Send
CC: to
University
Subcommittee.
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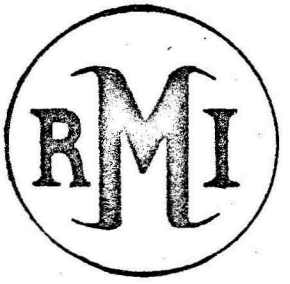
Note
"see p. 6."
NR

Done - angie

RESEARCH MANAGEMENT IMPROVEMENT PROGRAM



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PROGRAM TO INCREASE PATENT AWARENESS AT 8 SELECTED ACADEMIC INSTITUTIONS

Robert Goldsmith
Research Corporation, New York

PROGRAM DEVELOPMENT

This program was inaugurated in July of 1974 and during the period from July until November of 1974 our efforts were devoted to the preparation of a program that was expected to achieve the desired objective of increasing the flow of disclosures of inventions by the faculty at the eight selected institutions to the administration at those institutions.

The program that was evolved consisted of a three step approach as follows:

1) Meetings with the administration at each institution designed to work out a format for obtaining the maximum cooperation of the faculty at the institution and making the administration aware of the program and its desired end results.
2) Conducting seminars on a departmental basis at which we hoped to attract ten to fifteen percent of the faculty in each department. The object of the seminar was to acquaint each faculty member with the fact that inventions do come out of research, that the university has methods for bringing such inventions into broad public use, that there are a variety of requirements established by government grants and contracts that bind the inventor in various

ways and that means are available to enable the inventor to bring his invention disclosure to the attention of the university.

3) Monthly scheduled return visits to the university campus at which time individual meetings would be held with faculty members in an effort to simplify and accelerate the flow of invention disclosures from faculty to administration.

SEMINAR PRESENTATIONS

An outline was prepared for the seminars which was used by each of the speakers from Research Corporation, and distributed to the faculty members attending the seminars.

In the conduct of the seminars, use was made of illustrative slide material.

Table I attached to this report, lists the month and year during which a seminar week presentation was held and the total attendance for the seminars conducted at each of the eight institutions participating. The seminars were designed to last approximately fifty to fifty-five minutes of which approximately twenty-five to thirty minutes was devoted to the presentation of the material by a Research Corporation associate and the remaining time alloted to a question and answer period. Questionnaires were distributed during the seminar, and we attempted to have these questionnaires completed and returned to us so that we would have an attendance list as well as some reaction to the content of the seminar and also an indication of the attendees' particular research interests and suggestions as to other faculty members that might be interested in the program.

A variety of means were used to publicize the seminars. Printed seminar schedules were distributed through the faculty mail and also posted on departmental bulletin boards. Notices were placed in the faculty newspapers, student papers and departmental newsletters. At some institutions we were able to obtain on-campus radio publicity and local newspaper publicity.

Prior to seminar week, the Research Corporation associates planned meetings with each department chairman whose departments would be included in the presentation in an effort to infuse the department chairman with the importance of the program and to request that he personally solicit interest from his faculty.

TENTATIVE CONCLUSIONS AFTER COMPLETION OF SEMINARS

We found that the greater the interest that could be generated on the part of the department chairman, the better the turnout at any given seminar. If the department chairman could be convinced of the benefit of the seminar, then attendance became what might be called "a command performance". In certain instances we achieved attendance approaching 95% of a department faculty.

We found that in the conduct of the seminar week, the best approach in obtaining maximum attendance was to conduct seminars on a departmental basis and to hold the seminar in the building in which that department was located. We found great reluctance on the part of the faculty members to move from building to building to attend seminars. We also found that if a seminar could be scheduled during a regular faculty meeting hour, that this tended to increase the faculty attendance.

the part of the department chairman, the bett...

We found that the reaction to the seminar presentation was from good to excellent. The response was enhanced by the inclusion, by way of example, of selected items that appeared to be of greatest technical interest to the faculty.

The following four areas are representative of those in which we received the most questions at the conclusion of the seminar:

1) Examples of academic inventions or "what can be patented in my research area"?
2) What is the patent policy of the University, "Do I share in any income and does my department and the university share in any income"?
3) If my research is sponsored by an agency of the U. S. government, how does this sponsorship affect my ability to have an invention patented?
4) What effect does my desire to publish my research findings have on my ability to patent an invention?

