

Neighborhood Leadership for Environmental Health

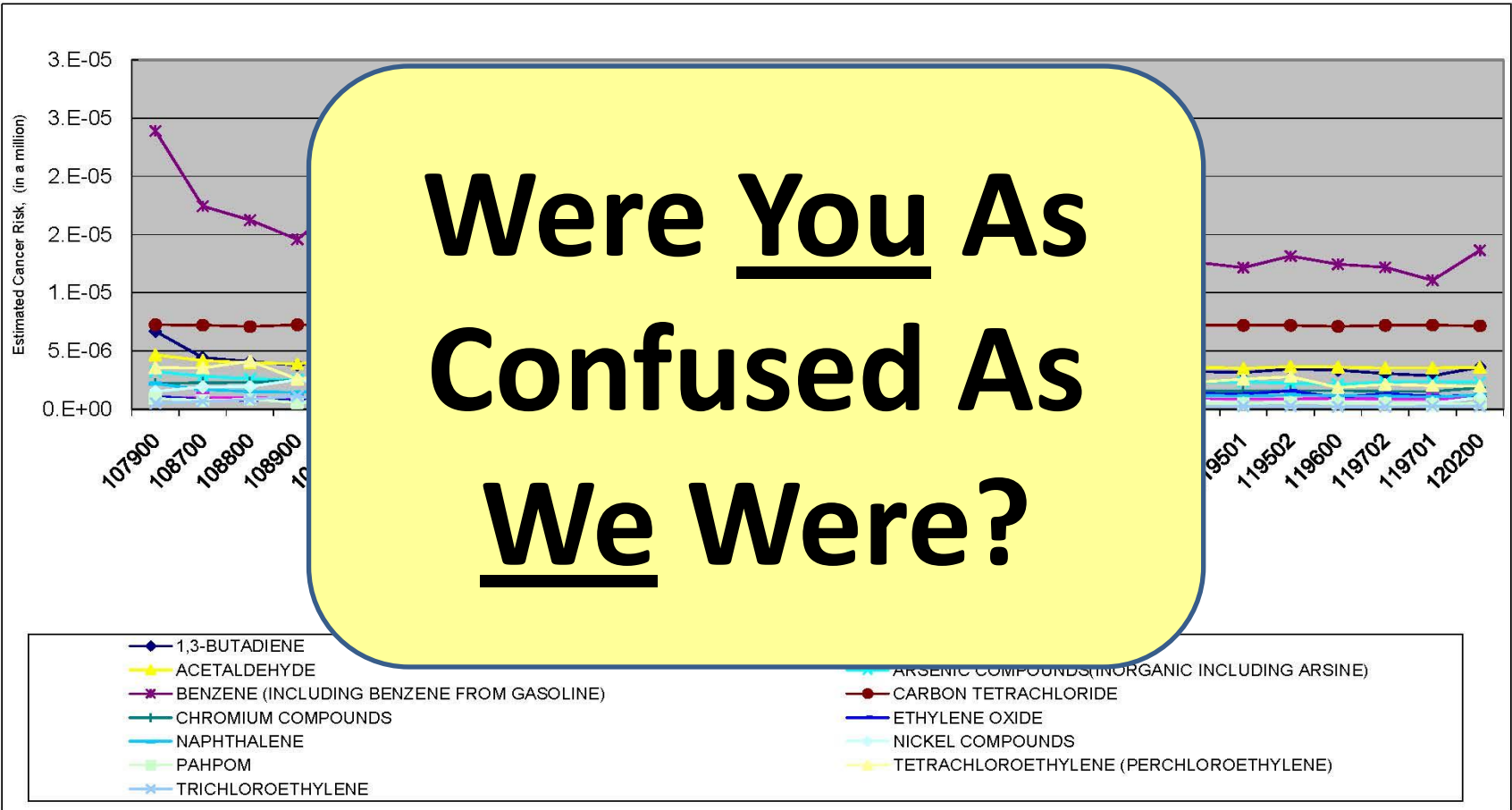
EPA Air Pollution
Presentation Follow-up

February 26, 2011

Sources of Air Pollution

- Most air pollution comes from:
 - Large Industrial Plants (refineries, iron and steel foundries, power plants)
 - Small Neighborhood Facilities (dry cleaners, metal degreasing, gasoline stations, autobody repair shops)
 - Motor Vehicles
 - Nonroad Mobile Sources (Aircraft, locomotives, offroad recreational vehicles, marine vessels, lawn and garden equipment)
 - Background Air Pollution

2002 NATA Estimated Cancer Risk
 Pollutants of Concern: Cleveland CARE Community



Lifetime cancer risk (US): 1 in 4 (males), in 5 (females) or 250,000 (males), 200,000 (females) in a million¹
 Heart Disease Deaths (Cuyahoga-Average 1994-1998) = 36,540 in a million²
 Traffic Accident Deaths (Cuyahoga County-2008) = 67 in a million³

1. American Cancer Society, Basic Cancer Facts (2005-2007), 2. Ohio Department of Health, Cardiovascular Disease in Ohio (94-98), 3. Ohio Traffic Crash Facts (2008), Ohio Department of Public Safety

