

3-13-98

## FACT SHEET

### EVALUATION OF THE CLEAN AIR ACT'S AIR TOXICS LEGAL AUTHORITIES FOR PROTECTING THE GREAT WATERS

#### TODAY'S ACTION

- ▶ The Environmental Protection Agency (EPA) is issuing a notice that the legal authority provided under the Clean Air Act (section 112) is adequate to protect public health and the environment from harmful effects associated with deposition of toxic air pollutants into what is known as the "Great Waters." The Great Waters include: the Great Lakes, Lake Champlain, Chesapeake Bay, and many U.S. coastal estuaries. Air toxics, also known as hazardous air pollutants, are known or suspected to cause cancer and/or other serious health effects, such as birth defects or reproductive effects.
- ▶ EPA recognizes that, while significant strides have been made to reduce the air toxics affecting the Great Waters, considerable work remains to further reduce these emissions. EPA will continue to develop and implement regulations under the air toxics programs and other authorities to achieve further reductions in pollutants affecting the Great Waters.
- ▶ EPA retains the ability to reevaluate its decision on the adequacy of the Clean Air Act's air toxics legal authority to protect Great Waters, based on new scientific information or a future evaluation of the effectiveness of the air toxics legal authorities.
- ▶ EPA issued its report to Congress in June 1997, entitled *Deposition of Air Pollutants to the Great Waters*. At that time, EPA requested public comment on the results of its evaluation of the adequacy of the air toxics legal authorities to protect the Great Waters from the deposition of toxic air pollutants. EPA carefully considered all public comments before making today's announcement.

#### BACKGROUND

- ▶ Under the Clean Air Act, EPA is required to assess the impacts of deposition of air toxics (and any other relevant air pollutants) on the Great Waters, which include the Great Lakes, the Chesapeake Bay, Lake Champlain, and many U.S. coastal estuaries. Additionally, the Act requires EPA to assess monitoring and research activities as well as the adequacy of its legal authorities under the Clean Air Act to address the air toxics of concern to the Great Waters.
- ▶ In today's determination, EPA focused on the legal authorities provided by the air toxics provisions of the Clean Air Act, rather than on an evaluation of the effectiveness of particular emission controls. EPA acknowledges that continued development and implementation of the air toxics regulatory program and other environmental programs are

necessary to protect the Great Waters.

- ▶ The Clean Air Act provides authority for EPA to regulate sources of 188 specific air toxics. (Note that this list originally contained 189 pollutants, but EPA has subsequently removed the chemical caprolactum from the list.) On July 16, 1992, EPA published a list of industry groups (known as source categories) that emit one or more of these air toxics. For listed categories of "major" sources (those that emit 10 tons/year or more of a listed pollutant or 25 tons/year or more of a combination of pollutants), the Clean Air Act requires EPA to develop standards that require the application of stringent air pollution reduction measures known as maximum achievable control technology (MACT).

### **WHY IS AIR POLLUTION A CONCERN FOR THE GREAT WATERS?**

- ▶ Many air pollutants settle out of the air onto land or a water surface. The Great Waters "pollutants of concern" include several chemicals that have a tendency to persist in the environment, to accumulate in plants and animals, and to biomagnify through the food web. The concentration of a pollutant at the top of the food web (for example, predatory fish, fish-eating birds and mammals, as well as humans who eat fish) can be thousands or even millions of times greater than the concentration of the pollutant found in water.
- ▶ The pollutants of concern in the Great Waters are: metals (mercury, cadmium, lead) and their compounds, dioxins (2,3,7,8-TCDD), furans (2,3,7,8-TCDF), polycyclic organic matter (POM), polychlorinated biphenyls (PCBs), and pesticides (chlordane, DDT/DDE, dieldrin, hexachlorobenzene, alpha-hexachlorocyclohexane ( $\alpha$ -HCH), lindane, and toxaphene).
- ▶ Many of these pollutants, such as mercury and PCBs, are related to developmental and reproductive defects, and exposure of fetuses and children is of special concern.
- ▶ One indicator of potential human exposure to these toxic pollutants is fish consumption advisories issued by State agencies. According to EPA's 1996 fish consumption advisory database, advisories in the Great Lakes States most commonly are issued for PCBs, mercury and dioxins. In coastal waters, advisories commonly are issued for PCBs and dioxins. Airborne emissions from local and distant sources that deposit onto the watershed or surface waters may contribute to this problem.
- ▶ While nitrogen compounds are not classified as "air toxics," and therefore were not included in today's determination, they are one of the pollutants of concern for the Great Waters. Loadings of nitrogen compounds in coastal waters, which come from air pollution as well as water pollution from large and small sources, can cause excessive growth of algae. This overabundance of algae results in reduced levels of oxygen (which is known as eutrophication) which can harm fish or shellfish, aquatic vegetation and coral reefs. EPA's Chesapeake Bay Program has identified eutrophication as a major problem

affecting the overall health of the Bay, as have many other estuaries.

