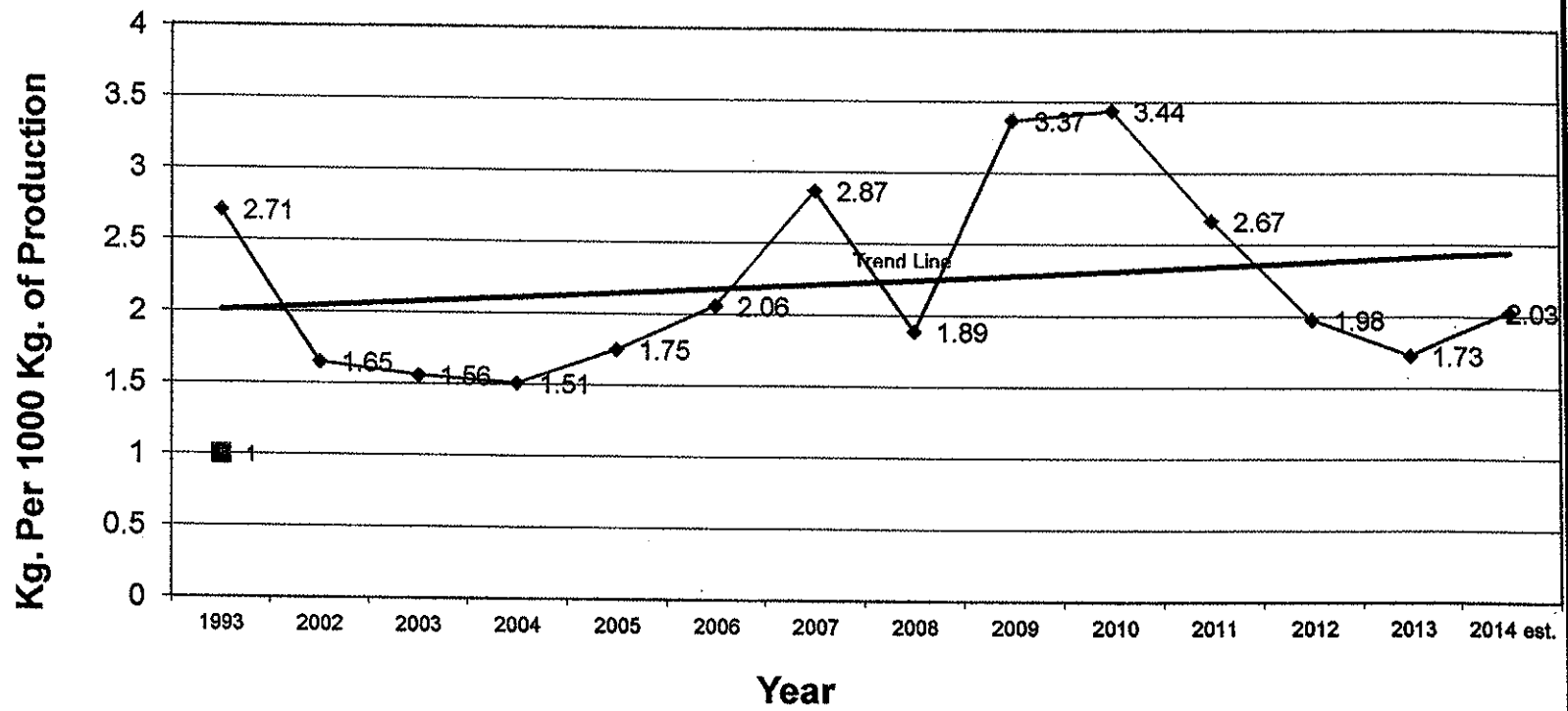
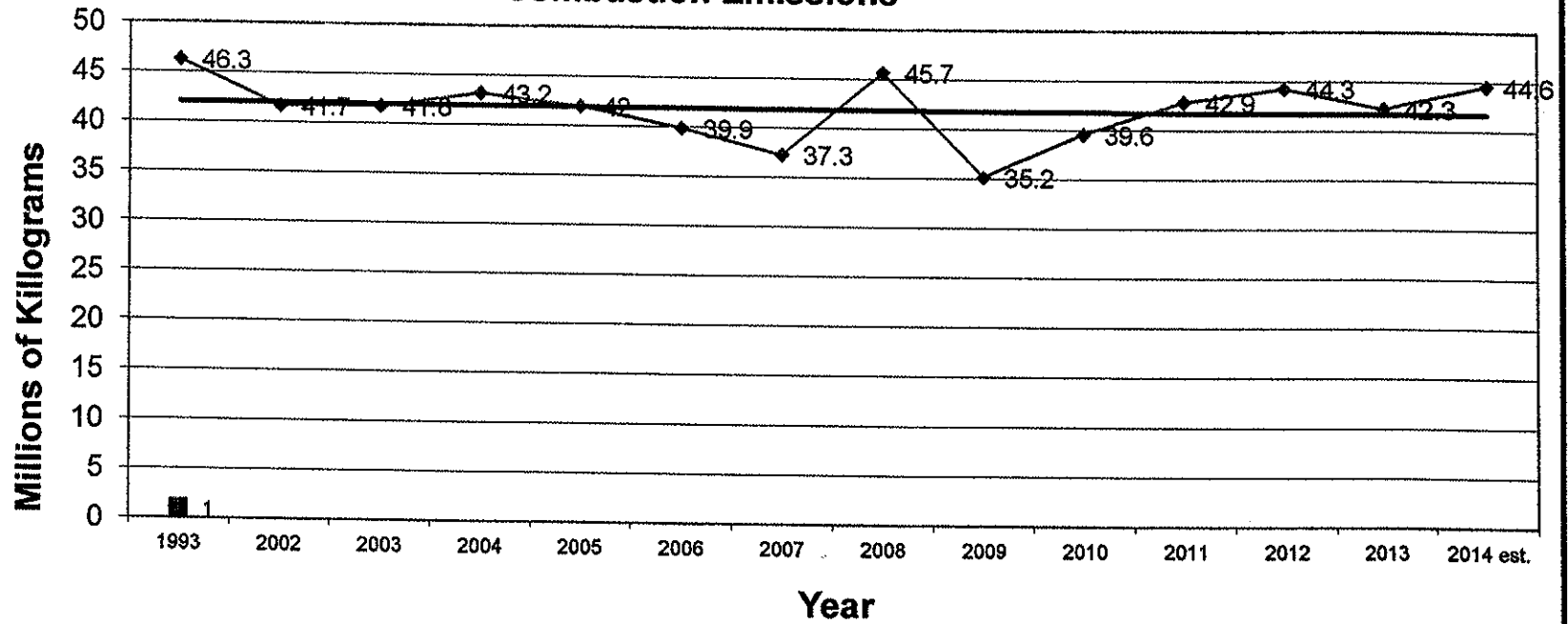
