



STAR Program

Strategic Toxic Air Reduction

The need for action

- ★ Protecting the health and safety of the people who live in this community must be our top priority.
- ★ The federal Environmental Protection Agency has set a health risk goal (1 in 1 million lifetime cancer risk) that states and local communities are using in their efforts to lower exposure risks to toxic chemicals.
- ★ Louisville residents have some of the greatest exposure risks to airborne toxic chemicals of any of the communities in the Southeast, based on data reported by companies to the U.S. Environmental Protection Agency.
- ★ A 2003 report based on extensive air monitoring in West Louisville and other sites verified that 18 toxic chemicals were present in levels that exceeded the health risk goal (1 in 1 million lifetime cancer risk).
- ★ Some Louisville companies have made significant steps to reduce toxic emissions in recent years, but others have not. Without a required emissions reduction program, we will continue to have high levels of toxic chemicals in our air.

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Highlights of the program

- ★ Focused, strategic plan that will significantly reduce levels of toxic chemicals in our air beginning next year and prompt sharp reductions over the next five years
- ★ Requires more detailed information to be reported to the public than ever before about toxic chemicals being released into the air
- ★ Establishes a health risk goal (1 in 1 million lifetime cancer risk) for the 38 most prevalent toxic chemicals in our community
- ★ Primary focus is on reducing levels of the 18 toxic chemicals proven to exceed the health risk goal through monitoring in the West Jefferson County Community Task Force study
- ★ Secondary focus is on the additional 20 toxic chemicals that pose the next greatest health risks to the community and, based on aggregate data reported to the U.S. EPA, may be present at levels above the health risk goal
- ★ Requires 173 companies that emit the largest amounts of chemicals to determine through modeling whether they are exceeding the health risk goal for each of the targeted chemicals
- ★ Requires companies that exceed the goal to present a plan to reduce emissions and reach the goal over the next six years
- ★ Strengthens our ability to prevent new air toxic problems by adopting and enforcing state laws that require new and expanded companies to meet the health risk goal for the 190 most toxic chemicals
- ★ Uses state-of-the-art air monitoring equipment to ensure modeling accuracy
- ★ Raises requirements for reporting malfunctions, increases frequency of inspections and requires repairs to be done more quickly
- ★ Increases annual permit fees for companies that are leading sources of air toxics to help cover the program's costs – on average, about \$350 for moderate sources and \$5,500 for major sources

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Toxic chemicals that are covered

18 toxic chemicals proven to exceed the health risk goal

These 18 chemicals were found to exceed the health risk goal through monitoring by the West Jefferson County Community Task Force

- Acrylonitrile
- Arsenic
- Benzene
- Bromoform
- 1,3 Butadiene
- Cadmium
- Carbon Tetrachloride
- Chloroform
- Chloroprene
- Chromium
- 1,4 Dichlorobenzene
- Ethyl Acrylate
- Formaldehyde
- Methyl Chloride
- Nickel
- Tetrachloroethylene
- Trichloroethylene
- Vinyl Chloride

20 toxic chemicals that may exceed the health risk goal

These 20 chemicals are the remaining most toxic chemicals that Louisville companies release based on their reporting to the U.S. EPA

- Aluminum
- Ammonia
- Antimony & its compounds
- Boron trifluoride
- Butyl acrylate
- Chlorine
- Cobalt & its compounds
- Copper & its compounds
- Diisocyanates
- Glycol ethers
- Hydrochloric acid
- Hydrofluoric acid
- Lead compounds
- Manganese & its compounds
- Napthalene
- Nitric acid
- Sulfuric acid
- Toluene
- 1,2,4 Trimethylbenzene (cumene)
- Xylene (mixed isomers)

Companies that are covered

Major sources (43 companies)

Companies, known as Title V companies under federal law, that are allowed to release more than 100 tons of chemicals into our air each year.

Moderate sources (130 companies)

Companies that emit more than 25 tons of chemicals into our air each year.

Required steps

The 173 companies that are major or moderate sources of toxic emissions currently provide aggregate data to the APCD on toxic chemicals used annually in their operations. The reports do not provide detailed information on each chemical emitted.

Point 1 – Emissions inventory

Companies will provide detailed information to the APCD and the public about the amount of each of the targeted toxic chemicals they release.

Point 2 – Emissions levels by point of release

Companies will provide detailed information about the emissions levels of toxic chemicals from each stack or release point in their facility. The report will list the amounts of each chemical from each stack or release point.

Point 3 – Emissions level modeling

Companies will use established models to determine whether any of the chemicals they are using exceed the health risk goal. If toxic chemical emissions are at levels below the goal, no additional action is required.

Point 4 – Emissions reduction plan

If toxic chemical emissions exceed the health risk goal, companies must submit a plan to the APCD staff for lowering emissions to meet the goal. Steps could include changing to less toxic chemicals, using lesser amounts of toxic chemicals, improving processes to reduce emissions levels.

Point 5 – Emissions compliance

Companies must meet the health risk goal for each toxic chemical within the specified timeframe or prove to the APCD Board – **A)** they have made significant progress and deserve more time to meet the goal or **B)** they have implemented the best technology available to reduce emissions.

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Implementation Timeline By Company

Major sources (43 companies that release 100 tons or more annually)

Requirement	2005	2006	2007	2008	2009	2010
Point 1	A	B				
Point 2	A	B				
Point 3	A	B				
Point 4		A	B			
Point 5			A	B		

Moderate sources (130 companies that release 25-99 tons annually)

Requirement	2005	2006	2007	2008	2009	2010
Point 1		A,B				
Point 2			A,B			
Point 3				A,B		
Point 4					A,B	
Point 5						A,B

A= 18 toxic chemicals proven through monitoring to exceed the health risk goal

B= 20 toxic chemicals that may exceed the health risk goal

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Implementation Timeline By Year**2005**

- ★ Major sources must report whether they meet the health risk goal for the 18 toxic chemicals monitored at high levels.

2006

- ★ Major sources that exceed health risk goal for any of the 18 monitored toxic chemicals must submit for APCD approval a plan for lowering emissions to the health risk goal within a year.
- ★ Major sources must report whether they meet the health risk goal for the other 20 targeted chemicals.
- ★ Moderate sources must report the amounts of each of the 38 chemicals emitted.

2007

- ★ Major sources will be required to meet the health risk goal for the 18 monitored toxic chemicals or prove to the APCD Board they have made progress and deserve more time to meet the goal or have implemented the best technology available to reduce emissions.
- ★ Major sources that exceed the health risk goal for any of the 20 other targeted chemicals must submit a plan to lower emissions within a year.
- ★ Moderate sources must report detailed information for each emission point (or stack) for the 38 chemicals.

2008

- ★ Major sources will be required to meet the health risk goal for the 20 other targeted chemicals or prove to the APCD board they have made progress and deserve more time to meet the goal.
- ★ Moderate sources must report whether they meet the health risk goal for the 38 toxic chemicals monitored at high levels.

2009

- ★ Moderate sources that exceed the health risk goal for any of the 38 chemicals must submit for APCD approval a plan for lowering emissions to the health risk goal within a year.

2010

- ★ Moderate sources will be required to meet the health risk goal for the 38 monitored toxic chemicals or prove to the APCD Board they deserve more time to meet the goal or have implemented the best technology available to reduce emissions.