We have found at those institutions where medical schools represent a substantial portion of the research activity, that the approach that proved to be successful in other areas of the institution have not proven to be as successful in the medical school. Since in each of these institutions, the medical school operates as an independent entity, agreements and procedures reached with the main University administration are not necessarily observed by the medical schools. For example, our scheduled seminars have, almost without exception, attracted a far smaller percentage of faculty at medical schools than at the other research-oriented departments within the university proper.

While the seminar approach is valuable, it must be recognized that it is a "broad brush" approach and as such misses many faculty members. It also tends to inhibit the willingness of certain faculty members to discuss problem areas openly.

The original concept of holding seminars for the administration has been discarded. It has been found that individual contact with those administrators involved in patent matters is much more satisfactory.

Many seminars were attended by relatively large numbers of graduate students. While this of itself was not objectionable, it did appear to have a stultifying effect on the faculty during the question period. Whether excluding graduate students is desirable is not clear; their exclusion would probably cause more problems than it would solve.

INDIVIDUAL VISITS

After the conclusion of the seminar week, the program of individual visits was initiated.

Based on early results, it appears that we can reasonably see an average of eight faculty members per visit day and that during the course of the two years of individual visits, we will be able to meet, at least once, all of the science and engineering-oriented research faculty at each institution.

TENTATIVE CONCLUSIONS RESULTING FROM INDIVIDUAL INTERVIEWS

Certain key approaches have been determined in scheduling these faculty visits. The faculty member in general, is not interested in discussing "patentable inventions". His first response to this is that he does not make inventions. We have found it more efficacious to suggest that a meeting be held to discuss the general areas of the faculty member's research, and, as the interview proceeds, turn the conversation to patentable inventions.

During these individual interviews, we have found that, although almost all of the institutions involved have printed patent policies, which are widely distributed and which spell out the responsibilities of the individual faculty member to disclose inventions to the institution, the detailed procedures used by the institution for evaluating, patenting and licensing such inventions and the method of sharing royalty income are generally completely unknown to the faculty.

GENERAL PROBLEM AREAS

Since the institutions receive research funds from a number of government agencies and the patent policy of these government agencies varies from one to the other, the academic researcher finds it almost impossible to comprehend the differences in these policies. More often than not, he takes the attitude that, if there is government sponsorship involved, there can be no retention of patent rights in any invention made under such sponsorship. This lack of understanding has probably caused a number of patentable inventions to go undisclosed.

The attitude of the institution's administrative personnel in handling disclosures has a marked effect on the willingness of a faculty member to make disclosures. Some institutions seem to process disclosures in a rapid fashion and keep the inventor posted on the state of the evaluation and disposition of his disclosure. Other institutions tend to drag this procedure on and this delay tends to alienate the faculty researcher.

We have found, at the top administrative levels, a variety of attitudes towards the handling of patentable technology from the institute's researchers. Some institutes recognize that the patenting and licensing of technology can prove to be a source of income to the institution as well as a benefit to a broad cross section of industry and

the public. Other institutions do not recognize this and are not inclined to make any effort beyond a most superficial one to aid in this transfer.

Some of the institutions have an "in-house" capability for handling the evaluation, patenting and licensing of the inventions. This "in-house capability" is scaled in size to handle a certain number of disclosures. If the quantity increases beyond the capability of the "in-house" staff, there seems to be little desire to either expand the capability or set up alternate means for handling the increased number of disclosures. The result appears to be designed to decrease the effort to obtain disclosures and maintain a constant flow if possible.

RESULTS TO DATE

Based upon preliminary data received from the institutions, Table II presents the number of invention disclosures received during the years 1970-1974 and the disclosures received in 1975 and the first quarter of 1976.

It should be pointed out that these numbers are subject to further evaluation and clarification since at some institutions they represent total institution disclosures and in other institutions only disclosures forwarded to Research Corporation.

We can state, however, that at several of the institutions the flow of invention disclosures has increased between 100 and 250% since the inception of the program.

WORK IN PROGRESS

We are involved in obtaining historical statistical information from each of the eight institutions that will allow us to draw additional conclusions relative to the effectivity of our approach.

