### Commission for Environmental Cooperation

# Air Quality and Pollutant Releases Program

JPAC Meeting June 24, 2009 Denver, Colorado

Orlando Cabrera-Rivera



# Air Quality and Pollutant Releases Program

**Projects that create an infrastructure** allowing the three Parties to:

- exchange information
- reach a common vision
- work cooperatively on addressing environmental issues

**Focus on:** Capacity-building, Information for Decision-making, and the Assessment of Emerging Trends.

## Enhancing North American Air Quality Management

 Provide a more complete North American picture of air quality and air emissions to support decision-making on air quality management

### North American Pollutant Release and Transfer Register (PRTR) Project

Integration of North American PRTR data (TRI, NPRI, RETC) to improve our understanding of the industrial sources and handling of pollutants of common concern

# Enhancing North American Air Quality Management

#### **Current Activities:**

- Compilation of and updates to Mexico's National Emissions Inventory
- Comprehensive assessment of North American air emissions inventories and monitoring networks (Completed in Dec. 2008)
- Update to North American Power Plant Emissions Report
- North American Strategy for Air Quality
   Management (June 09).
  - Comparability/Compatibility
  - Accessibility
  - Capacity Building
  - Support for multi-pollutant approach



### North American PRTR Project

#### **Current Activities:**

- Promote comparability and consistency in reporting, data collection and quality assurance
- Annual Taking Stock report and Taking Stock Online
- Support Mexico's development and integration of PRTR state and federal programs
- Stakeholder input via the annual meeting of the North American PRTR Consultative Group (general public, NGOs, industry, governments, media)
- Promote international linkages.

#### **Taking Stock 2005** (June 2009)



- Industrial releases in North
   America to air, land, and water
- Transfers to recycling or other management
- Analyses by pollutant and industry sector
- Special feature chapter on the petroleum industry in NA
- Raises awareness of health and environmental issues
- Enables collaboration across borders and with industry.

### Taking Stock 2005 in numbers

PRTR Program	No. of Facilities	Substances Listed (Reported)	Tonnes reported
Canada NPRI	8,773	325 (203)	2,046,368
US TRI	23,798	650 (512)	3,510,941
Mexico RETC	2.452	104 (73)	65,232
North American Total	35,023		5,557,308



### Taking Stock 2005 - Key Findings

Top reporting sectors in each country:

Canada	Mexico	United States
Oil and gas extraction	Metal mining	Chemicals manufacturing
Primary metals	Electric utilities	Primary metals
Wastewater treatment	Electrical equipment manufacturing	Mining



## Taking Stock 2005 Key Findings (continued)

- 5.5 billion kg of toxic pollutants reported, along with 32 billion kg of criteria air contaminants.
- 30 substances accounted for 90% of all releases and transfers; 9 were subject to reporting to all 3 PRTR programs.
- Handling of toxic pollutants:
  - Canada: 50% transfers to recycling;
  - Mexico: 70% releases to air;
  - United States: air releases = 20%; land releases = 20%;
     and transfers to recycling = 20%.
- Most cross border transfers were to recycling or treatment.

## TS 2005 – Feature on the Petroleum Industry Key Findings

- 1.5 billion kg, or 25%, of all toxic releases and transfers reported by all industry sectors in 2005.
  - 1.36 billion kg was hydrogen sulfide reported only by Canadian oil and gas extraction facilities.
- 3.7 billion kg of criteria air contaminants.
- Hydrogen sulfide example of the gaps in our understanding of industrial pollution resulting from differences in reporting requirements.
- Identification of areas to enhance comparability, and to prioritize pollutants and actions to reduction pollution.

🏉 Taking Stock: North American Pollutant R...



