

A satellite-style map showing the United States, Canada, Mexico, and parts of Europe and Africa. The Atlantic Ocean is visible between the continents. Labels for various countries and regions are present, including Canada, United States, Mexico, Hudson Bay, North Atlantic Ocean, Gulf of Mexico, Morocco, Algeria, Libya, Egypt, Spain, France, Germany, Italy, Greece, Turkey, and others. A scale bar in the bottom left indicates 500 miles and 1000 kilometers.

# ***ACROSS THE POND***

## ***Assessing REACH's First Big Impact on U.S. Companies and Chemicals***

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ENVIRONMENTAL DEFENSE FUND

finding the ways that work

## *What does the SIN List have to do with the U.S.?*

- REACH applies equally to imports
- U.S. companies making/importing SVHCs will get increasing scrutiny
- List-driven approaches under consideration in ME, WA, OR, CA and for federal TSCA reform

## *Questions to be explored*

- Which SIN List chemicals are in US commerce?
- In what amounts?
- Made or imported by which companies?
- In which states and at which sites?

## *Questions to be explored*

- Which SIN List chemicals have been tested in the U.S.?
- Which have been regulated by EPA?
- How many have been exempted from regulatory requirements?

## *Where to get US production data?*

- TSCA Inventory Update Rule (IUR)\* requires periodic manufacturer/importer reporting
- 1986-1990-1994-1998-2002
  - Site location, volume range only
  - $\geq 10,000$  lbs/yr/site threshold
- 2006-2011-2016, etc.
  - Downstream processing/use/exposure data
  - $\geq 25,000$  lbs/yr/site threshold

\* Available at [www.epa.gov/iur](http://www.epa.gov/iur)

## *Summary of 2006 IUR data*

- Reflects production or import in 2005 only
- Public databases include:
  - ~6,200 chemicals
  - ~1,540 companies at ~3,825 sites
  - ~24,400 site records (unique co/site/chem)
- But chemicals/companies/sites can be CBI
  - >1,300 CBI chemicals not in 2002 public database
- IUR total 2005 volume is 27 trillion pounds
  - >95% is domestically produced

