

Preparing for the Cleanup Job in Eastern Europe

■ Hoping to give industry a foot in the door in what it expects will be a "multi-billion dollar market" in cleanup technologies created largely by the environmental plight of Eastern Europe, the Commerce Department will bring together government researchers and industry representatives to discuss ways of commercializing environmental technologies in a conference in Reston, Virginia, starting 5 September.

The conference, called Challenge of the Environment: New Technologies—New Markets, will be co-sponsored by the Department of Energy, the EPA, and several industrial asso-

ciations. Scientists from Brookhaven, Pacific Northwest, and Los Alamos National Laboratories, the EPA, and other federal research centers will present papers on dozens of new technologies, including ways of treating petroleum sludge, removing toxic metals from waste waters, and tracing pollutants.

"These technologies won't necessarily be the ones industry picks up on," says conference manager Evelyn Fields, adding that the specific environmental problems of Poland, Hungary, and Czechoslovakia will determine which technologies are pursued. She says the conference simply will get researchers

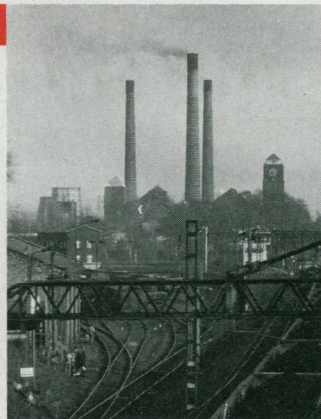


Photo Researchers

Pall over Poland.

and industry representatives talking. "We don't have any set expectations," she says.

Germ Cell Gene Panel

■ A special panel of NIH's Human Gene Therapy Subcommittee will meet for the first time this fall to discuss a possible extension of gene therapy: the insertion of genetic material into human eggs. The accompanying ethical questions are so thorny, says immunologist Robertson Parkman of Children's Hospital of Los Angeles, who heads the Germ-line Therapy Panel, that at the first meeting scientists will simply "discuss how to discuss them."

The tests of gene therapy carried out so far have all involved somatic cells, where altered genes can't be passed on to offspring. Parkman points out, however, that with known disease genes such as the cystic fibrosis gene, researchers may soon be able to replace a faulty parental gene in the egg. "But how do you decide which genes of which diseases are worth eliminating?" Parkman asks.

The problem becomes much thornier, he says, if the Human Genome Project identifies clusters of genes that influence traits such as height or intelligence. If genetic tweaking could boost a child's chance of a high IQ, should it be done? If so, who would pay for it? Parkman says his panel isn't going to wait until the technology arrives to start addressing these questions.

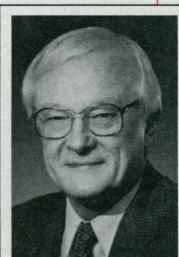
Scientists' Malaise

■ Besieged by complaints about the quality of life in academia, the NSF is assembling a working group that will meet in early October to investigate why a startling number of researchers have been griping about their jobs.

"There's a certain malaise among academic researchers," says Rennselaer Polytechnic Institute president Roland W. Schmitt, the head of the committee. He cites an avalanche of anecdotal evidence, including letters to NSF complaining about the plight of scientists. And he's not convinced that funding difficulties are the full story; indeed, he thinks a deeper malaise may be leading scientists to exaggerate their research money troubles.

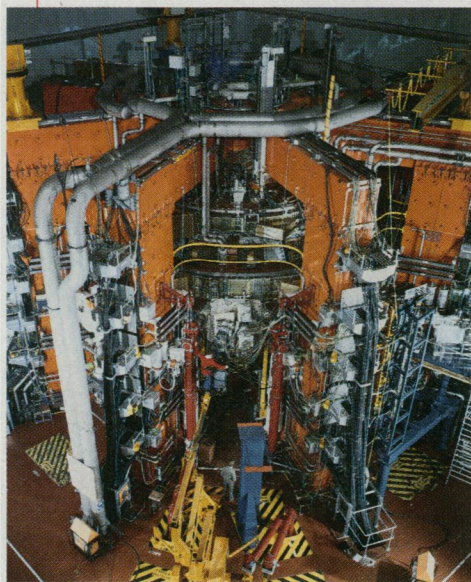
Schmitt mentions a survey by the American Physical Society, published in the February *Physics Today*, in which only 11% of young physics faculty agreed that research funding was adequate in 1990, compared to 63% in 1977. But Schmitt says per capita research funding has grown roughly 6% since 1977. "Clearly there's something funny happening here," he says. "We need to understand what's going on."

To define the problems facing university researchers, Schmitt and NSF officials are seeking out a range of academic personalities for the working group, from deans to bench scientists. "We want to ask all the right questions," Schmitt says. "Flying blind you may exacerbate the problem rather than fix it."



Roland Schmitt

A Tritium Boost for JET



JET Joint Undertaking

Scientists will supercharge the JET with a shot of tritium.

■ Magnetic confinement fusion research will take another incremental step forward before the end of the year, if all goes according to plan. Researchers at the Joint European Torus (JET) in the United Kingdom intend to introduce small amounts of tritium, the heaviest hydrogen isotope, into a burning deuterium plasma—the first such "D-T" test shots ever performed.

D-T fusion has long been a goal of fusion scientists, who ex-

pect tritium's extra neutron to boost the fusion rate, producing substantially more energy than deuterium alone. But fusion researchers have hesitated to embark on tritium experiments because the radioactive isotope can contaminate a reactor.

The new experiments at JET will burn a plasma that is 5 to 10% tritium in order to study energy production and the boost to the reactor's neutron flux. After the test shots, engineers will also measure the persistence of radioactive tritium in the confinement chamber's lining.

JET director Paul-Henri Rebut betrays little excitement over the upcoming experiments, emphasizing that much preliminary work remains to be done. But rivals at Princeton's Plasma Fusion Laboratory, which is planning its own D-T shots next July, are mildly jealous at getting scooped. "I have mixed feelings," says one physicist. "I'm glad to see it happen, but we wanted to be first."

Editorial leak: The caption to last week's photo of Louis Leakey misidentified him as son Richard.