## **WHAT IS EPA DOING TO REDUCE POLLUTION AFFECTING THE GREAT WATERS?**

### **Under the Clean Air Act's Air Toxics Authorities:**

- ▶ EPA is developing emissions standards, or regulations, for over 170 categories of stationary sources of air toxics emissions. EPA already has issued many technology-based standards (known as maximum achievable control technology or "MACT" standards) and expects to issue the remainder by November 15, 2000. As the standards are phased in, EPA expects emissions of many of the Great Waters toxic pollutants of concern to decrease significantly.
- ▶ For example:
  - *The Synthetic Organic Chemical Manufacturing Industry rule* (also known as the "Hazardous Organics NESHAP" or the "HON"): expected to reduce air toxics emitted by this industry by approximately 90 percent (510,000 tons) from 1994 levels.
  - *The Municipal Waste Combustors rule*: expected to reduce dioxin emissions from these sources by 99 percent from 1990 levels, and mercury emissions by 90 percent, when implemented fully by December 2000. These sources account for over 61 percent of the total dioxin emissions and almost 19 percent of the national man-made emissions of mercury.
  - *Hospital/Medical Infectious Waste Incinerators rule*: when implemented fully by September 2002, is expected to reduce dioxin emissions from these sources by 94 percent and mercury emissions by 95 percent. These sources account for 11 percent of the total dioxin emissions and 10 percent of the national man-made emissions of mercury.
- ▶ EPA intends to issue regulations in the near future for Hazardous Waste Combustors and will soon be implementing the Primary Aluminum Industry standards. These actions will reduce substantially emissions of mercury and polycyclic organic matter, respectively.
- ▶ Under the Clean Air Act's Residual Risk Program, EPA plans to develop and implement a program for assessing risks from sources regulated under the air toxics program, and to promulgate any additional rules, if necessary, to reduce any unacceptable "residual risks" to the public and the environment. As an initial step toward this effort, EPA is seeking comment on a report to be issued later this month which contains potential methods and strategies to address these risks to public health and the environment.

## **Actions to Address Nitrogen Compounds**

- ▶ Under the Acid Rain and mobile source provisions of the Clean Air Act, EPA has taken important steps towards reducing nitrogen oxide emissions by 2 million tons by the year 2000 (from 1980 levels).
- ▶ In November 1997, EPA proposed the Ozone Transport rule that would provide substantially more health and environmental protection by reducing nitrogen oxide emissions in 22 eastern states and the District of Columbia. These regional nitrogen oxide reductions are critical to improving air quality in the eastern U.S., as well as for helping address nitrogen deposition problems for the Chesapeake Bay and other eastern coastal waters. EPA intends to issue a final rule in September 1998.
- ▶ EPA recently revised the National Ambient Air Quality Standards for ozone and particulate matter. Implementation of these new standards will reduce nitrogen deposition to the Great Waters over the next 10-20 years.

## **Related EPA Activities**

- ▶ On February 19, EPA and the Department of Agriculture issued the “Clean Water Action Plan,” which describes important actions EPA and other federal agencies will take to reduce exposure to toxic pollutants in the nation’s water and fish. For example, by April 1998, EPA will release the Contaminated Sediment Strategy detailing Agency actions to reduce the volume of contaminated sediments. In 1998, EPA will also identify contaminated sediment recovery demonstration projects in those watersheds identified as being of the greatest concern, and begin work to develop detailed pollution prevention, source control, and remediation plans.
- ▶ In 1998, EPA will finalize development of an integrated, multimedia initiative addressing mercury and other priority persistent, bioaccumulative, and toxic pollutants. The initiative will use all of the Agency’s tools -- including regulatory and nonregulatory approaches -- to reduce current and future risks to human health and the environment from exposure to these toxics which can pose a threat to human health, especially the developing fetus, and the environment.
- ▶ Wastewater treatment systems to remove biological nitrogen are being installed at a significant rate in many states: 25 plants in Long Island Sound by 2010 and 30 plants in Chesapeake Bay by 2000.
- ▶ EPA is continuing to develop Clean Water Act effluent guidelines for industries using Best Available Technology. Data on EPA’s 28 guidelines show over 88,000 tons per year reduction in nitrogen, in the form of ammonia, and 541,000 pounds per year reduction in

mercury.