# ENVIRONMENTAL DEFENSE FUND

| CAS         | CHEM_NAME                           | CHEM_AGG_P                     | MAX_CONC         | CHEM_PHYSI            | CHEM_NUM_SITES | CHEM_NUM_WORKERS | CHEM_IND_PROCESS | CHEM_COMM_CONS |
|-------------|-------------------------------------|--------------------------------|------------------|-----------------------|----------------|------------------|------------------|----------------|
| 100-01-6    | Benzenamine, 4-nitro-               | 1 to < 10 million lbs          | Greater than 90% | Dry Powder, Pellets   | 1 to 99        | 1 to 99          | Yes              | No             |
| 1000-82-4   | Urea, N-(hydroxymethyl)-            | 500,000 to < 1 million lbs     | 1% - 30%         | Liquid                | 1 to 99        | 1 to 99          | No               | No             |
| 1000-90-4   | Zinc, bis[O-(1-methylethyl) carb    | < 500,000 lbs                  | Greater than 90% | Dry Powder            | 1 to 99        | 1 to 99          | No               | No             |
| 100-10-7    | Benzaldehyde, 4-(dimethylamin       | < 500,000 lbs                  | Greater than 90% | Dry Powder            | 1 to 99        | 100 to 999       | No               | No             |
| 10017-56-8  | Ethanol, 2,2',2"-nitritotris-, phos | < 500,000 lbs                  | Greater than 90% | Water or Solvent We   | 1 to 99        | 1000 or greater  | No               | No             |
| 10017-59-1  | 2,7-Anthracenedisulfonic acid, 9    | < 500,000 lbs                  | Greater than 90% | Dry Powder            | 1 to 99        | 1 to 99          | No               | No             |
| 100-18-5    | Benzene, 1,4-bis(1-methylethyl)     | 50 to < 100 million lbs        | Greater than 90% | Liquid                | 1 to 99        | 100 to 999       | Yes              | No             |
| 100208-96-6 | Iron, N,N-bis[2-[bis(carboxymet     | < 500,000 lbs                  | 1% - 30%         | Liquid                | 1 to 99        | 1 to 99          | No               | No             |
| 100-20-9    | 1,4-Benzenedicarbonyl dichlorid     | 10 to < 50 million lbs         | Greater than 90% | Other Solid           | 1 to 99        | 1000 or greater  | Yes              | No             |
| 100-21-0    | 1,4-Benzenedicarboxylic acid        | 1 billion lbs and greater      | Greater than 90% | Dry Powder, Water o   | 100 to 999     | 1000 or greater  | Yes              | Yes            |
| 10022-31-8  | Nitric acid, barium salt (2:1)      | 500,000 to < 1 million lbs     | Greater than 90% | Dry Powder, Other S   | 1 to 99        | 1 to 99          | Yes              | Yes            |
| 10024-93-8  | Neodymium chloride (NdCl3)          | 500,000 to < 1 million lbs     | CBI              | Liquid                | 1 to 99        | 1 to 99          | No               | No             |
| 10024-97-2  | Nitrogen oxide (N2O)                | 10 to < 50 million lbs         | Greater than 90% | Liquid                | 1 to 99        | 100 to 999       | Yes              | No             |
| 10025-67-9  | Disulfidesulphenyl chloride         | < 500,000 lbs                  | Greater than 90% | Liquid                | 1 to 99        | 100 to 999       | No               | No             |
| 10025-78-2  | Silane, trichloro-                  | 100 to < 500 million lbs       | Greater than 90% | Liquid                | 1 to 99        | 100 to 999       | Yes              | No             |
| 10025-87-3  | Phosphoric trichloride              | 50 to < 100 million lbs        | Greater than 90% | Liquid                | 1 to 99        | 100 to 999       | No               | No             |
| 10026-04-7  | Silane, tetrachloro-                | 100 to < 500 million lbs       | Greater than 90% | Liquid                | 1 to 99        | 1000 or greater  | Yes              | No             |
| 10026-11-6  | Zirconium chloride (ZrCl4), (T-4)   | 10 to < 50 million lbs         | Greater than 90% | Dry Powder            | 1 to 99        | 100 to 999       | No               | No             |
| 10026-12-7  | Niobium chloride (NbCl5)            | < 500,000 lbs                  | CBI              | CBI                   | 1 to 99        | 1 to 99          | No               | No             |
| 1002-62-6   | Decanoic acid, sodium salt (1:1     | < 500,000 lbs                  | 1% - 30%         | Liquid                | 1 to 99        | 1 to 99          | No               | No             |
| 10027-33-5  | 1,3-Benzenedicarboxylic acid, s     | < 500,000 lbs                  | 1% - 30%         | Water or Solvent We   | 1 to 99        | 100 to 999       | No               | No             |
| 10028-15-6  | Ozone                               | 1 to < 10 million lbs          | 1% - 30%         | Gas or Vapor          | 1 to 99        | 100 to 999       | No               | No             |
| 10028-22-5  | Sulfuric acid, iron(3+) salt (3:2)  | 500 million to < 1 billion lbs | Greater than 90% | Liquid                | 1 to 99        | 1 to 99          | No               | No             |
| 10034-77-2  | Silicic acid (H4SiO4), calcium s    | 1 billion lbs and greater      | Greater than 90% | Dry Powder, Pellets   | 1000 or great  | 1000 or greater  | Yes              | Yes            |
| 10034-85-2  | Hydriodic acid                      | < 500,000 lbs                  | 31% - 60%        | Liquid                | 1 to 99        | 1 to 99          | No               | No             |
| 10035-10-6  | Hydrobromic acid                    | 100 to < 500 million lbs       | Greater than 90% | Gas or Vapor, Liquid  | 1 to 99        | 1000 or greater  | Yes              | Yes            |
| 100-37-8    | Ethanol, 2-(diethylamino)-          | 10 to < 50 million lbs         | Greater than 90% | Liquid                | 1 to 99        | 1000 or greater  | Yes              | Yes            |
| 10038-98-9  | Germane, tetrachloro-               | < 500,000 lbs                  | 61% - 90%        | Liquid                | 1 to 99        | 1 to 99          | No               | No             |
| 10039-54-0  | Hydroxylamine, sulfate (2:1)        | 10 to < 50 million lbs         | Greater than 90% | Dry Powder, Pellets   | 1 to 99        | 100 to 999       | Yes              | No             |
| 100-40-3    | Cyclohexene, 4-ethenyl-             | 1 to < 10 million lbs          | Greater than 90% | Liquid                | 1 to 99        | 1000 or greater  | Yes              | Yes            |
| 100-41-4    | Benzene, ethyl-                     | 1 billion lbs and greater      | Greater than 90% | Pellets or Large Crys | 100 to 999     | 1000 or greater  | Yes              | Yes            |
| 100-42-5    | Benzene, ethenyl-                   | 1 billion lbs and greater      | Greater than 90% | Pellets or Large Crys | 1000 or great  | 1000 or greater  | Yes              | Yes            |
| 10042-59-8  | 1-Heptanol, 2-propyl-               | 1 to < 10 million lbs          | Greater than 90% | Liquid                | 1 to 99        | 100 to 999       | Yes              | Yes            |
| 10042-76-9  | Nitric acid, strontium salt (2:1)   | 1 to < 10 million lbs          | Greater than 90% | Dry Powder, Other S   | 1 to 99        | 100 to 999       | Yes              | Yes            |
| 10043-01-3  | Sulfuric acid, aluminum salt (3:2   | 1 billion lbs and greater      | Greater than 90% | Dry Powder, Pellets   | 100 to 999     | 1000 or greater  | Yes              | Yes            |
| 10043-11-5  | Boron nitride (BN)                  | 1 to < 10 million lbs          | Greater than 90% | Dry Powder            | 1 to 99        | 100 to 999       | No               | No             |
| 10043-35-3  | Boric acid                          | 100 to < 500 million lbs       | Greater than 90% | Dry Powder, Pellets   | 1 to 99        | 100 to 999       | Yes              | Yes            |
| 10043-52-4  | Calcium chloride (CaCl2)            | 1 billion lbs and greater      | Greater than 90% | Dry Powder, Pellets   | 1 to 99        | 1000 or greater  | Yes              | Yes            |
| 100-43-6    | Pyridine, 4-ethenyl-                | 500,000 to < 1 million lbs     | Greater than 90% | Liquid                | 1 to 99        | 100 to 999       | Yes              | No             |
| 100-44-7    | Benzene, (chloromethyl)-            | 10 to < 50 million lbs         | Greater than 90% | Liquid                | 1 to 99        | 1 to 99          | Yes              | Yes            |
| 100-46-9    | Benzenemethanamine                  | < 500,000 lbs                  | Greater than 90% | Liquid                | 1 to 99        | 1 to 99          | No               | No             |