Commission for Environmental Cooperation | Français | Español



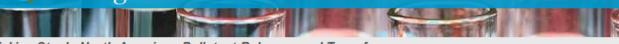












Taking Stock: North American Pollutant Releases and Transfers

Search the Database PRTR facility mapping tool (Google Earth)

Using and Understanding the Data

Glossary of Terms

Taking Stock report

Key findings from Taking Stock 2005

TS 05 Feature chapter: Releases and Transferes from the North American Petroleum Industry Download the Report

Medias

Contact us / Feedback

#### Taking Stock

Taking Stock is an annual report that analyzes data reported to the pollutant release and transfer registers (PRTRs) of Canada, Mexico and the United States to present a North American picture of industrial pollution. The data are reported by industrial facilities to the three North American PRTRs:

- Canada's National Pollutant Release Inventory (NPRI)
- 2. US Toxics Release Inventory (TRI)
- 3. Mexico's Registro de Emisiones y Transferencia de Contaminantes (RETC)

Taking Stock Online, the CEC's integrated and searchable database, allows users the opportunity to compare and analyze North American releases and transfers of pollutants by location, substance, facility and type of release or transfer, and to map the results.

Select an option below to learn more:

#### Search the Database

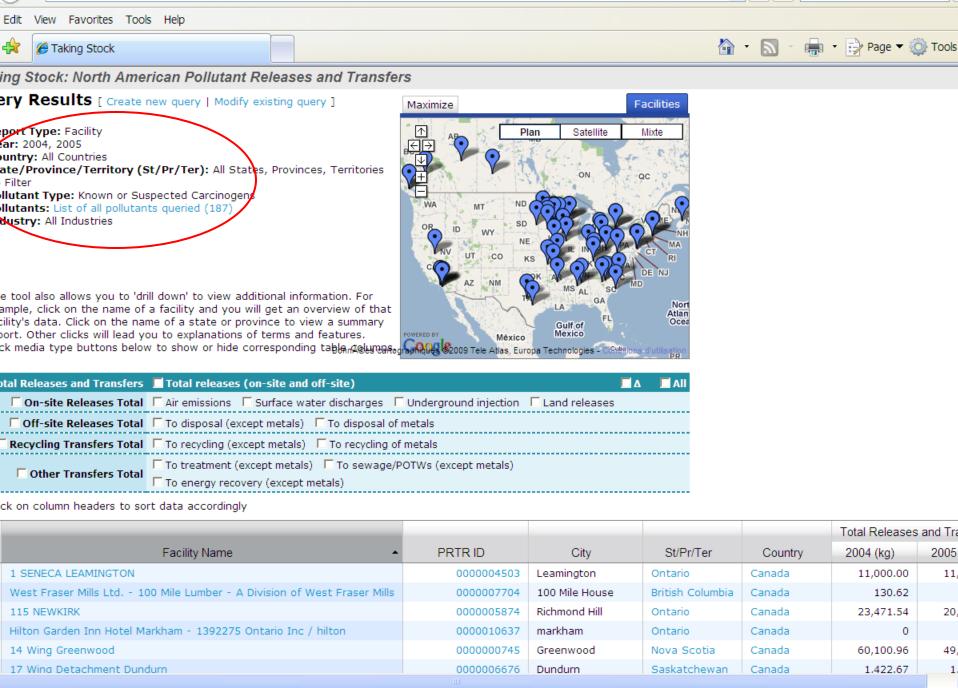
Search the PRTR database and create and download your own reports.

#### PRTR Facility Mapping Tool

A downloadable file that can be opened using Google Earth to enable interactive mapping of some 35,000 North American industrial facilities that reported data in 2005.

#### Using and Understanding the Data

PRTR data can be complex. Here is a guide on how to interpret











Country

Canada

Canada



2005

11,

20,

Total Releases and Tra

2004 (kg)

