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Environmental impact

Risk to the environment is inherent in taking oil from the Earth-in drilling a well, storing fuel for future use, and transporting it from place to place. And as the 1989 spill in Alaska's Prince William Sound demonstrated, the consequences can be enormous.

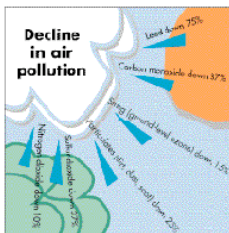
In the last 25 years, concern about the environmental impact of using oil has propelled the enactment of scores of new laws and regulations-many designed to make transporting oil safer. Today, computerized sensors known as "smart pigs" check pipelines for corrosion or other defects that can lead to leaks. New tankers are equipped with double hulls to limit the size of spills. Training and monitoring the people who pilot the tankers is a top priority.

Government oversight has altered the way refineries operate as well. They must purify waste water before discharging it, limit emissions of toxic chemicals, and treat hazardous wastes. Refineries' products have also changed. Diesel fuel contains less sulfur. Gasoline no longer contains lead. Thanks to additives that increase oxygen content-alcohols such as ethanol or ethers such as MTBE (methyl tertiary butyl ether)-gasoline burns cleaner and emits less carbon monoxide.

These steps, coupled with catalytic converters and other changes in automobile technology, have cut new cars' emissions by 96 percent compared to the 1960s, before pollution controls were introduced. Although Americans have twice as many cars as they did in the 1960s-and drive them three times as far-total tailpipe emissions are a third what they were 40 years ago.

The result is tangible environmental progress. Each year, the U.S. Environmental Protection Agency reports on annual trends in urban air quality. The most recent report, issued in 1996, shows declines in the six major pollutants regulated under the 1970 Clean Air Act. Over the 10-year period 1987-96, the level of lead in the air fell by 75 percent; carbon monoxide and sulfur dioxide each fell by 37 percent; smog (ground-level ozone) fell by 15 percent; and nitrogen dioxide fell by 10 percent. The level of particulates (dirt, dust, and soot) fell by 25 percent over the eight-year period 1988-96. (The particulate standard changed in 1987, so this is the most current data.)

Additional changes brought by the 1990 Clean Air Act amendments contributed to this progress. For example, reformulated gasoline has reduced emissions that form ground-level ozone, the principal ingredient of smog, which exacerbates asthma and other respiratory ailments. (By law, only reformulated gasoline can be sold in the nine U.S. cities with the most smog: Baltimore, Chicago, Hartford, Houston, Los Angeles, Milwaukee, New York, Philadelphia, and San Diego.)



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