# ENVIRONMENTAL DEFENSE FUND

|    | C       | D                                      | E                                   | F             | I          | J          | K        | L         | M          |
|----|---------|--|-------------------------------------|---------------|------------|------------|----------|-----------|------------|
| 1  | CAS     | COMPANY_NAME                           | SITE_NAME                           | SITE_CITY     | SITE_STATE | SITE_ZIP   | MANUFACT | IMPORT_DA | SITE_LIMIT |
| 48 | 50-70-4 | Archer Daniels Midland Company         | ADM - Decatur Bioproducts           | Decatur       | IL         | 62526      | Yes      | No        | No         |
| 49 | 50-70-4 | BASF Corporation                       | Corporate Headquarters              | Florham Park  | NJ         | 07932      | No       | Yes       | N/A        |
| 50 | 50-70-4 | Cargill, Inc.                          | Cargill Corn Milling Hammond        | Hammond       | IN         | 46320      | No       | Yes       | N/A        |
| 51 | 50-70-4 | Quadra Chemicals, Inc.                 | Quadra Chemicals, Inc. - Portlar    | Portland      | OR         | 97210      | No       | Yes       | N/A        |
| 52 | 50-70-4 | Roquette America, Inc.                 | Corporate Headquarters Keokuk       | Keokuk        | IA         | 52632      | Yes      | Yes       | No         |
| 53 | 50-70-4 | Roquette America, Inc.                 | Gurnee Plant                        | Gurnee        | IL         | 60031      | Yes      | No        | No         |
| 54 | 50-70-4 | Wego Chemical & Mineral Corp.          | Wego Chemcial & Mineral Corp.       | Great Neck    | NY         | 11021      | No       | Yes       | N/A        |
| 55 | 50-81-7 | TR International, Incorporated         | TR International                    | Seattle       | WA         | 98101      | No       | Yes       | N/A        |
| 56 | 50-99-7 | Archer Daniels Midland Company         | ADM - Cedar Rapids                  | Cedar Rapids  | IA         | 52404      | Yes      | No        | No         |
| 57 | 50-99-7 | Archer Daniels Midland Company         | ADM - Clinton Corn Plant            | Clinton       | IA         | 52732      | Yes      | No        | No         |
| 58 | 50-99-7 | Archer Daniels Midland Company         | ADM - Decatur Corn Plant            | Decatur       | IL         | 62526      | Yes      | No        | No         |
| 59 | 50-99-7 | Cargill, Inc.                          | Cargill Corn Milling Dayton         | Dayton        | OH         | 45414      | Yes      | No        | No         |
| 60 | 50-99-7 | Cargill, Inc.                          | Cargill Corn Milling Memphis        | Memphis       | TN         | 38113      | Yes      | No        | No         |
| 61 | 50-99-7 | Corn Products International            | Argo Plant                          | Bedford Park  | IL         | 60501-0347 | Yes      | No        | Yes        |
| 62 | 50-99-7 | Ferro Corporation                      | Ferro Pfanstiehl                    | Waukegan      | IL         | 60085      | Yes      | No        | No         |
| 63 | 50-99-7 | Roquette America, Inc.                 | Corporate Headquarters Keokuk       | Keokuk        | IA         | 52632      | Yes      | Yes       | No         |
| 64 | 50-99-7 | Solae, L.L.C.                          | The Solae Company                   | Bellevue      | OH         | 44811      | Yes      | No        | No         |
| 65 | 50-99-7 | Tate & Lyle Ingredients Americas, Inc. | Tate & Lyle, Decatur                | Decatur       | IL         | 62525      | Yes      | No        | No         |
| 66 | 51-03-6 | S C Johnson & Son, Inc                 | S C Johnson & Son, Inc              | Sturtevant    | WI         | 53177      | CBI      | CBI       | CBI        |
| 67 | 52-51-7 | BASF Corporation                       | Corporate Headquarters              | Florham Park  | NJ         | 07932      | No       | Yes       | N/A        |
| 68 | 52-51-7 | Thetford Corporation                   | Thetford Corporation                | Ann Arbor     | MI         | 48106      | No       | Yes       | N/A        |
| 69 | 54-21-7 | Archimica Inc.                         | Archimica Inc.                      | Springfield   | MO         | 65807      | No       | Yes       | N/A        |
| 70 | 54-21-7 | Atotech USA, Inc.                      | Atotech USA, Inc.                   | Rock Hill     | SC         | 29731      | Yes      | No        | No         |
| 71 | 55-22-1 | Vertellus Specialites Inc.             | Vertellus Specialties Inc. - Indiar | Indianapolis  | IN         | 46244      | Yes      | No        | No         |
| 72 | 55-63-0 | Alliant Techsystems Inc.               | ATK Launch Systems Inc.             | Magna         | UT         | 84044      | Yes      | No        | No         |
| 73 | 55-63-0 | Alliant Techsystems Inc.               | Radford Army Ammunition Plant       | Radford       | VA         | 24143      | Yes      | No        | No         |
| 74 | 55-63-0 | General Dynamics                       | St. Marks Powder, Inc.              | Crawfordville | FL         | 32327      | Yes      | No        | No         |
| 75 | 56-23-5 | Basic Chemicals Company, LLC           | Basic Chemicals Company, LLC        | Geismar       | LA         | 70734      | Yes      | No        | No         |
| 76 | 56-23-5 | Basic Chemicals Company, LLC           | Basic Chemicals Company, LLC        | Wichita       | KS         | 67215      | Yes      | No        | No         |
| 77 | 56-23-5 | Oxy Vinyls, LP                         | LaPorte                             | La Porte      | TX         | 77571      | Yes      | No        | Yes        |
| 78 | 56-23-5 | Syngenta Crop Protection, Inc.         | Syngenta Crop Protection, Inc.      | St. Gabriel   | LA         | 70776-0011 | Yes      | No        | Yes        |
| 79 | 56-23-5 | The Dow Chemical Company               | FREEPOR, TX                         | FREEPOR       | TX         | 77541      | Yes      | No        | No         |
| 80 | 56-23-5 | The Dow Chemical Company               | PITTSBURG, CA                       | PITTSBURG     | CA         | 94565      | Yes      | No        | Yes        |
| 81 | 56-23-5 | The Dow Chemical Company               | PLAQUEMINE, LA                      | PLAQUEMINE    | LA         | 70764      | Yes      | No        | No         |
| 82 | 56-23-5 | Vulcan Materials Company               | Geismar Plant                       | Geismar       | LA         | 70734      | Yes      | No        | No         |
| 83 | 56-23-5 | Vulcan Materials Company               | Wichita Plant                       | Wichita       | KS         | 67215      | Yes      | No        | No         |
| 84 | 56-34-8 | Sachem, Inc.                           | SACHEM, Inc.                        | Cleburne      | TX         | 76033      | Yes      | No        | No         |
| 85 | 56-35-9 | Arkema Inc.                            | Arkema Inc. - AXIS/Mobile Facili    | Axis          | AL         | 36305      | CBI      | CBI       | CBI        |
| 86 | 56-37-1 | LANXESS Corporation                    | LANXESS - Wellford                  | Wellford      | SC         | 29385      | CBI      | CBI       | CBI        |
| 87 | 56-37-1 | Lindau Chemicals, Inc.                 | Lindau Chemicals, Inc.              | Columbia      | SC         | 29201      | Yes      | No        | CBI        |
| 88 | 56-40-6 | Cherkit Chemical Corporation           | Cherkit Chemical Corporation        | Darien        | CT         | 06820      | No       | Yes       | N/A        |



