often seem to regard it as less of an instrument of enforcement than as a weapon of malicious harassment.

So far, the highest government official to say so publicly is John A. Carver, Jr., a Democratic appointee to the Federal Power Commission (FPC). In a recent speech to a petroleum industry group, Carver said that "NEPA has minimal impact in any substantive way," and that, while it may be a laudable expression of policy, "its sole observable function has been that of furnishing a weapon of delay to those who would use it for that purpose."

Carver's remarks, however, obscure the fact that judicial rulings and consequent delays of pipelines, power plants, and dams have been based on what the courts found to be cursory, slanted, or otherwise inadequate environmental impact statements. Delays and the agencies' reactions to them also have tended to obscure a number of less sensational but nonetheless positive side effects of NEPA which—in the long run—may prove to be a more accurate and lasting measure of the law's worth than delays imposed by litigation.

The law and its requirement of impact statements has forced, perhaps not obviously, nearly every agency—over 40 in all—to conduct a sometimes agonizing reappraisal of the way it performs its business and the way its business affects the environment. As a direct result of NEPA, the federal government this year will spend thousands of man-hours and perhaps $20 million that it never spent before to anticipate the adverse effects of pest-control programs, military installations, highways, and numerous other major and minor public works worth billions of dollars.

All this activity has imposed an unfamiliar burden of introspection and public exposure on federal agencies, in addition to masses of new paperwork and considerable overtime labor. This process has also produced an unprecedented flood of information about the environmental effects of government activities and their underlying rationale.

Among others, Russell E. Train, the chairman of the CEQ, believes that NEPA has opened some important cracks in executive secrecy in that it forces government administrators to articulate the reasoning behind their activities—and to solicit and respond to comments from both the public and other agencies—before taking any major action.

NBS Loses Branscomb to IBM

The President's technology opportunities program, which was unveiled early this year, assigned a lead role to the National Bureau of Standards (NBS), marking what was probably the first time the bureau has starred in any program of national prominence. Lewis M. Branscomb, the man who aroused the low-profile and somewhat sleepy agency to such eminence after only 2½ years as its director, announced last week he is leaving to become vice-president and chief scientist of IBM. This decision, which Branscomb explains as "a personal opportunity for me that is not likely to come again," will deprive the Washington science scene of one of its rising and brighter stars.

IBM did not have to scour the length and breadth of the nation for its new executive. Emmanuel R. Piore, present chief scientist at IBM and a doyen of American statesmen of science, is a member of the NBS visiting committee. An atomic physicist, not a computer technologist by trade, Branscomb will direct IBM's research on a strategic rather than a tactical basis. IBM spends roughly $500 million a year on research and development, compared with a total budget of less than $50 million enjoyed by the NBS. Branscomb thus steps into a job that is ten times larger and, it is said, will roughly double his present salary of $36,000. Since becoming director of the NBS in June 1969, he has turned down at least two university presidencies and has been in the running for the presidency of Massachusetts Institute of Technology (which went to Jerome B. Wiesner) and the directorship of the National Science Foundation (assigned to H. Guyford Stever).

Branscomb, age 45, has been with the NBS for more than 20 years, serving first in its atomic physics section, and from 1961 as head of the Joint Institute for Laboratory Astrophysics, a cooperative venture between the NBS and the University of Colorado. The 2½ years since he succeeded Allen V. Astin as NBS director is too short a time to have turned around a federal agency that is itself part of a larger bureaucracy, the Department of Commerce. Branscomb has made few changes of substance, and his most notable achievement has probably been to foster a change in attitude toward the bureau and a recognition of its potential as the government's instrument for stimulating industrial technology.

Until recently, the National Science Foundation had this suddenly fashionable area all to itself with its RANN program (research applied to national needs). The new money for enhancing industrial research in this year's budget was in fact split between the National Science Foundation and the NBS, a partition that many attribute to Branscomb's powers of persuasion with White House officials, including Peter G. Peterson, who has now become Secretary of Commerce. Largely through gaining a share of the industrial technology incentives program, the new budget request for the NBS is, at $72 million, some 60 percent larger than last year's.

Branscomb's empire-building spirit has been less in evidence in consumer product testing, a field that might be expected to interest a standards bureau. The affair of the AD-X2 battery additive, which 18 years ago occasioned the firing and rehiring of the previous NBS director, has not been forgotten in the bureau. Branscomb says it would be "very unwise" for the NBS to get into consumer product testing because its sophisticated equipment can better be used in devising methodologies of testing than in assessing particular products.

Branscomb has served on several of the key advisory committees that form the backbone of the science governance system. He has been a member of the ballistic missile defense advisory committee, the president's science advisory committee (PSAC), and the defense science board. Branscomb says he will be too busy at IBM to participate in the Washington science advisory committee system. But his experience at IBM will clearly place him at no disadvantage as a candidate for the science-based posts that may become available in future.—NICHOLAS WADE