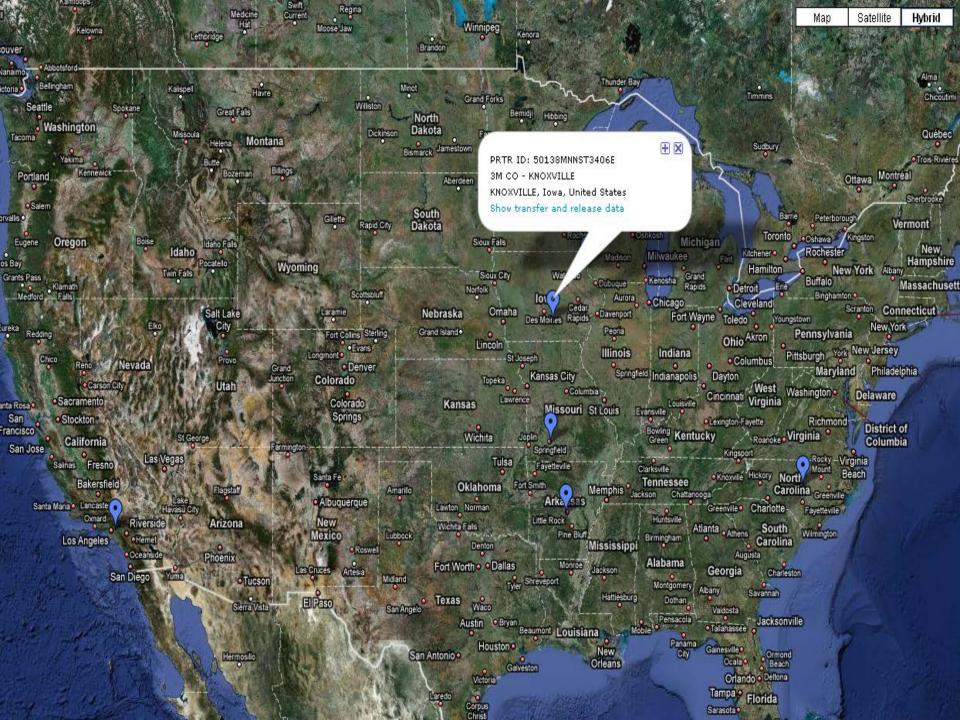
11,000.00

23,471.54

60,100.96

1,422,67

130.62



North Battleford Saska Swift Current Havre

Montana

t Lake City \_

Billings

Wyoming

Scottsbluff

Fort Collins Sterling

PRTR ID: 50138MNNST3406E

3M CO - KNOXVILLE

KNOXVILLE, Iowa, United States

Norfolk

Nebraska

Grand Island •

Omaha

lov

Des Moirtes Rapids

Media Type	2004 (kg)	2005 (kg)	Δ (kg)	Δ%
Total Releases and Transfers	13,106.58	12,931.52	-175.06	-1.34
Total releases (on-site and off-site)	2,222.22	2,131.52	-90.70	-4.08
On-site Releases Total	2,222.22	2,131.52	-90.70	-4.08
On-site air emissions	2,222.22	2,131.52	-90.70	-4.08
On-site surface water discharges	0	0	0	
On-site underground injection	0	0	0	
On-site land releases	0	0	0	
Off-site Releases Total	0	0	0	
Off-site to disposal (except metals)	0	0	0	
Off-site to disposal of metals	0	0	0	
Recycling Transfers Total	4,988.66	9,525.62	4,536.96	90.95
Transfers to recycling (except metals)	4,988.66	9,525.62	4,536.96	90.95
Transfers to recycling of metals	0	0	0	
Other Transfers Total	5,895.69	1,274.38	-4,621.32	-78.38
Transfers to treatment (except metals)	5,895.69	1,271.20	-4,624.49	-78.44
Transfers to sewage/POTWs (except metals)	0	0	0	
Transfers to energy recovery (except metals)	0	3.17	3.17	

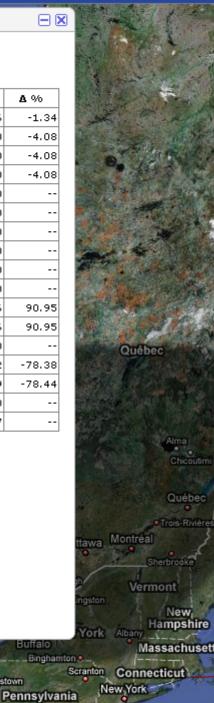
Aurora

Davenport

Peona

• Chicago

Fort Wayne



Buffalo

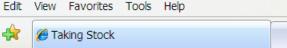
Youngstown

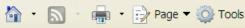
Detroit

Toledo

Cleveland

Ohio Akron















#### ing Stock: North American Pollutant Releases and Transfers ery Results [ Create new query | Modify existing query ]

port Type: Facility (drilldown) TR ID: 50138MNNST3406E cility: 3M CO - KNOXVILLE ear: 2004, 2005

untry: All Countries ate/Province/Territory (St/Pr/Ter): All States, Provinces, Territories

