

contour stripping to be as innocuous as ploughing the south forty.

A particularly harmful aspect of contour stripping is the practice of dumping the spoil or overburden down the slope from

the bench or "cut" that is made to gain access to the coal. In this regard, Dunlap was disturbed at an exception made to the pending bill's ban of this spoil disposal practice. Under the bill, spoil from the first

short linear cut—and it is not clear how many "first cuts" will be allowed—can be left permanently on the downslope, where severe erosion and even landslides will be an ever-present possibility. The House-

## Briefing

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### NSF Controversies Remain Unresolved

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The Senate passed an \$826.6-million authorization bill for the National Science Foundation (NSF) by unanimous vote on 13 May without any attempt to include a companion version of the controversial Bauman amendment adopted last month by the House. That amendment, sponsored by Representative Robert E. Bauman (R-Md.), would give Congress authority to review, and if it saw fit, to kill, any of the 14,000 grants awarded each year by the NSF.

The Senate took up the matter in the midst of a lengthy debate on bills to establish a new consumer protection agency. The speed of passage, floor managed by Senator Edward M. Kennedy (D-Mass.), took many by surprise, including Bauman, who at last word was still looking for Senate sponsors for his amendment. The two bills will now go to House-Senate conference which will decide between keeping or not keeping the amendment.

Meanwhile, Representative Olin E. Teague (D-Tex.), has appointed a conspicuously Texas- and aeronautics-oriented group to advise his Committee on Science and Technology on the future of NSF's curriculum development programs. One such program, "Man: A Course of Study" (MACOS), aroused the movement for stricter Congressional oversight of NSF's educational activities and led to the Bauman amendment's passage on 9 April (*Science*, 25 April). Teague is under pressure from Congressional conservatives to reexamine a number of NSF policies.

His review group will be headed by James M. Moudy, Chancellor of Texas Christian University. Two members, whose principal qualifications are that they are mothers of school-age children, will be Mrs. James A. McAuley of Dallas and Mrs. Russell L. Schweickart of Arlington, Virginia, wife of the former astronaut. Rocco A. Petrone, who recently resigned as associate administrator of the space agency and now

runs a private firm in Washington, D.C., will also be a panel member.

Other members will be the former Democratic Congresswoman from Oregon, Edith Green, who, as chairman of an education subcommittee, had moved farther and farther away from the liberal majority; Gerard Piel, publisher of the *Scientific American*; Elam K. Hertzler, a special assistant to the Commissioner of Education in the Office of Education; and Jim W. Zumberge, Chancellor of the University of Nebraska, who is also a member of the National Science Board which oversees the NSF.

In addition to these reviews, the Justice Department has begun a separate investigation of "possible tax and financial irregularities" in connection with MACOS' distribution nationally.—D.S.

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### Soviets Said to Gain More from Science Exchanges

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The Soviet Union is benefiting more than the United States from the current program of science exchanges, according to a Jewish physicist who recently emigrated to Israel and is now visiting the United States. Aleksandr Voronel, who went into hiding last year in the Soviet Union to avoid arrest after an abortive attempt to organize an international scientific seminar in his apartment, says that the Soviets have much more to gain from the exchange program than do the Americans. However he urges that the program continue.

Voronel met informally with reporters in Washington recently. He is touring this country under cosponsorship of the Committee for Concerned Scientists and the National Conference on Soviet Jewry, to meet with both American politicians and physicists. Voronel is a solid-state physicist.

He described Soviet scientists and the officials who control them as desperately eager for travel abroad for both material and intellectual reasons.

"The brains of Russians and Americans may be the same but their up-

bringing is different. There is a constant lack of ideas in Russian science. There are great gaps in our science. We have strength in details but very few new ideas. The current for new ideas comes always from the West."

Voronel accused Soviet officials of "systematic stealing of technology" from the West. He alleged that the "stealing" takes place literally through clandestine means and, more generally, through taking advantage of ordinary contacts with Westerners. One reason for this, he said, is that Soviet officials don't trust their own intellectuals. They frequently hold up Western technology as an example to their own scientists. Soviet scientists, as well as officials and their families, also use the exchanges to buy consumer goods, which they can obtain more cheaply abroad than in their own country.

What can Americans get from the exchanges? Soviet science can offer the United States much on an individual basis, Voronel says, since some Soviet scientists are exceptionally good. For the rest, "you can have many friends . . . . It's not short term profit. But in the long term, it will be very useful for Western people" because "their influence will be raised in Soviet society." Voronel advised Western scientists participating in exchanges to make as many informal contacts as possible, and not to see only these people whom the authorities want them to.

Voronel is best known for having organized a weekly seminar in his Moscow apartment for scientists like himself who had lost their jobs after applying to live in Israel. After trying to hold an international version of the seminar last summer, he went into hiding to avoid arrest, and was subsequently allowed to leave the country. His successor in holding the weekly seminars, Marc Azbel, was recently prevented from returning to Moscow, according to recent reports, and Victor Brailovsky, a cyberneticist, ran the seminars in his stead. Brailovsky too, reportedly has been threatened with arrest recently by the Soviet secret police.—D.S.