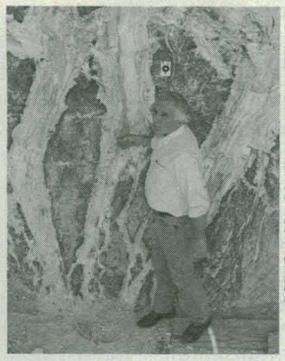
Yucca Dry After All?

■ A controversial theory that has kept the nation's chief nuclear waste-burial project tied in knots for years may be shot down soon in a major review. Experts on a panel at the National Academy of Sciences seem to be lining up 17-0 behind the government and against an outspoken critic of the project, which aims to store canisters of highly radioactive spent fuel under Yucca Mountain, Nevada. The expert consensus favors studies that predict the site will remain dry enough to safeguard public health from waterborne radiation for thousands of years.

But the government's view was challenged in 1987 by Jerry



DOE/JOHNSON CONTROLS WORLD SERVICES

Water traces. *Calcium veins at Yucca Mountain.*

Szymanski, a "whistle-blowing" engineer at the Department of Energy (DOE). He argues that the water table is so unpredictable that it could suddenly rise hundreds of meters, flooding the proposed waste repository. Mainstream geologists regard Szymanski's scenario as highly improbable (see *Science,* 22 February, p. 864).

Szymanski contends an initial peer review that went against him was biased. A second review panel, composed of three people nominated by DOE and two by Szymanski, split predictably 3-2 in a report issued by DOE in November. Now comes the academy study due out next February. Although unlikely to end the disagreement, it is expected to come down unequivocally in favor of DOE.

FDA Ponders Gene-Therapy Regulations

■ The Food and Drug Administration (FDA) is preparing to issue guidelines spelling out its plans for regulating human gene-therapy experiments and products that may arise from them.

FDA's plan to define its jurisdiction in this field came to light last week when FDA commissioner David A. Kessler said officials and are "a couple of months away from articulating" a comprehensive policy statement that will clarify the rules. The new guidelines would apply to research as well as to commercial products and processes.

So far, scientists have carried out genetic engineering experiments using patients' own cells and applied to FDA voluntarily for approval. But companies are likely to begin producing commercial products by the end of the decade. And this makes it urgent, FDA officials say, that the agency spell out in advance what kind of data it will need.

GAMMA LIAISON

Boy in the bubble. *Victims of severe combined immunodeficiency disease may benefit from gene therapies to be regulated by FDA.*

"I'm not sure the agency has ever said that [reviews by FDA] are required," Kessler told a gathering of science writers last week. However, he later told *Science*, "We may not have said it up front, but the agency does have jurisdiction."

The possibility that some gene-therapy protocols might escape multiple reviews tantalizes a longtime critic of the review process, immunologist Steven A. Rosenberg of the National Cancer Institute. Because many scientists now seek approval from NIH as well as FDA, reducing the number of hearings would "revolutionize human gene therapy," he says.

Fibers For Thought

■ Public health experts are becoming concerned about the risk of exposure to refractory ceramic fibers (RCF), a class of manmade mineral fiber used to insulate industrial furnaces and other high-temperature equipment. The Environmental Protection Agency (EPA), after years of "informally" examining animal studies, has decided to launch a priority review to determine if RCFs need to be regulated more strictly.

Recent animal studies have linked RCFs to lung cancer and other diseases. Human exposure to airborne RCFs is "a workplace issue" limited to people who manufacture or process the stuff, says Bill Kelly, a vice president of the Carborundum Company, a Niagara Falls-based firm that makes RCFs. According to EPA, about 800 people manufacture and process RCFs, and another 31,500 install RCF-containing products.

EPA's 6-month review either will exonerate RCFs as a human health hazard, which is "unlikely," one mineralogist told *Science*, or initiate steps to reduce a health threat. Meanwhile, the Occupational Safety and Health Administration is taking steps of its own, developing a workplace exposure limit to airborne RCFs. Currently, there are no mandated limits on the number of fibers workers are exposed to, says Kelly.

Lead Researcher Under Investigation

■ A disputed paper on the effect of lead on cognitive development is once again the subject of a formal investigation—initiated this time at the behest of the fraud squad at the National Institutes of Health. The NIH Office of Scientific Integrity (OSI) has officially asked the University of Pittsburgh to investigate charges that Pittsburgh psychiatrist Herbert Needleman violated scientific misconduct rules by the way he analyzed data published in 1979 in the *New England Journal of Medicine*. The study showed that children exposed to relatively high levels of environmental lead had lower IQs and poorer school performance than those with less exposure to lead.

Needleman's 1979 paper was first investigated in 1983 by a panel of experts convened by the Environmental Protection Agency (EPA). Although the inquiry initially found fault with the paper's methodology, EPA ultimately gave the paper its stamp of approval. But the paper was challenged again this year by two psychologists hired by the owners of a defunct lead smelter in Utah, then locked in a battle with the government over the cost of cleaning up lead tailings at the plant (see *Science*, 23 August, p. 842). The psychologists, Claire Ernhart of Case Western Reserve University and Sandra Scarr of the University of Virginia, prepared a report for the court critical of Needleman, who was scheduled to testify in the case. Needleman has maintained that multiple reviews have failed to uncover any flaws in the 1979 study.

The smelter case was settled out of court, but Scarr and Ernhart took their accusations to OSI. The government's rules say that the institution where the alleged misconduct occurred must investigate it first.

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