We have prepared an outline, in a preliminary format, for the final report and are compiling material for inclusion in that report.

We are continuing to conduct regular visits to the institutions.

We are investigating various avenues of approach at the medical schools, which we hope to have refined to a workable plan in the near future.

We are compiling material for inclusion in a document that will assist institutions in adapting the techniques that we have found successful to their own programs.

A final report covering this material will be available probably in December 1977. No dissemination plans or price have been decided. There will be a "cookbook" which will be essentially a manual that universities can use to set up their own program to increase the flow of discourses from faculty to administration.

TABLE I

SEMINAR SCHEDULE & ATTENDANCE

INSTITUTION	SEMINAR DATE	TOTAL SEMINAR ATTENDANCE
A	Nov. 1974	147
B	March 1975	188
C	April 1975	112
D	May 1975	86
E	Oct. 1975	150
F	Oct. 1975	386
G	Nov. 1975	200
H	Dec. 1975	19

MEMORANDUM

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF THE ASSISTANT SECRETARY FOR HEALTH

NJL

TO : James Hinchman
Assistant General Counsel

DATE: January 9, 1977

Comments on 1/5 Report

PATENT BRANCH, OGC
DHEW

JAN 17 1978

FROM : Senior Fellow, NCHSR

SUBJECT: Patent Policy Study

background

Since I'm leaving town today 'til the end of the week, I have only skimmed the January 5 Report prepared by Norman Latker and am dictating some quick reactions which I probably won't even have a chance to proof-read.

With a few significant exceptions, (see page-by-page comments below) I believe the Report is a basically accurate statement of DHEW's historical approach to patent policy and a justification for its current policy.

But therein lies the rub. As I understand the Secretary's charge, it is to review HEW's patent policy in terms of its current utility to the Department. To do this, I submit that we need to start with DHEW objectives, and while Norman Latker does not state any, the implicit sine qua non of his report is that the patent policy objective is to promote private development of DHEW supported inventions and to minimize the cost of administering patent policy.

To be responsive to the Secretary's request, I would suggest that we need to (1) reach agreement on current objectives; (2) see what options we can develop to respond to those objectives; and (3) consider the tradeoffs involved in each of the options.

In this connection, I would propose that the primary goal is not to promote any and all further private development of HEW supported inventions, but to promote cost-effective development of HEW supported inventions and to discourage trivial and unjustifiably costly innovations. I would also suggest that equity to all-at-interest be an important objective. The addition of such objectives are likely to both increase the options proposed by Latker and to markedly change judgements about the tradeoffs involved. For example, Latker places high stock in minimizing development subsidies and the cost of administering patent policies. But, a comparison of such increased costs with potential reductions of HEW expenditures for Medicare and Medicaid reimbursement may show that these are good investments even though they were not so in the 1960's.

objectives, and while Norman Latker does not state any, the

In addition to the above general proposed approach to the Secretary's request, I would suggest that the following inaccuracies and omissions of the Latker Report need to be changed:

Page 3: The Report states that there are "assertions throughout the December 22 Report on Health Technology Management" which deny the difficulties in moving scientific ideas into commercial products. The Technology Management Report has only three statements about patent policy and none of them assert anything about the well-known difficulties of nurturing ideas into end-use products.

Page 15: The Report sets forth the major conditions which are currently attached to IPA's, but does not make it clear that these conditions are complied with in terms of the universities' judgement as opposed to HEW's judgement and oversight. (or did I musunderstand Bernie's comments?)

Page 19: The Report states that the Health Technology Management Study presumes Department ownership of inventions to control their entrance into the marketplace. The Technology Management Study made no such statement; moreover, I personally think that conditions attached to assignment of rights might be a more productive approach if we can be clever enough to come up with such conditions.

Pages 21 - 22: The Report offers five options. It does not offer such options as (1) deferring determination of rights except in those cases where it can be determined in advance that it is in the Department's interest to extend the first option to the grantee or the contractor; (2) a similar exception clause built into the option under which the Department takes title to all inventions; and (3) an option under which HEW continues to grant first option to universities through IPA but defers determination to contractors.