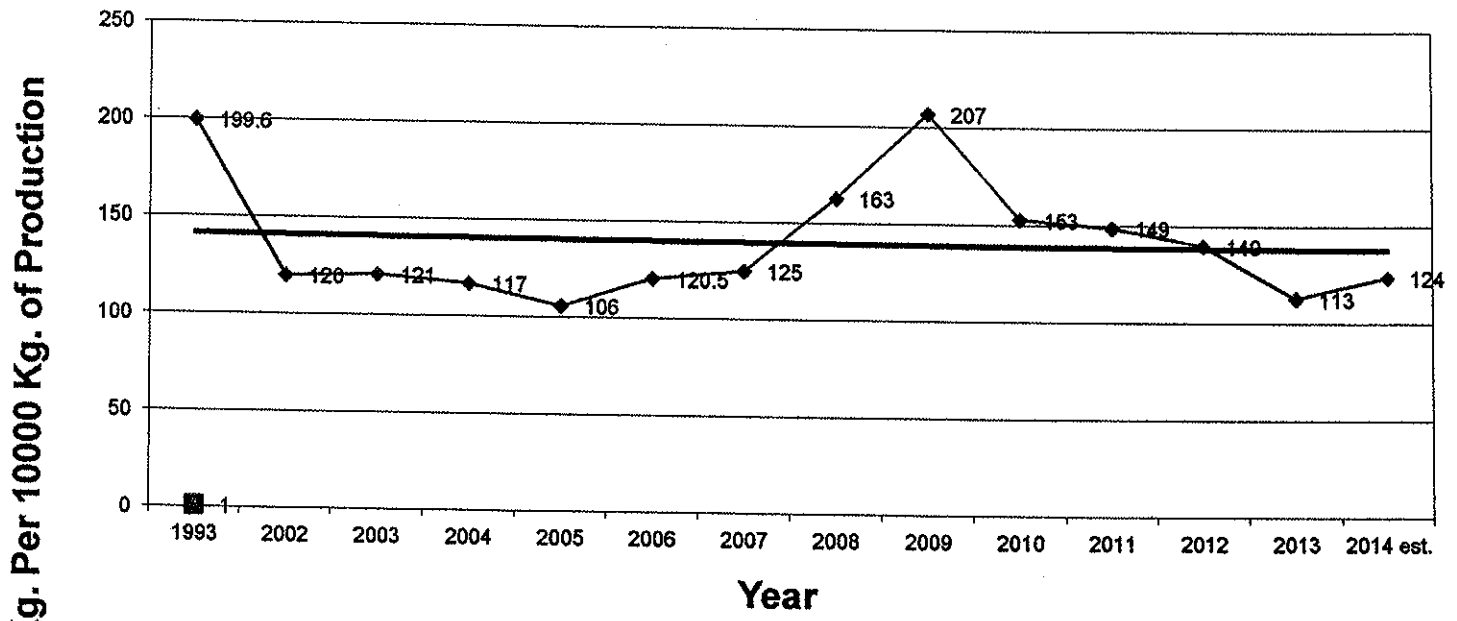