Let's Break It Down

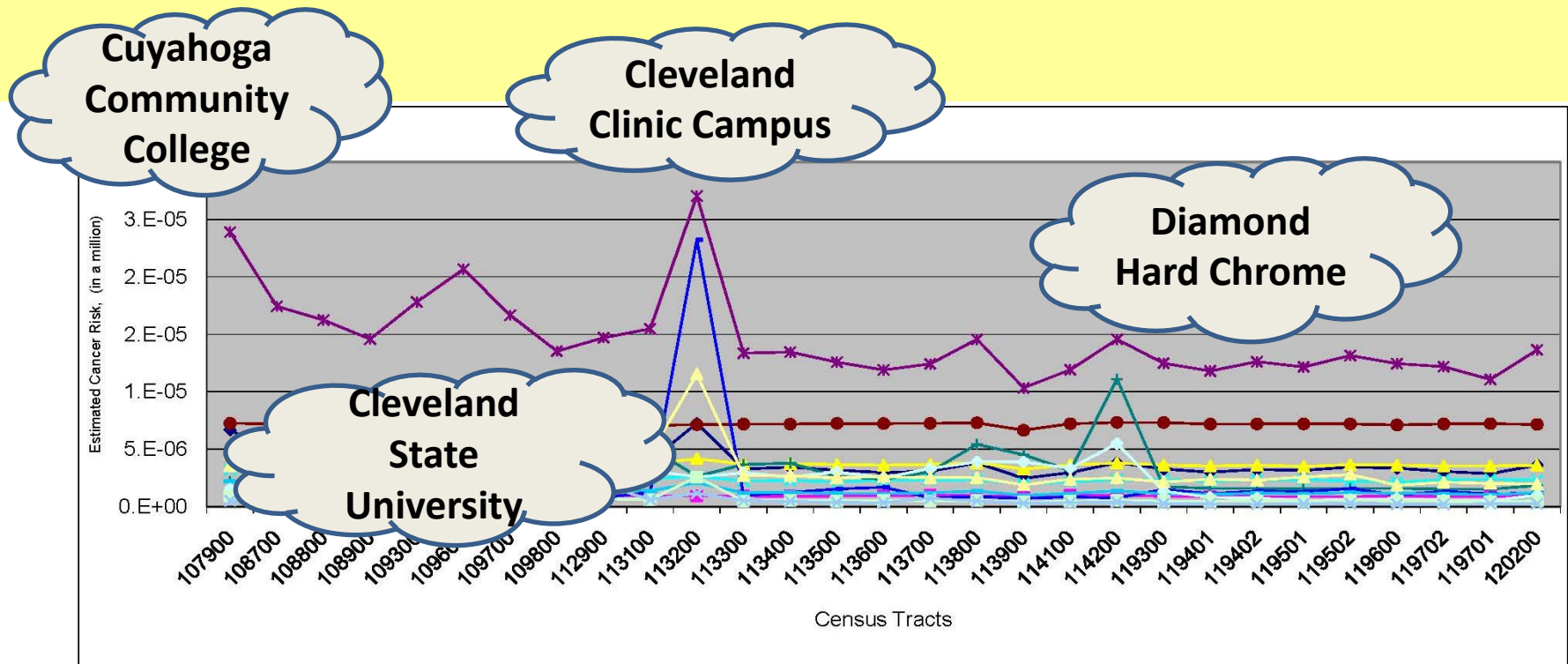
- **4 Areas of Pollution**

- Cleveland Clinic Campus
- Woodland/Kinsman/E.55th
- Cleveland State University
- Cuyahoga Community College

- **4 Pollutants of Concern**

- Benzene – motor vehicles, industrial boilers
- Ethylene Oxide – Sterilizers used to clean hospital equipment
- Chromium Emissions – Diamond Hard Chrome
- Tetrachloroethylene – Dry cleaners, metal degreasers

4 Areas of Pollution



Cleveland Clinic Campus



Benzene

Hospitals & Benzene

Benzene is a combustion pollutant – mobile sources & boilers

Regulations: EPA are working on Boiler MACT Standards to address such sources

Ethylene Oxide

Hospitals & Ethylene Oxide

Hospitals use ethylene oxide sterilizers (sterilizers used to clean hospital equipment)

Regulations: There is a MACT in place for ethylene oxide sterilizers and Cleveland Clinic

EPA compliance staff is currently working to determine compliance at the facility.

Woodland/Kinsman/E. 55th Area

Other sources?

Let's discuss

**Diamond Hard
Chrome**

Chromium Emissions

Primary pollutant contributing to estimated cancer risk:

Chromium emissions

Diamond Hard Chrome

Was modeled/accounted for in NATA.

Regulations: Is an area source - does not meet the major source regulations

However, because of the concern/health effect of chromium, even small/area sources are subject to Federal regulations.

EPA compliance staff is currently working with the facility to determine compliance

Cuyahoga Community College

Benzene

St. Vincent Charity Hospital

**Cuyahoga
Community
College**

**Pollutants contributing to the
estimated cancer risk:**

Benzene

Benzene is a combustion
pollutant – mobile sources &
boilers

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Orange Avenue Post Office

NLEH Project Results

- EPA Compliance Staff will be visiting:
 - Cleveland Clinic
 - Diamond Chrome(to ensure compliance with current regulations)
- EHW/Greater Cleveland Clean Air Campaign will continue to track & support environmental regulations for boilers
- EHW/NLEH will work with local residents to identify additional sources of air pollution

Questions?