**llutant Type:** Known or Suspected Carcinogens llutants: List of all pollutants queried (187)

dustry: All Industries

e tool also allows you to 'drill down' to view additional information. For ample, click on the name of a facility and you will get an overview of that cility's data. Click on the name of a state or province to view a summary port. Other clicks will lead you to explanations of terms and features. ck media type buttons below to show or hide corresponding table columns.



tal Releases and Transfers	■ Total releases (on-site and off-site)	Δ	☐ All
✓ On-site Releases Total	$\Gamma$ Air emissions $\Gamma$ Surface water discharges $\Gamma$ Underground injection $\Gamma$ Land releases		
☐ Off-site Releases Total	☐ To disposal (except metals) ☐ To disposal of metals		
Recycling Transfers Total	To recycling (except metals) To recycling of metals		
✓ Other Transfers Total	□ To treatment (except metals) □ To sewage/POTWs (except metals) □ To energy recovery (except metals)		

ck on column headers to sort data accordingly

kdown by Chemical										
			Total Releases and Transfers		On-site Releases Total		Recycling Transfers Total		Other Transfers Total	
Pollutant 🔺	CAS Numb	er	2004 (kg)	2005 (kg)	2004 (kg)	2005 (kg)	2004 (kg)	2005 (kg)	2004 (kg)	2005 (kg)
Ethylbenzene <b>C</b>	100-41-4		13,106.58	12,931.52	2,222.22	2,131.52	4,988.66	9,525.62	5,895.69	1,274.38
Total for this pag		age	13,106.58	12,931.52	2,222.22	2,131.52	4,988.66	9,525.62	5,895.69	1,274.38

ords returned

st < prev 1 next > las

Known or suspected carcinogen







Taking Stock: North American Pollutant R...



Commission for Environmental Cooperation | Français | Español













Taking Stock: North American Pollutant Releases and Transfers



Search the Database PRTR facility mapping tool (Google Earth)

Frequently asked questions Download the map

Using and

Understanding the Data

Glossary of Terms

Taking Stock report Medias

Contact us / Feedback

The CEC's new map layer for Google Earth lets users explore pollution data from about 35,000 industrial facilities in North America

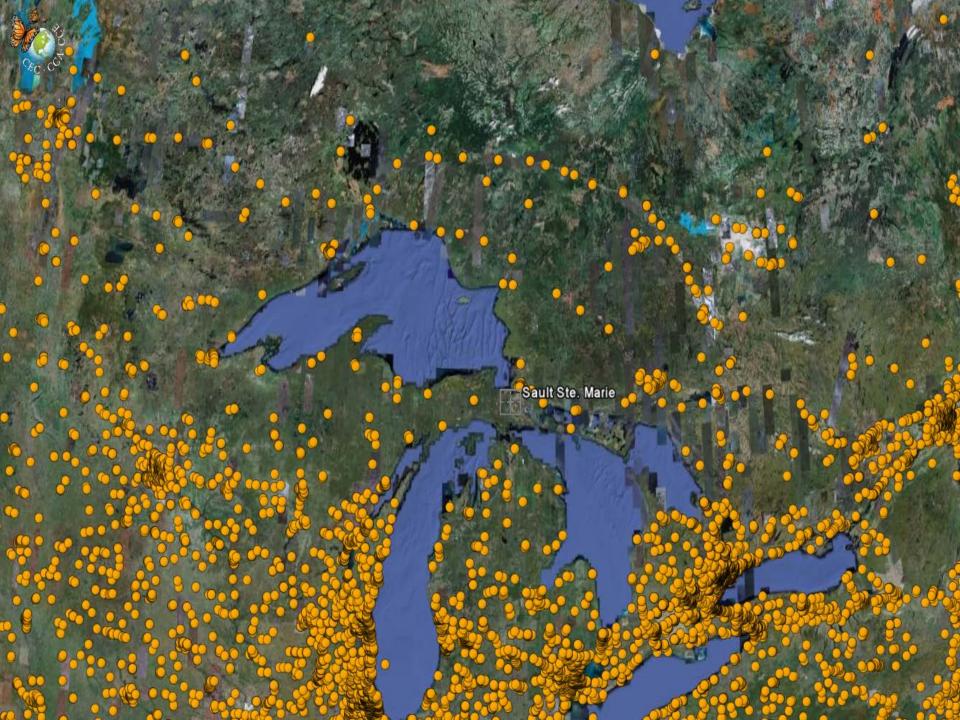
With new information on chemical releases and transfers from Mexican industrial sources now available to the public, the CEC has created the first seamless, North America-wide map layer connecting citizens with point-specific industrial pollutant data in Canada, Mexico and the United States.