Chart No. 6
Combustion Emissions



Combustion Emissions were down slightly from 2012 levels.

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



Combustion levels per Kg of production continues to drop as a result of increased production.

Chemical Emissions to Air and Water

Year 2013 Emissions and Comparisons with 2012 Results

Table 1

Plant No.	Chemical Name	Amount Released in 2013 Kilograms		Total 2013 kg.	Total 2012 kg.	% Change From 2011	Estimate 2014 kg.
		Waterway	Air				
2	Nitrogenous Material	1,438		1,438	2,187	-34	2,100
1,2,3	Ammonia	627	26,894	27,521	27,616	-0.3	27,500
2,3,5,6	Methanol		629	629	1,456	-57	800
2	Iso Octane		8,726	8,726	5,720	+52	5,700
2	Vinyl Chloride	1	614	615	615	0	500
6	Hydrochloric Acid				392	-100	0
3,5	Kerosene Type Solvents		117	117	757	-84	250
3,5	Ethyl Alcohol		50,239	50,239	48,626	+3	52,000
1,2	Nitrate Ion	22,514		22,514	21,744	+3.5	22,000
1,5	Isopropanol		137	137	112	+22	150
2,3,6	Phenol		3,361	3,361	3,277	+2	3,400
1,3,6	Formaldehyde		67	67	526	-87	70
6	Polymeric diphenylmethane diisocyanate			0	132	-100	0
6	Methylene bis(phenylisocyanate)			0	120	-100	0
2	Oil and Grease	985		985	1,043	-6	1,000
2	Phosphorus Salts	251		251	172	+46	175
2	Aluminum Ion	99		99	116	-15	150
5	Acetic acid		1,879	1879	998	+88	2,074
4	Sulphur Dioxide		830	830	177	+368	200
	Emissions less than 100 kg./yr.*		107	107	344	-69	100
	Total Emissions, kg.	25,915	93,600	119,515	116,130	+3	118,169

Identification of Companies: (1) 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 2013 Data and Comparisons with 2012 and 2014 Estimates
Table 2

Plant No.	Chemical Name	Amount Transferred in 2013 Kilograms		Total 2013 Kg	Total 2012 Kg	% Change From 2012	Estimate 2014 kg.
		Landfill	Recycled/ Treated				
1	Tributyl-Phosphine Sulfide	12,269		12,269	12,743	-4	13,000
3,6	Phenol*	10,764	157,505	168,269	146,204	+15	190,000
1,2,5,6	Liquid Industrial Waste (Oils,etc)	0	234,035	234,035	168,025	+39	217,000
2	Vinyl Resins*	54,731	0	54,731	88,064	-60	60,000
1	Phosphorus Salts	0	1,196	1,196	1,060	+12	1,500
1,2,4,5	Waste Misc. Haz. Prod. & Rinses	3,403	156,314	159,717	195,800	-23	230,000
3	Formaldehyde*	127	11,118	11,245	10,296	+10	13,000
4	Sodium Hydroxide	0	6,330	6,330	5,520	+14	5,000
Total Chemical Wastes		81,294	566,498	647,792	627,712	+3	729,500
Chemicals with wastes of 100 Kg. or less per year **							

Identification of Companies: (1) 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.

** Includes: Mercury and Batteries.

Combustion Emissions
Burning Fuel For Steam Generation And Drying
Emissions for 2013 and 2012 and Estimates for 2014
Table 3

Combustion Product Component	Amount Released		
	2013	2012	2014 Estimate
Carbon Dioxide 1000 tonnes	42.23	44.24	44.61
Nitrogen Dioxide tonnes	36.77	40.72	40.22
Carbon Monoxide tonnes	26.22	28.76	27.55
Sulfur Oxides tonnes	1.17	0.80	1.17
Methane tonnes	0.95	1.44	1.03
Volatile Organic Carbon tonnes	0.85	2.73	1.0
Totals 1000 tonnes	42.3	44.3	44.6

Non Plant CAER Members

Fire Departments From

Fort Erie

Niagara Falls

Thorold

St Catharines

Niagara Region Police

Niagara Region EMS

Associate CAER Members

Team 1 Academy

Newalta, Fort Erie site

First Response Environmental

Itech Environmental Services