## *Limitations to IUR Data*

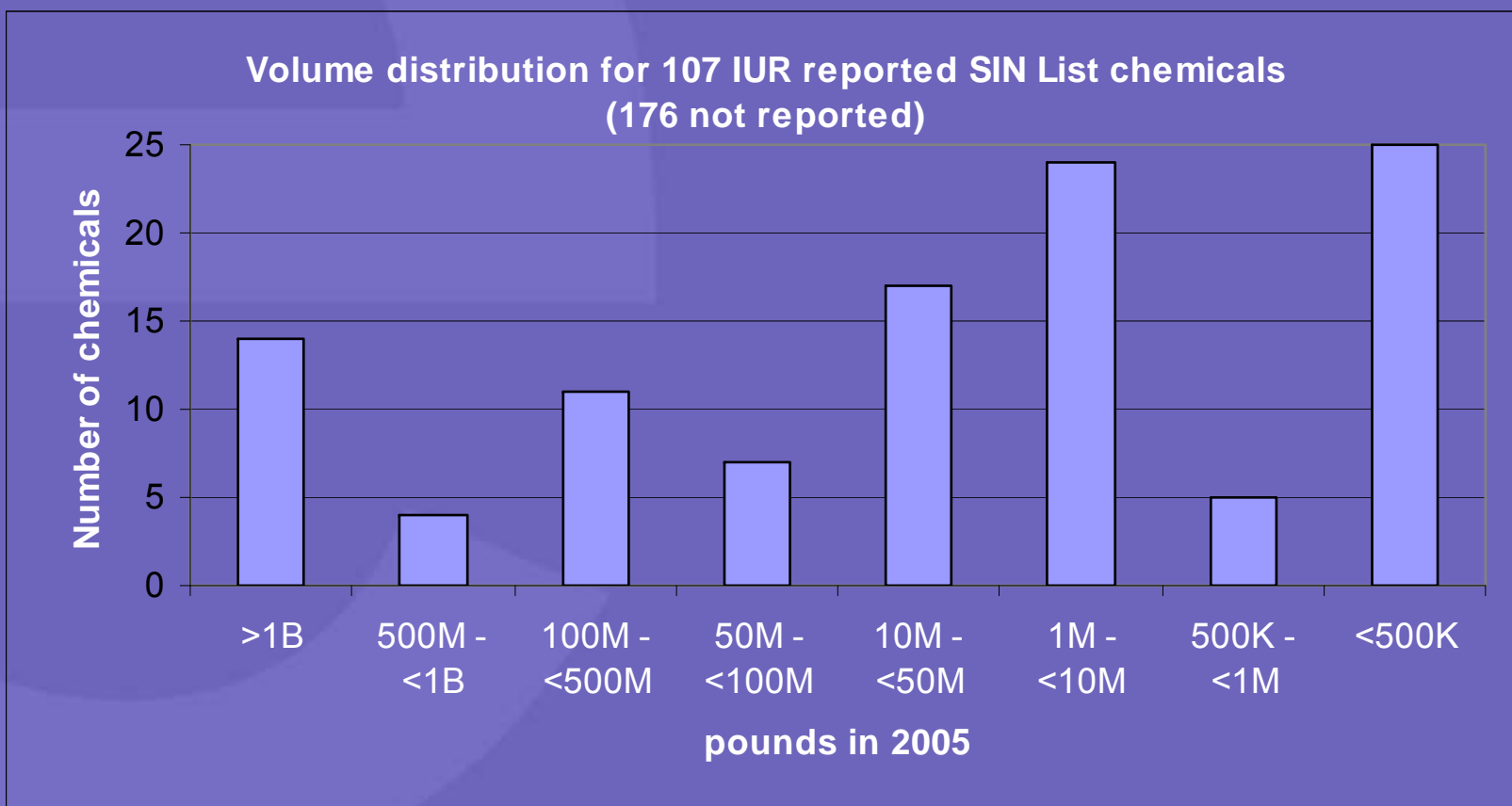
- Many exemptions, e.g.:
  - Production for non-TSCA regulated uses
  - Polymers
  - R&D chemicals
  - Chemicals imported as part of an article
  - Non-isolated intermediates
  - Small manufacturers
- Dated and only 1 yr (2005), despite large fluctuations
- High threshold of 25,000 pounds per site
- Public can't see CBI chemicals/companies/sites

## *Which SIN List chemicals are in US commerce?*

- $\geq 80\%$  are on the TSCA Inventory
  - ~ 83,000 chemicals: made at some point since 1979
  - Identities of ~15,000 are CBI, could include some on SIN List
- 38% reported on 2006 IUR, excluding:
  - <25,000 pounds per site
  - Exempted chemicals (e.g., some NPEs and OPEs)
  - Chemicals claimed CBI

