

revised policy. The company will reduce emissions by about 2,300 tons/yr beyond what could be achieved using conventional controls, and at the same time save over \$12 million in capital costs and several million dollars in annual operating costs.

Seven large stacks will be controlled more tightly, instead of imposing controls on 119 process-fugitive sources. Because only seven sources need to be inspected, enforcement will be easier and quicker.

In another bubble, over Armco Inc.'s steel mill in Middletown, Ohio, \$6 million worth of controls on such open dust-sources as storage piles, roads, and parking lots are reducing total suspended particulate (TSP) emissions by 4,000 tons/yr; controls for process fugitives, at a cost of about \$20 million, would have resulted in a mere 650-ton/yr emission reduction.

Armco's program is cutting TSP emissions six times what could be achieved with traditional controls, while saving the company \$14 million in capital costs and almost \$3 million in annual operating costs. In addition, says John E. Barker, Armco's director of environmental engineering, the program is seen as instrumental in getting the community classified as an attain-

ment area within the next six months.

EPA estimates that "with increased trading from this policy, the economy will be saving over \$1 billion from bubbles alone by the end of 1982, thereby freeing scarce capital for industrial revitalization and jobs. The agency already has approved 18 bubbles that save \$50 million over the cost of conventional controls, with another 100 under review that save an average of \$2 million each."

LOOKING AHEAD—Prompted by some chemical companies, industry trade groups, and utilities, EPA is studying the pros and cons of incorporating a bubble provision into some new-source performance standards (NSPS) now under development. In fact, at a meeting last month of the National Air Pollution Control Techniques Advisory Committee,* the agency discussed some of the issues that would be involved in an NSPS bubble policy, and received comments from the Committee and the public. Should EPA decide to go ahead, it might then add bubble provisions to individual NSPS on a case-by-case basis.

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* A group of experts in the field of air-pollution control. Its members are from industry, environmental groups, state and local pollution-control agencies, consulting firms, and academics.

Solar unit will use molten salt medium

□ Sandia National Laboratories (Albuquerque, N.M.), which has achieved an energy conversion efficiency of 90% with a liquid-sodium solar receiver, has nevertheless chosen molten salt to store solar energy in its next project—a system that will produce steam to generate 750 kW of electricity. A Sandia spokesman notes that the medium costs only about a third as much as liquid sodium, is not as hazardous to use (liquid sodium will burn if a leak exposes it to air), and is preferred by most users.

In earlier tests, molten salt was heated to 1,050°F, and conversion efficiency was about 85%. Sandia is now preparing for a full-system trial of molten salt (60% sodium nitrate, 40% potassium nitrate), in which the medium will be stored after it is heated, then used to generate steam for driving a turbine to produce electricity. The spokesman notes that this will be the first time that molten salt will have been used to generate electric power. Martin Marietta Corp.'s Denver Div. will build the system, with tests to begin in the summer of 1983.

In limbo: OSHA's cancer policy

Nothing much has happened since the Reagan team announced a revision of the generic carcinogens standard, but some crucial decisions may be made this summer.

□ When the Reagan Administration launched its regulatory relief campaign during its initial weeks in office, the Occupational Safety and Health Administration's (OSHA) generic carcinogens policy was targeted as a major candidate for swift and sweeping change. But now, more than a year after that announcement, OSHA is far from issuing even proposed changes to the controversial rule, and more than a year away from adopting permanent changes. What OSHA and the rest of

Reagan's regulators are running into is an increasingly complex debate on technical and emotional questions about environmental cancer.

In January, OSHA announced that it would be revising the standard adopted in 1980, and asked for public comment on several points. During the summer, OSHA officials will evaluate the new comments, as well as those dating back to October 1977, when the current standard was first proposed. Already, new questions are being

asked about the cancer policy by top Administration officials, including the most basic of all: Does OSHA really need a generic carcinogens standard?

CONSENSUS IS YES—There is general agreement among industry and labor that OSHA needs guidelines for determining what defines a potential human carcinogen and what the agency and employers should do about it. But that is where the consensus stops. In the six years since the idea of guidelines for carcinogens was first proposed by the then Assistant Labor Secretary Morton Cron, both groups have joined top cancer scientists in disagreements on the prevalence of environmentally induced cancer, the meaning of animal studies for signaling potential human disease, how can-

cer is caused by chemicals, and how much U.S. industry should spend on controls. Those arguments still rage today.

It is not yet clear what OSHA's current chief, Thorne G. Auchter, will eventually propose, but he is under significant pressure from the President's task force on regulatory relief and from industry to pull back on the cancer policy. Vice-President George Bush, chairman of the task force, is reportedly upset with the slow pace of regulatory changes, and the OSHA carcinogens rule remains a major target of the Reagan team.