Page 26: The Report states that rights in some cases will be lost due to the failure of the non-profit organization to file patent applications if it has no guarantee of ownership. I would suggest here that times have changed since the IPA policy was developed and the universities are today desperate to obtain research funds; thus, this important problem might be counteracted by the simple device of requiring (as a condition of a grant) that applications be filed when appropriate. Moreover, we might sweeten the pot by adding a small amount of grant funds to cover the relevant associated expenses.

Page 28: The Report states that the December 22 Report on Technology Management will be viewed by some as "thought-control" or "book burning." These are inappropriate red-herring terms which should be deleted.

Sherry Arnstein

cc: David Cooper
Chris Bladen
Norman Latker

May 7, 1976

PRELIMINARY EXPLANATORY COMMENTS ACCOMPANYING DRAFT LEGISLATION

The Board Section

1. The legislation makes clear that Agency determinations regarding the application of the single patent rights clause (i.e., whether an invention is a subject invention) are reviewable by the Board. However, the drafting committee, while not rejecting Board review of disputes regarding other contract patent provisions such as indemnity, authorization and consent clauses, determined to make no provision for such review without direction from the Executive Subcommittee.

The Contractor Section

2. The non-profit sector was not handled separately as originally anticipated. The drafting committee agreed that a technology transfer capability should be considered along with other factors in determining whether any contractor is "responsible," rather than presuming a distinction between profits and non-profits. If it is later determined that a technology transfer capability is a necessary element in establishing contractor "responsibility," consideration should be given to the amendment of the Federal Procurement Regulations to add "technology transfer capability" as a factor which should be evaluated to determine "responsibility."

3. The problems generated by the Freedom of Information Act were resolved, in part, by the drafting committee by providing to the Government the right to defer release of information disclosing Government funded inventions until appropriate patent protection has been obtained. This is considered to be an Exemption 3 situation under FOIA ("unless otherwise provided by statute"). The drafting committee presumes that any employee section added to the legislation will provide to the Government the same ability to defer release of information disclosing an employee invention. In addition, the NASA/ERDA Protection of Invention Rights statement included in the legislation is also deemed to be authorization to defer release under Exemption 3 of FOIA of any information which might jeopardize the protection of a Government funded invention.

4. The drafting committee determined not to provide, without direction from the Executive Subcommittee, language spelling out an inventor's rights in situations where contractor does not elect to retain title.

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evaluated to determine "responsibility."

5. The drafting committee discussed but did not act upon the question of whether the 10 year guaranteed period of exclusivity should be tolled during the period the patent holder is before a regulatory agency obtaining pre-market clearance of the patented invention. This question was deemed to be of special importance to agencies generating inventions which require pre-market clearance by the regulatory components of FDA, EPA, Agriculture, etc. The impact of new legislation requiring pre-market clearance of medical devices will no doubt act as a disincentive to risk investment in such devices.

6. It was the sense of the drafting committee that the question of whether the single patent clause would be applicable to GOCO's would be deferred and considered when drafting the uniform regulations authorized by Section 2 of the contractor section. It was, however, clear that any agency could use a patent clause other than the single patent clause when contracting with GOCO's if the Board agreed under Section 3(b) of the contractor section.

The Licensing Section

7. While it appeared that the intention of Section 3(d) of the licensing portion of the legislation (which was adopted from prior drafts cleared by the Executive Subcommittee) limits NTIS funding to agency filing of foreign patent applications, Sections 3(a) and (h) of the same part could be construed to provide for NTIS support of both foreign and domestic filing by agencies. This apparent ambiguity was left for discussion by the Executive Subcommittee.

8. Notwithstanding the prior draft licensing legislation cleared by the Executive Subcommittee, the drafting committee specifically provided for the licensing of foreign patents and patent applications under different conditions than domestic licensing. This was considered appropriate, since the prior draft was intent on riding on the ERDA licensing language, which appears to be no longer necessary.

9. The drafting committee, following the prior draft licensing legislation, did not provide for sale of either domestic or foreign patents and patent applications However, the Executive Subcommittee may wish to rediscuss this in light of the expediency of "sale" in comparison to licensing when dealing with foreign patents and patent applications. There was some comment that a provision for sale may be unnecessary, since the authority could be construed to be available in the Property Act, and that asking for the right to sell in this legislation might appear to be grasping for too much authority.