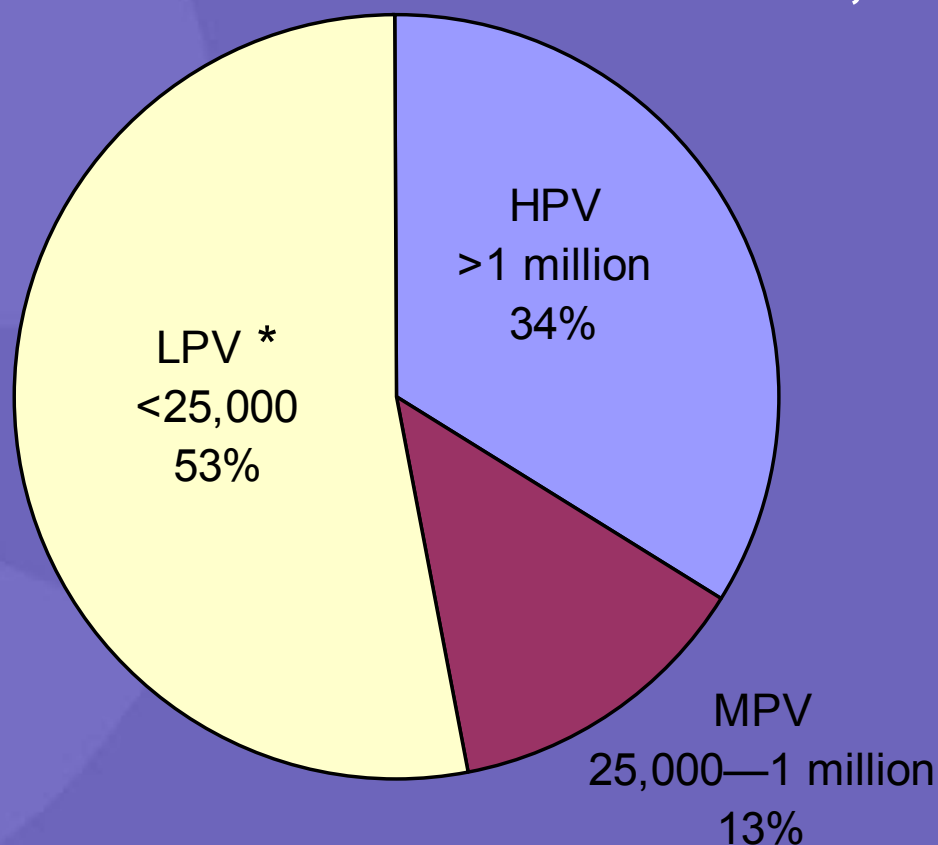
*In what amounts are SIN List chemicals produced or imported in the US?*

- EPA reports aggregate volumes only in broad ranges



*In what amounts are SIN List chemicals produced or imported in the US?*

IUR volume distribution for SIN List Chemicals, lbs in 2005



\* chemicals not reported; some may no longer be in commerce

*In what amounts are SIN List chemicals produced or imported in the US?*

- 14 SIN List chemicals >1 billion pounds

|                               |                    |
|-------------------------------|--------------------|
| Bisphenol A                   | Acrylonitrile      |
| Styrene                       | 2,4-Dinitrotoluene |
| Ethanol, 2-ethoxy-, 1-acetate | Carbon monoxide    |
| Formaldehyde                  | Benzene            |
| Aniline                       | Vinyl chloride     |
| 1,3-Butadiene                 | Ethylene oxide     |
| Ethylene dichloride           | Propylene oxide    |

## *Which companies produce/import SIN List chemicals in the US?*

- 235 companies reported production or import of at least 1 SIN List chemical.
  - 114 producers, 135 importers, 38 claimed CBI

| <u>Company</u>                                       | <u># Manufactured</u> | <u># Imported</u> | <u># CBI</u> | <u>Total*</u> |
|--|-----------------------|-------------------|--------------|---------------|
| BASF Corporation                                     | 3                     | 13                | 0            | 16            |
| The Dow Chemical Company                             | 11                    | 11                | 0            | 14            |
| E. I. du Pont de Nemours and Co.                     | 9                     | 5                 | 0            | 12            |
| Huntsman Corporation                                 | 4                     | 6                 | 0            | 9             |
| Chemtura Corporation<br>(formerly Great Lakes Chem.) | 0                     | 0                 | 9            | 9             |
| ICC Chemical Corporation                             | 0                     | 8                 | 0            | 8             |
| Ferro Corporation                                    | 5                     | 2                 | 0            | 7             |
| Albemarle Corporation                                | 4                     | 4                 | 1            | 7             |

\* Numbers do not add to total because a chemical may be produced and imported by the same company.

*Which companies produce/import  
SIN List chemicals in the US?*

- Many SIN List chemicals produced by multiple companies and at many different sites.

| <u>Chemical name</u>   | <u># Companies</u> | <u># Sites</u> |
|------------------------|--------------------|----------------|
| Benzene                | 41                 | 62             |
| Styrene                | 19                 | 25             |
| 1,3-Butadiene          | 17                 | 22             |
| Formaldehyde           | 16                 | 42             |
| Ethylene dichloride    | 15                 | 22             |
| Nickel monoxide        | 14                 | 24             |
| Hexane                 | 13                 | 15             |
| Bisphenol A            | 10                 | 13             |
| Vinyl chloride         | 9                  | 13             |
| Ethylene oxide         | 9                  | 13             |
| Nonylphenol ethoxylate | 7                  | 23             |
| Carbon monoxide        | 4                  | 14             |

## *In which states are SIN List chemicals produced or imported?*

- 42 states as well as Puerto Rico and the Virgin Islands.

|                | <i># of Chemicals</i> |                 |            |               | <i># of Sites</i> |                 |            |               |
|----------------|-----------------------|-----------------|------------|---------------|-------------------|-----------------|------------|---------------|
|                | <u>Produced</u>       | <u>Imported</u> | <u>CBI</u> | <u>Total*</u> | <u>Produced</u>   | <u>Imported</u> | <u>CBI</u> | <u>Total*</u> |
| Texas          | 29                    | 31              | 10         | 48            | 65                | 35              | 8          | 100           |
| New Jersey     | 8                     | 26              | 3          | 35            | 6                 | 12              | 3          | 21            |
| Ohio           | 11                    | 19              | 2          | 30            | 12                | 15              | 2          | 27            |
| Louisiana      | 21                    | 7               | 4          | 27            | 31                | 6               | 4          | 38            |
| New York       | 2                     | 22              | 3          | 25            | 2                 | 12              | 2          | 15            |
| North Carolina | 8                     | 9               | 6          | 22            | 10                | 5               | 2          | 16            |
| Pennsylvania   | 12                    | 13              | 2          | 20            | 10                | 11              | 2          | 21            |
| Michigan       | 5                     | 12              | 1          | 15            | 3                 | 2               | 1          | 6             |

\* Numbers do not add to total because a chemical may be produced and imported in the same state or site.