Both the Administration and industry officials are looking at other ways to coordinate and streamline federal government efforts to control carcinogens. The White House Office of Science and Technology Policy, for example, has put development of agency-wide criteria for regulating carcinogens on a fast track. Its regulatory work group on science and technology, chaired by OSTP director George A. Keyworth, is expecting to release preliminary guidelines for defining carcinogenic chemicals and assessing their risk to humans, by mid-summer.

The intent is to come up with a policy that could apply under the numerous environmental laws administered by the Consumer Products Safety Commission, OSHA, the Environmental Protection Agency, the Food and Drug Administration, and others.

PEER REVIEWS—Industry, led by the American Industrial Health Council, also would like to see adoption of a federal science panel that could evaluate the potential danger of various chemicals regulated by more than one agency. AIHC and its member companies are pushing for the establishment of science advisory boards at each regulatory agency to make the difficult technical judgments about possible human-cancer risk from various exposures.

A top scientist from an AIHC member company explains that the "peer review" offered by such science panels is critical. "These are important economic and policy questions that must be based on sound technical judgment," he says.

Both proponents and opponents of the regulatory peer-review process are anxiously awaiting the expected re-

lease in September of recommendations from the National Academy of Sciences on whether the panels should be set up at all. NAS's National Research Council Committee on the Institutional Means for Assessment of Risks to Public Health is evaluating, in response to a Congressional order, the way the government assesses cancer risk, and is expected to take a close look at adoption of a national science panel on chemical carcinogens.

WHAT INDUSTRY WANTS—Meanwhile, the controversial OSHA cancer policy remains on the books. Court cases against it have been filed by organized labor, which calls the 1980 rule too weak, and by industry, which claims that the policy locks OSHA into an unworkable straitjacket that triggers questionable regulations. The suits have been consolidated into the Fifth Circuit Court in New Orleans, where the case is stalled awaiting OSHA's new final rule.

So far, industry has been pushing for a totally revamped policy. In addition to proposals for science advisory groups to study chemicals on a substance-by-substance basis (rather than plugging data into a set formula, as the current rule suggests), industry focuses on two major points. First, and most basic, is the policy's failure to allow equal consideration of negative* epidemiological and animal data.

Industry scientists say this view is narrow and could result in unnecessary and expensive regulation, especially in cases in which animal studies show a cancer link, but decades of human exposure show no excess of cancer cases.

Second, says industry, the standard must be changed to conform to the Supreme Court's July 1980 benzene decision that requires OSHA to prove that its rules will protect workers from "significant risk of harm." The Supreme Court's order essentially threw out the standard's provisions that would have automatically required installation of engineering controls to reduce exposure to the lowest level feasible. Now, industry says, OSHA must go one step further on the cancer policy and allow flexibility to use a variety of controls, including respiratory and other personal-protection equipment in the presence of potential carcinogens.

*Negative tests indicate that there is no potential carcinogenicity.

"The way the policy is written now," says Lee Starr, director of environmental health and safety affairs for Celanese Corp. (New York City), "does not allow for you to be innovative." Starr and other industry officials feel that the current policy "freezes" science by setting up rigid criteria for treating each chemical the same way, and warn against making any future policy too inflexible.

LABOR DISSENTS—But union officials, who were unenthusiastic about the idea of a cancer policy in its early stages, now believe a strong policy is needed to force the Reagan Administration into regulatory action. The agency has not moved as quickly as labor would like on requested new health standards for such compounds as ethylene oxide, formaldehyde and ethylene dibromide.

A strong cancer policy could trigger automatic regulation where animal data indicate a potential problem, union leaders say. "A generic policy is a necessity," says Richard Lewis, occupational and environmental health specialist for the International Chemical Workers' Union. "So far, we've only seen this Administration taking apart standards rather than developing them."

Organized labor is expected during the summer to fight to keep the standard intact.

Meanwhile, the OSHA carcinogens policy sits unused. The January 1982 notice requesting comments suggested a stay on the controversial "candidates list" and "priority list" that would have to be published under the policy, and it is unlikely that Auchter will publish any list of possibly dangerous chemicals while the massive rewrite of the rule is underway. But what the agency will do in the future is still an open question.

Some industry officials who would like to see the formal policy scrapped worry that revoking the rule might result in more adverse publicity than OSHA or the Reagan Administration can bear. Clearly, this summer will prove crucial for major decisions about the government's role in regulating carcinogens. As one union official notes, "The issue is simply this—are we going to have a major cancer policy or not?"

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