10. The proviso following Section 5(a) (4) in the licensing section is not considered to require a mandatory determination as in Section 5(a)(1) through (4) above it. Accordingly, it was the sense of the drafting committee that the determination referenced in the proviso need not be made unless facts are made available to the agency that competition might be affected.

Other Provisions

11. Although the drafting committee favors some incentive awards program, it made no provision in the legislation for such a program anticipating the report by the Committee reviewing employee invention legislation. This was deemed appropriate, since it appears that an awards program would be in the main applicable to Government employees. The drafting committee did, however, discuss use of Sec. 306 of the NASA Act as a model for establishing an awards program. The committee favorably viewed the use of the broad approach of Sec. 306, which leaves details of the program for regulatory implementation.

12. It was not apparent that the definition of "practical application" was necessary in the definition section. Its deletion should be considered.

13. The definition of "contract" was drafted to insure that certain co-sponsored research and development contracts and loan guarantee programs would not be covered by the legislation.

Mr. Krueger with Mr. Andrews of North Carolina.
Mr. Byron with Mr. Lujan.
Mr. White with Mr. Slack.
Mr. Udall with Mr. Biester.
Mr. Bevill with Mr. Duncan of Oregon.
Mr. Brooks with Mr. Gude.
Mr. Phillip Burton with Mr. Eckhardt.
Mr. Danielson with Mr. Johnson of Colorado.
Mr. Dent with Mr. Conlan.
Mr. Ellberg with Mr. Evans of Colorado.
Mr. Flood with Mr. Heinz.
Mr. Gaydos with Mr. Hungate.
Mr. Dodd with Mr. Martin.
Mr. Green with Mr. Wiggins.
Mr. Rodino with Mr. Litton.
Mr. St Germain with Mr. Mosher.
Mr. James V. Stanton with Mr. Madden.
Mr. Vigorito with Mr. Eshleman.
Mr. Charles H. Wilson of California with Mr. McKay.
Mr. Yatron with Mr. Roberts.
Mr. Young of Texas with Mr. Vander Jagt.
Mr. Morgan with Mr. Roncalio.
Mr. Nix with Mr. Ryan.
Mr. Pepper with Mr. Peyser.
Mr. Nolan with Mr. Stephens.
Mr. Mathis with Mr. Steiger of Arizona.
Mr. Pickle with Mr. Schulze.
Mr. Rees with Mr. Railsback.
Mr. Brown with Mr. Taylor of Missouri.
Mr. Bergland with Mr. McEwen.
Mr. AuCoin with Mr. Weaver.
Mr. Anderson of California with Mr. Skubitz.
Mr. Jones of North Carolina with Mr. Steelman.

So the bill was passed.

The result of the vote was announced as above recorded.

A motion to reconsider was laid on the table.

GENERAL LEAVE

Mr. BRADEMAS. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days in which to revise and extend their remarks and include extraneous matter on the bill (H.R. 12838) just passed.

The SPEAKER. Is there objection to the request of the gentleman from Indiana?

There was no objection.

FURTHER MESSAGE FROM THE SENATE

A further message from the Senate by Mr. Sparrow, one of its clerks, announced that the Senate had passed without amendment a concurrent resolution of the House of the following title:

H. Con. Res. 618. Concurrent resolution requesting the return of H.R. 8235 and directing its reenrollment.

CHANGE IN LEGISLATIVE PROGRAM

(Mr. PERKINS asked and was given permission to address the House for 1 minute.)

Mr. PERKINS. Mr. Speaker, the bill (H.R. 12987), known as the emergency job programs stopgap extension, will not be considered this afternoon and will not be called up because we feel the bill is of such tremendous importance that virtually the full House should be present. We hope to have it programed for later in the week.

AUTHORIZING CLERK TO RECEIVE MESSAGES AND SPEAKER TO SIGN BILLS AND JOINT RESOLUTIONS NOTWITHSTANDING ADJOURNMENT

Mr. O'NEILL. Mr. Speaker. I ask unanimous consent that, notwithstanding the adjournment of the House until tomorrow, the Clerk be authorized to receive messages from the Senate, and that the Speaker be authorized to sign any enrolled bills and joint resolutions duly passed by the two Houses and found truly enrolled.