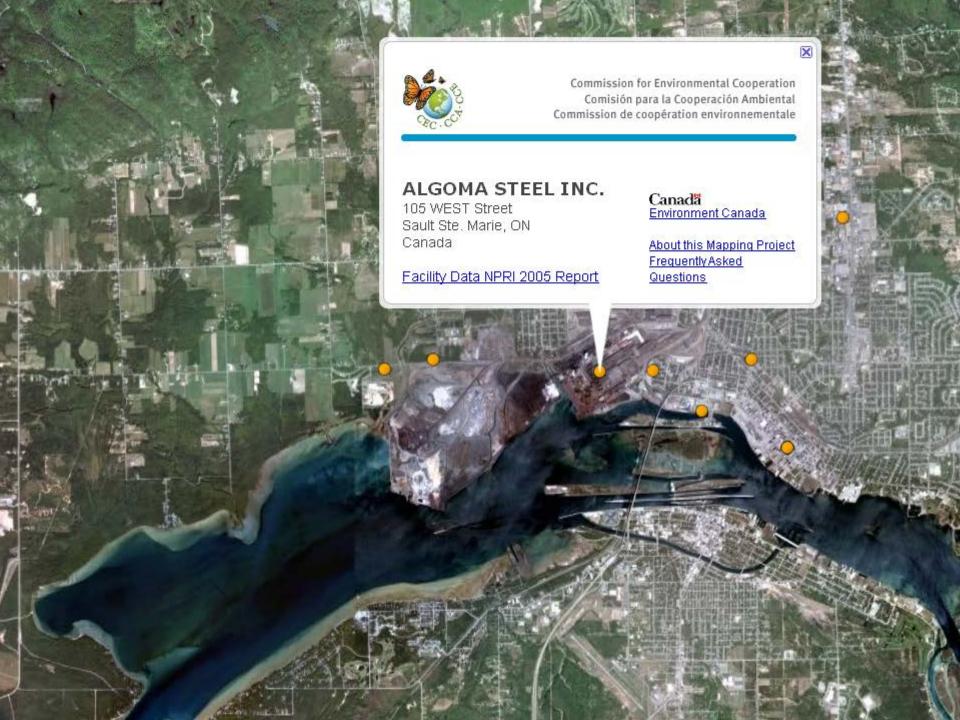


© Google Earth - © 2007 Europa Technologies - Images © 2007 TerraMetrics - Image NASA - @2007 Navteq

Using the Google Earth mapping service—innovative and free computer program that allows users to explore geographic data projected over satellite images and aerial photography the CEC's map layer plots about 35,000 North American industrial facilities that reported releases and transfers of pollutants in 2005, the most recent data available from all three countries.











## CEC Air Quality and Pollutant Releases Program

### Contact:

Orlando Cabrera Rivera Program Manager

Telephone:

(514) 350-4300 (514) 350-4314 Fax:

Email: ocabrera@cec.org