- California: 3 chemicals at 4 sites produced/imported.



## *In which states are SIN List chemicals produced or imported?*

- Some SIN List chemicals are produced or imported in many different states.

| <u>Chemical name</u>               | <i># of states</i> |                 |            | <u>Total*</u> |
|------------------------------------|--------------------|-----------------|------------|---------------|
|                                    | <u>Produced</u>    | <u>Imported</u> | <u>CBI</u> |               |
| Formaldehyde                       | 19                 | 8               | 2          | 22            |
| Nonylphenol ethoxylate (NPE)       | 1                  | 16              | 1          | 17            |
| Benzene                            | 13                 | 8               | 3          | 16            |
| Styrene                            | 3                  | 12              | 1          | 13            |
| Di-(2-ethylhexyl) phthalate (DEHP) | 3                  | 6               | 1          | 10            |

\* Numbers do not add to total because a chemical may be produced and imported in the same state.

## *Which SIN List chemicals have been tested in the US?*

- Most SIN List chemicals sufficiently tested and assessed in EU to indicate high hazard.
  - 234 are officially CMRs, PBTs or vPvBs
  - 13 are officially endocrine disruptors
- What testing has been done under TSCA?
  - Mandatory testing required for 38 SIN List chemicals (extent varies greatly)
  - Voluntary testing done or underway for 70
  - 28 overlap, so total of 80 (35%) have been tested

## *Which SIN List chemicals have been regulated in the US?*

- TSCA restricts only 2 SIN List chemicals or classes:
  - Asbestos and Hexavalent chromium compounds
- Even these regulations are quite limited:
  - Only asbestos in products no longer in commerce is regulated under TSCA; EPA's ban on all uses of asbestos was vacated by the 5th Circuit in 1991.
  - Only those hexavalent chromium-based water treatment chemicals intended for use in comfort cooling towers are banned under TSCA. Other uses of these compounds and any other hexavalent chromium compounds are unaffected.

*Which SIN List chemicals  
have been regulated in the US?*

- 20 SIN List chemicals are subject to Significant New Use Rules (SNURs).
- SNURs do not restrict production or use.
- Only require notification if production or use deviates from SNUR conditions.
- EPA can then review and accept, reject or impose conditions.

## *Which SIN List chemicals have been exempted in the US?*

- EPA has exempted 8 SIN List chemicals from reporting under the IUR.
- All are nonyl- or octylphenol ethoxylates (NPEs, OPEs), exempted because they are polymers presumed not to be bioavailable.
- Yet NPEs and OPEs:
  - are acutely toxic to aquatic organisms, and
  - break down to nonylphenol and octylphenol, more persistent and toxic than their parents and show endocrine-disrupting activity.

# *Conclusions*

- There is substantial US production and use of over 100, and likely many more, SVHCs.
- SVHCs are produced/imported by many different companies at many sites and states.
- Only ~1/3 of SIN List chemicals on TSCA Inventory have been subjected to any testing under TSCA.
- Only very limited uses of asbestos and certain Cr-VI compounds have been subjected to regulation.
- REACH's focus on SVHCs will have a major impact on US companies and chemical production and use.

Part II:  
IUR and the Public's Right to Know

## *IUR data: How much does EPA know and what isn't it telling us?*

- All data required under IUR is eligible for CBI status.
- EPA reports certain data only in ranges or aggregates across all submitters.
- Some data need not be submitted if not “reasonably ascertainable” or “readily obtainable” by producer.
- No reporting obligation on downstream users.



## *IUR use and exposure data*

For reportable organic chemicals (~5,550)  
“reasonably ascertainable” data on:

- # workers reasonably likely to be exposed at site of production/import;
- physical form(s) of the chemical and % of production volume in each form; and
- maximum concentration of the chemical substance as it leaves the submitter's possession.

## *IUR use and exposure data*

For organic HPV\* chemicals only (~2,800) –  
“readily obtainable” data on:

- industrial functions (e.g., adhesive, solvent) and % of production volume for each
- #, types of downstream processing and commercial-use sites
- # of workers handling chemical at each site
- product categories/types (e.g., paints)
- % of production volume and maximum concentration in each product category
- whether in products intended for use by children

\* chemicals  $\geq$ 300,000 pounds per site

# *Extent of CBI claims*

Exhibit 3. CBI Claims for Specific IUR Data Elements

| Data Element   | Percentage of Time Data Element Claimed Confidential |
|--|--|
| <b>Manufacturing Information</b>                                   |  |
| Domestic Manufacture Production Volume                             | 32%  |
| Import Production Volume   | 20%  |
| Site-Limited Status  | 13%  |
| Physical Form*   | 13%  |
| <b>Processing and Use Information</b>                              |  |
| Industrial Processing and Use Information (overall) **             | 28%  |
| Industrial Processing and Use Information (3-Code Combination) *** | 49%  |
| Process Use Code   | 26%  |
| 5-digit NAICS Code   | 29%  |
| Industrial Function Category                                       | 27%  |
| Commercial and Consumer Use Information                            | 26%  |

## *Extent of NRO\* claims*

| <u>IUR reporting category</u>               | <u># chemicals NRO</u> | <u>% NRO</u> |
|---|------------------------|--------------|
| Industrial processing and use information   | 337                    | 11%          |
| Industrial function category                | 419                    | 14%          |
| Commercial or consumer product category     | 427                    | 20%          |
| Use in product intended for use by children | 814                    | 38%          |

\* NRO = not readily obtainable

# *What else can't the public see?*

EPA's reporting methods obscure data that aren't even claimed CBI.

