

April 3, 2001

## **FACT SHEET**

### **FINAL AIR TOXICS RULE FOR SOLVENT EXTRACTION IN VEGETABLE OIL PRODUCTION**

#### **TODAY'S ACTION**

- ! The Environmental Protection Agency (EPA) is issuing a final rule to limit emissions of toxic air pollutants from facilities that use hexane to extract oil from vegetable seeds. Long-term exposure to hexane, a toxic air pollutant, can cause permanent nerve damage in humans.
- ! Today's rule affects 106 facilities that extract oil from one or more of eight types of oilseeds: soybeans; cottonseed; rapeseed (canola); corn germ; sunflower; safflower; peanuts; and flax.
- ! This rule is expected to reduce emissions of hexane by 6,800 tons per year and smog-forming volatile organic compounds (VOCs) by 10,600 tons per year.
- ! EPA's final rule restricts plant-wide hexane emissions from each affected facility rather than requiring individual controls at each emission point. This gives the industry flexibility to meet emission limits in the most cost-effective way, either through controls on a single emission point, or a combination of emission points. EPA encourages the industry to conserve resources and expects the industry will comply with this rule by upgrading equipment to recover and recycle solvents.

#### **BACKGROUND**

- ! The Clean Air Act of 1990 requires EPA to identify source categories that emit one or more listed 188 toxic air pollutants. Hexane is one of those pollutants.
- ! For major sources within each source category, EPA is required to develop standards that restrict emissions to levels consistent with the lowest-emitting (also called best-performing) plants. Major sources are those that emit more than 10 tons a year of a single air toxic or more than 25 tons a year of a combination of air toxics. All solvent extraction plants that use hexane are major sources.

- ! The extraction process is the same for all eight types of oilseeds subject to this rule (soybean, cottonseed, canola, corn germ, sunflower, safflower, peanuts, and flax). In each case, the seeds are crushed and mixed with the solvent. The oil then dissolves in the solvent. Following this step, the solution is separated from the seeds and heated to evaporate the solvent. The evaporated solvents are then condensed and reused in the process.
- ! Solvent losses, which occur at several points in the process, currently range from 0.2 to 2.0 gallons per ton of seeds processed. The solvent is 100 percent volatile organic compounds and approximately 64 percent hexane. This rule is expected to achieve approximately a 25 percent reduction of hexane and VOC emissions from the current level.
- ! EPA estimates that the total capital cost for the industry to comply with the rule is approximately \$30 million and the annual cost is slightly over \$12 million nationwide.
- ! EPA proposed rule this rule in the *Federal Register* on May 26, 2000 and solicited public comment on it. As a result of the comments, EPA is making a few clarifications, but is making no substantive changes in the final rule.
- ! Solvent extraction facilities that are subject to the final rule are required to be in compliance within three years from the date the final rule is published in the *Federal Register*.

#### **FOR MORE INFORMATION**

- ! Interested parties can download the rule from EPA's web site at: [www.epa.gov/ttn/oarpg/ramain.html](http://www.epa.gov/ttn/oarpg/ramain.html). For additional information, contact James F. Durham of the EPA's Office of Air Quality Planning and Standards at (919) 541-5672 or by e-mail at [durham.jim@epa.gov](mailto:durham.jim@epa.gov).
- ! EPA's Office of Air and Radiation's homepage 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 address is: [www.epa.gov/oar/](http://www.epa.gov/oar/).