

## The noise around us

Between 6 million and 16 million industrial workers now on the job in the United States will be partially or totally deafened by factory noise.

This aspect of the cost of noise might be measurable in terms of dollars paid in compensation or loss of effectiveness on the job. Yet it is a relatively small part of the total cost to society of a rapidly increasing new kind of pollution.

What is immeasurable is the deterioration of environmental quality for millions more. Many of these stand to suffer physical and mental illness as the result of the stress of noise that is all too common: the din of traffic, the crash of tearing down and building up, the medley of jet aircraft, electric food blenders and dropped garbage cans.

Recognizing that this cacophony had grown into a menace, the Federal Council for Science and Technology last July formed a task force to consider the problem of environmental noise.

**The task force** has now reported. It gives 14 recommendations for research into noise control, the setting of Federal standards for acceptable noise level, education, and cooperation among Federal, state and local agencies.

"Increasing severity of the noise problem in our environment has reached a level of national importance and public concern," the report states. "Immediate and serious attention must be given to the control of this mushrooming problem, since the overall loudness of environmental noise is doubling every 10 years. If noise is allowed to go unchecked, the cost of alleviating it in future years will be insurmountable."

Despite evidence of public concern, the task force continues, noise abatement has not received the attention it deserves either from government or from scientists and engineers. Where codes exist there is poor correlation among them and wide variation in their usefulness. They range from being overly restrictive to being completely ineffectual. Many codes pick on trivial noises but ignore the more serious noise makers such as aircraft, railroads and traffic.

**The report notes** that the United States has recognized the noise problem late and is "far behind many countries" in noise prevention and control, with the exception of aircraft noise control. So far much noise control depends on the bringing of private lawsuits, where it is difficult to prove enough damage to obtain an injunction.

Five of the report's recommendations deal with needed research:

- The Department of Health, Education and Welfare should study the effect of noise on hearing, physical and mental health, and productivity on the job. From these studies should come criteria for setting limits of human exposure to noise.

- While aircraft noise research continues, research into noise abatement in surface transportation should be greatly expanded.

- The National Bureau of Standards should construct an architectural acoustics laboratory to study the noise transmission characteristics of buildings and building materials and to develop noise control measures for industry.

- The Department of Interior should study the effects of noise on wildlife and archaeological and geological structures. Similar research should concentrate on domestic animals.

- The National Aeronautics and Space Administration should continue its noise abatement research and make the results generally available where possible.

Other recommendations call for the setting of Federal standards to protect physical and mental health, particularly hearing; to control aircraft noise, and to control noise produced by govern-



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*Noise will double in 10 years.*

ment-purchased passenger and freight carrying surface vehicles. Standards also should be set for city noise levels generally.

It is recommended also that federally financed housing and urban development programs be required to consider the noise problem.

## CERN

### Spain drops out

For the small fraternity of Spanish nuclear physicists, the membership of that country in CERN, the European Organization for Nuclear Research, has been an inspiration.

Because their own country is out of the scientific mainstream and lacks facilities for advanced nuclear and sub-nuclear research, CERN has been a sort of Mecca. Since Spain joined in 1961, several dozen of its scientists have conducted experimental and theoretical work there.

**Now that** relationship is ending; Spain will leave CERN at the end of the year because of financial problems. As a result, the number of Spanish scientists who will be able to work at the Geneva laboratory will be drastically reduced.

At present there are about 15 Spanish scientists at CERN. Nine of these are regular staff members and will remain. The other six are fellows, working on experimental teams or doing theoretical work. Such fellows, as well as so-called paid visitors, are invited by CERN to spend six months to two years there. They account for much of the beneficial interchange of scientists between the international organization and their home countries. They can come from non-member countries; U.S. scientists

work at CERN under this arrangement. But priority is given to scientists from member states.

The Spanish decision came despite efforts by the CERN council to make membership as easy as possible financially. The country's financial contribution would have dropped considerably next year, in spite of an increase in the organization's total budget.

**Spain already** had a concession whereby its assessment was 20 percent lower than it would be under the basic formula. (The only other member to enjoy such a concession is Greece, with a 40 percent reduction.) At its last meeting, the CERN council agreed to increase the concession to Spain from 20 to 50 percent. This would have reduced the country's cash contribution from about \$2.79 million in 1968 to \$1.65 million in 1969 (from 3.43 percent to 2.2 percent of the budget), while the total CERN budget is rising from \$64.96 million to \$76.05 million. These figures do not include possible assessments for the CERN 300-GeV accelerator, which might get underway next year (SN: 10/19, p. 387). But outlays on the project would be light in the early years.

Spain's departure leaves the basic membership of CERN at 12 countries.