- Uses only broad aggregate ranges instead of chemical-specific data or ranges for:
  - Production volume (*yet only 20-30% is CBI*)
  - # of processing sites, workers (*28% CBI*)
- Use of only Yes/No indicators and chemical counts instead of chemical-specific data for:
  - Industrial processing/use (*26-49% CBI*)
  - Commercial/consumer use (*26% CBI*)
- No data on % of production volume provided

# ENVIRONMENTAL DEFENSE FUND

Over-  
broad  
ranges

and

Yes/No

indicators

instead of

chemical

and site-

specific

data

| CAS         | CHEM_NAME                            | CHEM_AGG_P                     | MAX_CONC         | CHEM_PHYSI            | CHEM_NUM_SITES | CHEM_NUM_WORKERS | CHEM_IND_PROCESS | CHEM_COMM_CONS |
|-------------|--------------------------------------|--------------------------------|------------------|-----------------------|----------------|------------------|------------------|----------------|
| 100-01-6    | Benzenamine, 4-nitro-                | 1 to < 10 million lbs          | Greater than 90% | Dry Powder, Pellets   | 1 to 99        | 1 to 99          | Yes              | No             |
| 1000-82-4   | Urea, N-(hydroxymethyl)-             | 500,000 to < 1 million lbs     | 1% - 30%         | Liquid                | 1 to 99        | 1 to 99          | No               | No             |
| 1000-90-4   | Zinc, bis[O-(1-methylethyl) carb     | < 500,000 lbs                  | Greater than 90% | Dry Powder            | 1 to 99        | 1 to 99          | No               | No             |
| 100-10-7    | Benzaldehyde, 4-(dimethylamin        | < 500,000 lbs                  | Greater than 90% | Dry Powder            | 1 to 99        | 100 to 999       | No               | No             |
| 10017-56-8  | Ethanol, 2,2',2"-nitritoltris-, phos | < 500,000 lbs                  | Greater than 90% | Water or Solvent We   | 1 to 99        | 1000 or greater  | No               | No             |
| 10017-59-1  | 2,7-Anthracenedisulfonic acid, 9     | < 500,000 lbs                  | Greater than 90% | Dry Powder            | 1 to 99        | 1 to 99          | No               | No             |
| 100-18-5    | Benzene, 1,4-bis(1-methylethyl)      | 50 to < 100 million lbs        | Greater than 90% | Liquid                | 1 to 99        | 100 to 999       | Yes              | No             |
| 100208-96-6 | Iron, N,N-bis[2-[bis(carboxymet      | < 500,000 lbs                  | 1% - 30%         | Liquid                | 1 to 99        | 1 to 99          | No               | No             |
| 100-20-9    | 1,4-Benzenedicarbonyl dichlorid      | 10 to < 50 million lbs         | Greater than 90% | Other Solid           | 1 to 99        | 1000 or greater  | Yes              | No             |
| 100-21-0    | 1,4-Benzenedicarboxylic acid         | 1 billion lbs and greater      | Greater than 90% | Dry Powder, Water o   | 100 to 999     | 1000 or greater  | Yes              | Yes            |
| 10022-31-8  | Nitric acid, barium salt (2:1)       | 500,000 to < 1 million lbs     | Greater than 90% | Dry Powder, Other S   | 1 to 99        | 1 to 99          | Yes              | Yes            |
| 10024-93-8  | Neodymium chloride (NdCl3)           | 500,000 to < 1 million lbs     | CBI              | Liquid                | 1 to 99        | 1 to 99          | No               | No             |
| 10024-97-2  | Nitrogen oxide (N2O)                 | 10 to < 50 million lbs         | Greater than 90% | Liquid                | 1 to 99        | 100 to 999       | Yes              | No             |
| 10025-67-9  | Disulfidesulphenyl chloride          | < 500,000 lbs                  | Greater than 90% | Liquid                | 1 to 99        | 100 to 999       | No               | No             |
| 10025-78-2  | Silane, trichloro-                   | 100 to < 500 million lbs       | Greater than 90% | Liquid                | 1 to 99        | 100 to 999       | Yes              | No             |
| 10025-87-3  | Phosphoric trichloride               | 50 to < 100 million lbs        | Greater than 90% | Liquid                | 1 to 99        | 100 to 999       | No               | No             |
| 10026-04-7  | Silane, tetrachloro-                 | 100 to < 500 million lbs       | Greater than 90% | Liquid                | 1 to 99        | 1000 or greater  | Yes              | No             |
| 10026-11-6  | Zirconium chloride (ZrCl4), (T-4)    | 10 to < 50 million lbs         | Greater than 90% | Dry Powder            | 1 to 99        | 100 to 999       | No               | No             |
| 10026-12-7  | Niobium chloride (NbCl5)             | < 500,000 lbs                  | CBI              | CBI                   | 1 to 99        | 1 to 99          | No               | No             |
| 1002-62-6   | Decanoic acid, sodium salt (1:1      | < 500,000 lbs                  | 1% - 30%         | Liquid                | 1 to 99        | 1 to 99          | No               | No             |
| 10027-33-5  | 1,3-Benzenedicarboxylic acid, s      | < 500,000 lbs                  | 1% - 30%         | Water or Solvent We   | 1 to 99        | 100 to 999       | No               | No             |
| 10028-15-6  | Ozone                                | 1 to < 10 million lbs          | 1% - 30%         | Gas or Vapor          | 1 to 99        | 100 to 999       | No               | No             |
| 10028-22-5  | Sulfuric acid, iron(3+) salt (3:2)   | 500 million to < 1 billion lbs | Greater than 90% | Liquid                | 1 to 99        | 1 to 99          | No               | No             |
| 10034-77-2  | Silicic acid (H4SiO4), calcium s     | 1 billion lbs and greater      | Greater than 90% | Dry Powder, Pellets   | 1000 or great  | 1000 or greater  | Yes              | Yes            |
| 10034-85-2  | Hydriodic acid                       | < 500,000 lbs                  | 31% - 60%        | Liquid                | 1 to 99        | 1 to 99          | No               | No             |
| 10035-10-6  | Hydrobromic acid                     | 100 to < 500 million lbs       | Greater than 90% | Gas or Vapor, Liquid  | 1 to 99        | 1000 or greater  | Yes              | Yes            |
| 100-37-8    | Ethanol, 2-(diethylamino)-           | 10 to < 50 million lbs         | Greater than 90% | Liquid                | 1 to 99        | 1000 or greater  | Yes              | Yes            |
| 10038-98-9  | Germane, tetrachloro-                | < 500,000 lbs                  | 61% - 90%        | Liquid                | 1 to 99        | 1 to 99          | No               | No             |
| 10039-54-0  | Hydroxylamine, sulfate (2:1)         | 10 to < 50 million lbs         | Greater than 90% | Dry Powder, Pellets   | 1 to 99        | 100 to 999       | Yes              | No             |
| 100-40-3    | Cyclohexene, 4-ethenyl-              | 1 to < 10 million lbs          | Greater than 90% | Liquid                | 1 to 99        | 1000 or greater  | Yes              | Yes            |
| 100-41-4    | Benzene, ethyl-                      | 1 billion lbs and greater      | Greater than 90% | Pellets or Large Crys | 100 to 999     | 1000 or greater  | Yes              | Yes            |
| 100-42-5    | Benzene, ethenyl-                    | 1 billion lbs and greater      | Greater than 90% | Pellets or Large Crys | 1000 or great  | 1000 or greater  | Yes              | Yes            |
| 10042-59-8  | 1-Heptanol, 2-propyl-                | 1 to < 10 million lbs          | Greater than 90% | Liquid                | 1 to 99        | 100 to 999       | Yes              | Yes            |
| 10042-76-9  | Nitric acid, strontium salt (2:1)    | 1 to < 10 million lbs          | Greater than 90% | Dry Powder, Other S   | 1 to 99        | 100 to 999       | Yes              | Yes            |
| 10043-01-3  | Sulfuric acid, aluminum salt (3:2    | 1 billion lbs and greater      | Greater than 90% | Dry Powder, Pellets   | 100 to 999     | 1000 or greater  | Yes              | Yes            |
| 10043-11-5  | Boron nitride (BN)                   | 1 to < 10 million lbs          | Greater than 90% | Dry Powder            | 1 to 99        | 100 to 999       | No               | No             |
| 10043-35-3  | Boric acid                           | 100 to < 500 million lbs       | Greater than 90% | Dry Powder, Pellets   | 1 to 99        | 100 to 999       | Yes              | Yes            |
| 10043-52-4  | Calcium chloride (CaCl2)             | 1 billion lbs and greater      | Greater than 90% | Dry Powder, Pellets   | 1 to 99        | 1000 or greater  | Yes              | Yes            |
| 100-43-6    | Pyridine, 4-ethenyl-                 | 500,000 to < 1 million lbs     | Greater than 90% | Liquid                | 1 to 99        | 100 to 999       | Yes              | No             |
| 100-44-7    | Benzene, (chloromethyl)-             | 10 to < 50 million lbs         | Greater than 90% | Liquid                | 1 to 99        | 1 to 99          | Yes              | Yes            |
| 100-46-9    | Benzenomethanamine                   | < 500,000 lbs                  | Greater than 90% | Liquid                | 1 to 99        | 1 to 99          | No               | No             |

