credibility and confidence from the public," says Rainer Koch of Bayer, which is leading the industry task force. And, of course, to get a jump on complying with any new Swedish rules.

The guidelines represent a long-sought victory for scientists who have fought to see the rules adopted. "When we tried to express this view 5 years ago, we were called 'fundamentalists,' " says Jansson. Now that the view is about to be adopted as government policy, outside experts are cheering Sweden on. "The committee's proposal makes a tremendous amount of sense," says Linda Birnbaum, research director of experimental toxicology at the U.S. Environmental Protection Agency in Research Triangle Park, North Carolina. "Extreme persistency and extreme bioaccumulative properties go hand in hand with toxicity." Birnbaum, however, doubts that Sweden's approach will be adopted any time soon by the United States, which follows the risk-analysis approach.

Whether Sweden can persuade the rest of the E.U. to adopt such an aggressive policy is unclear. "The political desire for starting this work ... will not happen as long as the public doesn't demand a change," predicts environmental scientist Finn Bro-Rasmussen of the Technical University of Denmark in Copenhagen. But for some companies in Sweden, at least, their products will never be the same. With lead striking out under the new paradigm—it's persistent, bioaccumulative, and toxic—Orrefors Kosta Boda will have to devise new recipes for its crystal. Barium, for instance, gives the same luster as lead, but it is lighter. Says Orrefors spokesperson Karin Lindahl, "We will have to educate our customers not to choose their glass by weight but only by its beauty."

–LOTTA FREDHOLM

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SOLAR SYSTEM EXPLORATION

NASA Blasted for Rising Costs, Cancellations

When NASA cancelled a project last month that would have sent a tiny rover crawling over an asteroid, planetary researchers went into orbit. In a rare public statement, several senior scientists said that the cancellation is symptomatic of larger problems in the U.S. planetary science program. They warned that spiraling costs are threatening a fleet of planned missions and also called for a sweeping reexamination of the outer solar system effort.

The nanorover was scheduled to ride aboard Japan's Muses-C mission, which will return samples of an asteroid to Earth. But cost estimates tripled in the past year, to $60 million, prompting its manager, the Jet Propulsion Laboratory in Pasadena, California, to recommend canceling it. NASA headquarters concurred. The news comes just 3 months after NASA put a Pluto mission on hold because of rising costs (*Science*, 17 November, p. 1270). Earlier this year, NASA also abandoned a 2001 Mars lander and bowed out of a European comet mission.

"The cancellations and delays never seem to stop," says Wesley Huntress, director of the Carnegie Institution of Washington's Geophysical Laboratory, NASA's former space science chief, and vice chair of the American Astronomical Society's (AAS's) 1200-member planetary sciences division. "The planetary exploration program is in a crisis mode."

Unmerry-go-round. Wes Huntress and AAS decry pattern of delayed and canceled missions.

In a public statement issued on 14 November, the AAS division blamed the financial problems on "a pattern of underbidding" and an overemphasis on the "cheaper" portion of NASA's commitment to launching faster, cheaper, better spacecraft. To control the cost growth, the division recommends increased competition and external peer review. "We understand NASA is trying to wrestle with this beast," says division chair Mark Sykes, a planetary scientist at the University of Arizona in Tucson. "But there is the prospect for more cancellations."

Agency officials acknowledge the problem. "This is an unusual set of circumstances," says Jay Bergstralh, NASA's acting science director of the planetary exploration effort. "And there is anxiety in the community." The 1999 failures of two Mars missions have made for more conservative—and therefore more costly—estimates, he says, citing a report earlier this year that attributed the Mars failures in part to a lack of money for adequate testing.

AAS isn't the only outside group calling for changes. This week NASA's own space science advisory committee planned to send a letter to Ed Weiler, the agency space science chief, backing increased competition and reiterating the importance of missions like Pluto and Europa. "It's time to take a very careful look at the entire [planetary] program and fix it," says Steven Squyres of Cornell University, who chairs the panel. Huntress and Sykes also want an outside study of NASA's outer planetary program, but agency officials say that a NASA-led inquiry might come up with better solutions more quickly.

Bergstralh admits that officials at Japan's Institute for Space and Astronomical Studies in Tokyo are "not very happy" with NASA's decision on the nanorover. A proliferation of scientific instruments, he says, drove up costs on what began as a small technology demonstrator. However, it's possible that NASA may want to provide communications and navigation support in exchange for some data.

–ANDREW LAWLER

NUCLEAR SCIENCE

DOE Drops Plan to Restart Reactor

The U.S. Department of Energy (DOE) has abandoned the idea of restarting a controversial nuclear reactor at the Hanford Nuclear Reservation in Washington state. Some biomedical researchers are applauding the decision to pull the plug on the Fast Flux Test Facility (FFTF), which they feared would drain scarce resources from other DOE research programs. "It's the right decision," says Kenneth Krohn, a radiation oncologist at the University of Washington, Seattle, about the department's 21 November announcement. "The FFTF is just too costly."

The reactor was opened in 1980 as a breeder test reactor but was shuttered in 1993 after an independent review found that the facility was too expensive to operate. DOE officials later considered using it to produce radioactive isotopes for cancer treatment and plutonium for deep-space probes, both of which DOE feared could face future supply concerns. But last week officials decided that the cost of the restart, at $314 million over 5 years plus about $80 million a year to operate, was too high and support too thin. Regional environmental groups had been active in opposing any restart.

Instead, DOE plans to make do with existing facilities and to build a less expensive neutron accelerator that could produce tritium, a short-lived isotope of hydrogen critical to nuclear weapons, and meet other

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