The SPEAKER. Is there objection to the request of the gentleman from Massachusetts?

There was no objection.

CONFERENCE REPORT ON H.R. 10230, NATIONAL SCIENCE AND TECHNOLOGY POLICY, ORGANIZATION, AND PRIORITIES ACT OF 1976

Mr. TEAGUE submitted the following conference report and statement on the bill (H.R. 10230) to establish a science and technology policy for the United States, to provide for scientific and technological advice and assistance to the President, to provide a comprehensive survey of ways and means for improving the Federal effort in scientific research and information handling, and in the use thereof, to amend the National Science Foundation Act of 1950, and for other purposes:

CONFERENCE REPORT (H. REPT. No. 94-1046)

The committee of conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 10230) to establish a science and technology policy for the United States, to provide for scientific and technological advice and assistance to the President, to provide a comprehensive survey of ways and means for improving the Federal effort in scientific research and information handling, and in the use thereof, to amend the National Science Foundation Act of 1950, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the House recede from its disagreement to the amendment of the Senate and agree to the same with an amendment as follows: In lieu of the matter proposed to be inserted by the Senate amendment insert the following:

That this Act may be cited as the "National Science and Technology Policy, Organization, and Priorities Act of 1976".

TITLE I—NATIONAL SCIENCE, ENGINEERING, AND TECHNOLOGY POLICY AND PRIORITIES

FINDINGS

SEC. 101. (a) The Congress, recognizing the profound impact of science and technology on society, and the interrelations of scientific, technological, economic, social, political, and institutional factors, hereby finds and declares that—

(1) the general welfare, the security, the economic health and stability of the Nation, the conservation and efficient utilization of its natural and human resources, and the effective functioning of government and society require vigorous, perceptive support and employment of science and technology in achieving national objectives;

(2) the many large and complex scientific and technological factors which increasingly influence the course of national and international events require appropriate provision, involving long-range, inclusive planning as well as more immediately program development, to incorporate scientific and technological knowledge in the national decisionmaking process;

(3) the scientific and technological capabilities of the United States, when properly fostered, applied, and directed, can effectively assist in improving the quality of life, in anticipating and resolving critical and emerging international, national, and local problems, in strengthening the Nation's international economic position, and in furthering its foreign policy objectives;

(4) Federal funding for science and technology represents an investment in the future which is indispensable to sustained national progress and human betterment, and there should be a continuing national investment in science, engineering, and technology which is commensurate with national needs and opportunities and the prevalent economic situation;

(5) the manpower pool of scientists, engineers, and technicians, constitutes an invaluable national resource which should be utilized to the fullest extent possible; and

(6) the Nation's capabilities for technology assessment and for technological planning and policy formulation must be strengthened at both Federal and State levels.

(b) As a consequence, the Congress finds and declares that science and technology should contribute to the following priority goals without being limited thereto:

(1) fostering leadership in the quest for international peace and progress toward human freedom, dignity, and well-being by enlarging the contributions of American scientists and engineers to the knowledge of man and his universe, by making discoveries of basic science widely available at home and abroad, and by utilizing technology in support of the United States national and foreign policy goals;

(2) increasing the efficient use of essential materials and products, and generally contributing to economic opportunity, stability, and appropriate growth;

(3) assuring an adequate supply of food, materials, and energy for the Nation's needs;

(4) contributing to the national security;

(5) improving the quality of health care available to all residents of the United States;

(6) preserving, fostering, and restoring a healthful and esthetic natural environment;

(7) providing for the protection of the oceans and coastal zones, and the polar regions, and the efficient utilization of their resources;

(8) strengthening the economy and promoting full employment through useful scientific and technological innovations;

(9) increasing the quality of educational opportunities available to all residents of the United States;

(10) promoting the conservation and efficient utilization of the Nation's natural and human resources;

(11) improving the Nation's housing, transportation, and communication systems, and assuring the provision of effective public services throughout urban, suburban, and rural areas;

(12) eliminating air and water pollution, and unnecessary unhealthful, or ineffective drugs and food additives; and

(13) advancing the exploration and peaceful uses of outer space.