- ▶ EPA is considering revising its water quality criteria development plan and the required analytical method for measuring mercury concentrations in water to be more sensitive and less subject to sample contamination. Together, these changes would lead to more precise data on actual mercury levels in water. EPA is also evaluating the linkage of air emissions to water quality impacts (using the total maximum daily load process) in an effort to help determine appropriate reduction actions.
- ▶ EPA's Nonpoint Source program and the EPA/NOAA (National Oceanographic and Atmospheric Administration) Coastal Zone Management Program will continue to provide guidance and funding to States to implement programs for reducing nonpoint source runoff using "Best Management Practices". Nonpoint sources include agricultural and urban run-off.
- ▶ Releases of mercury and some other persistent and bioaccumulative toxics (PBTs) are required to be reported on the Toxics Release Inventory (TRI). However, relatively few sources report releases of PBTs because statutory reporting thresholds are high (i.e., above the levels found at most facilities). To increase public access to meaningful information on PBTs, EPA is preparing a proposal to lower reporting thresholds for mercury and other persistent and bioaccumulative toxics.
- ▶ The Integrated Risk Information System (IRIS) is an EPA data base containing Agency consensus scientific positions on potential adverse human health effects that may result from chronic exposure to environmental contaminants. Development of chemical-specific summaries of qualitative health information that will be included in IRIS is an ongoing process, and several chemicals related to the Great Waters contamination have been or are in the process of having such files developed.

### **Related International Activities**

- ▶ Since many of the toxic pollutants of concern to the Great Waters potentially can travel great distances in the air from country to country, EPA is supporting international agreements and negotiations to address these pollutants.
- ▶ EPA participates in the United Nations Economic Commission for Europe negotiations on persistent organic pollutants and heavy metals. In June 1998, the United States and more than 30 other countries are expected to sign two protocols: the first protocol will ban or set strict limits on the use of 16 persistent organic pollutants, including PCBs and DDT; the second protocol will set strict limits on the use of the three heavy metals -- mercury, lead, and cadmium.
- ▶ Through the Canada-U.S. Great Lakes Binational Toxics Strategy, EPA is pursuing the

reduction and virtual elimination of many great waters pollutants including mercury, PCBs, and dioxins/furans. The strategy contains specific “challenge goals,” e.g., 50% reduction in the deliberate use and release of mercury by the year 2006, issued to all sectors of society. Interested stakeholders, including states, industry, environmental groups, tribes, and others are involved in the implementation of the strategy.

### **FOR FURTHER INFORMATION**

- ▶ Interested parties can download the Federal Register notice from EPA's web site on the Internet under recent actions at the following address: (<http://www.epa.gov/ttn/oarpg>). The notice also is available through EPA's Air and Radiation Docket and Information Center (Docket Number A-97-21) by calling (202) 260-7548 or -7549 or FAX (202) 260-4000 (a reasonable fee may be charged for copying). For technical questions about this action, contact Dale Evarts at (919) 541-5535.
- ▶ A copy of EPA's June 1997 report to Congress on *Deposition of Air Pollutants to the Great Waters* can be obtained from EPA's web site at the following address: (<http://www.epa.gov/ttn/oarpg/t3rc.html>). A hard copy of the report can be obtained, supplies permitting, from the Library Services Offices (MD-35), US EPA, Research Triangle Park, North Carolina, 27711.
- ▶ EPA's National Center for Environmental Assessment has a home page on the Internet which contains further information about EPA activities related to risk analysis of human health and ecological effects including information about pollutants of concern to the Great Waters. This webpage also provides information about and access to EPA's Integrated Risk Information System (IRIS). The home page address is: (<http://www.epa.gov/ncea>).
- ▶ EPA's Great Lakes National Program Office has a home page on the Internet which contains information about the Binational Toxics Strategy, monitoring and cleanup activities, and other information related to Great Lakes ecosystem protection. The home page address is: (<http://www.epa.gov/glnpo>).
- ▶ The Clean Water Action Plan and information related to activities associated with it can be accessed from EPA's home page on the Internet at: ([www.epa.gov/cleanwater](http://www.epa.gov/cleanwater)).
- ▶ The EPA's Office of Air and Radiation's home page on the Internet contains a wide range of information on the air toxics program, as well as many other air pollution programs and issues. The Office of Air and Radiation's home page address is: (<http://www.epa.gov/oar/>).