# *EPA's reporting uses overbroad ranges*

| Production Volume  | Range in IUR database | Range in IUR report* | Data required to be reported     |
|--------------------|-----------------------|----------------------|----------------------------------|
| Benzene            | ≥1B                   | 15-20B               | Actual volume to 2 sign. figures |
| 1,2-dichloroethane | ≥1B                   | 25-30B               |                                  |

\* These narrower ranges are provided only for top 100 chemicals

|  |              |
|--|--------------|
| Ranges used in EPA's public IUR database | <500K        |
|  | 500K - <1M   |
|  | 1M - <10M    |
|  | 10M - <50M   |
|  | 50M - <100M  |
|  | 100M - <500M |
|  | 500M - <1B   |
|  | ≥1B          |

*EPA's reporting uses overbroad ranges*

| Required reporting ranges for # workers | EPA's public database ranges | Required reporting ranges for # sites |
|---|------------------------------|---------------------------------------|
| <10                                     | 1-99                         | <10                                   |
| 10-24                                   | 100-999                      | 10-24                                 |
| 25-49                                   | ≥1,000                       | 25-99                                 |
| 50-99                                   |                              | 100-249                               |
| 100-499                                 |                              | 250-1,000                             |
| 500-999                                 |                              | 1,000-9,999                           |
| 1,000-9,999                             |                              | ≥10,000                               |
| ≥10,000                                 |                              |                                       |



# ENVIRONMENTAL DEFENSE FUND

Exhibit 22. Number of Chemicals and Reporting Frequency for the Commercial and Consumer Category

| Commercial and Consumer Product Category  | Number of Chemicals | Number of Times Reported |
|---|---------------------|--------------------------|
| Rubber and plastic products               | 480                 | 747                      |
| Paints and coatings                       | 335                 | 498                      |
| Lubricants, greases and fuel additives    | 303                 | 475                      |
| Soaps and detergents                      | 271                 | 444                      |
| Adhesives and sealants                    | 221                 | 335                      |
| Paper products                            | 147                 | 242                      |
| "Fabrics, textiles and apparel"           | 124                 | 146                      |
| Agricultural products (non-pesticidal)    | 108                 | 173                      |
| Electrical and electronic products        | 107                 | 132                      |
| Transportation products                   | 87                  | 131                      |
| Automotive care products                  | 85                  | 110                      |
| Polishes and sanitation goods             | 63                  | 79                       |
| Wood and wood furniture                   | 57                  | 82                       |
| Metal products                            | 47                  | 60                       |
| Photographic supplies                     | 41                  | 44                       |
| Glass and ceramic products                | 25                  | 35                       |
| Lawn and garden products (non-pesticidal) | 24                  | 29                       |
| Leather products                          | 23                  | 24                       |
| Artists supplies                          | 17                  | 19                       |
| Other                                     | 1052                | 2015                     |
| Not Readily Obtainable                    | 427                 | 903                      |

## *What data should EPA provide?*

- Provide all chemical- and site-specific data that are not CBI
  - after reviewing and allowing only legitimate CBI claims.
- Indicate, for each chemical and site, those reporting elements that are claimed CBI or NRO.