DECLARATION OF POLICY

SEC. 102. (a) PRINCIPLES.—In view of the foregoing, the Congress declares that the

United States shall adhere to a national policy for science and technology which includes the following principles:

(1) The continuing development and implementation of strategies for determining and achieving the appropriate scope, level, direction, and extent of scientific and technological efforts based upon a continuous appraisal of the role of science and technology in achieving goals and formulating policies of the United States, and reflecting the views of State and local governments and representative public groups.

(2) The enlistment of science and technology to foster a healthy economy in which the directions of growth and innovation are compatible with the prudent and frugal use of resources and with the preservation of a benign environment.

(3) The conduct of science and technology operations so as to serve domestic needs while promoting foreign policy objectives.

(4) The recruitment, education, training, retraining, and beneficial use of adequate numbers of scientists, engineers, and technologists, and the promotion by the Federal Government of the effective and efficient utilization in the national interest of the Nation's human resources in science, engineering, and technology.

(5) The development and maintenance of a solid base for science and technology in the United States, including: (A) strong participation of and cooperative relationships with State and local governments and the private sector; (B) the maintenance and strengthening of diversified scientific and technological capabilities in government, industry, and the universities, and the encouragement of independent initiatives based on such capabilities, together with elimination of needless barriers to scientific and technological innovation; (C) effective management and dissemination of scientific and technological information; (D) establishment of essential scientific, technical and industrial standards and measurement and test methods; and (E) promotion of increased public understanding of science and technology.

(6) The recognition that, as changing circumstances require periodic revision and adaptation of title I of this Act, the Federal Government is responsible for identifying and interpreting the changes in those circumstances as they occur, and for effecting subsequent changes in title I as appropriate.

(b) IMPLEMENTATION.—To implement the policy enunciated in subsection (a) of this section, the Congress declares that:

(1) The Federal Government should maintain central policy planning elements in the executive branch which assist Federal agencies in (A) identifying public problems and objectives, (B) mobilizing scientific and technological resources for essential national programs, (C) securing appropriate funding for programs so identified, (D) anticipating future concerns to which science and technology can contribute and devising strategies for the conduct of science and technology for such purposes, (E) reviewing systematically Federal science policy and programs and recommending legislative amendment thereof when needed. Such elements should include an advisory mechanism within the Executive Office of the President so that the Chief Executive may have available independent, expert judgment and assistance on policy matters which require accurate assessments of the complex scientific and technological features involved.

(2) It is a responsibility of the Federal Government to promote prompt, effective, reliable, and systematic transfer of scientific and technological information by such appropriate methods as programs conducted by nongovernmental organizations, including industrial groups and technical societies. In particular, it is recognized as a responsibility of the Federal Government not only to coordinate and unify its own science and technology information systems, but to facilitate the close coupling of institutional science research with commercial application of the useful findings of science.

(3) It is further an appropriate Federal function to support scientific and technological efforts which are expected to provide results beneficial to the public but which the private sector may be unwilling or unable to support.

(4) Scientific and technological activities which may be properly supported exclusively by the Federal Government should be distinguished from those in which interests are shared with State and local governments and the private sector. Among these entities, cooperative relationships should be established which encourage the appropriate sharing of science and technology decisionmaking, funding support, and program planning and execution.

(5) The Federal Government should support and utilize engineering and its various disciplines and make maximum use of the engineering community, whenever appropriate, as an essential element in the Federal policymaking process.

(6) Comprehensive legislative support for the national science and technology effort requires that the Congress be regularly informed of the condition, health and vitality, and funding requirements of science and technology, the relation of science and technology to changing national goals, and the need for legislative modification of the Federal endeavor and structure at all levels as it relates to science and technology.

(c) PROCEDURES.—The Congress declares that, in order to expedite and facilitate the implementation of the policy enunciated in subsection (a) of this section, the following coordinate procedures are of paramount importance:

(1) Federal procurement policy should encourage the use of science and technology to foster frugal use of materials, energy, and appropriated funds; to assure quality environment; and to enhance product performance.

(2) Explicit criteria, including cost-benefit principles where practicable, should be developed to identify the kinds of applied research and technology programs that are appropriate for Federal funding support and to determine the extent of such support. Particular attention should be given to scientific and technological problems and opportunities offering promise of social advantage that are so long range, geographically widespread, or economically diffused that the Federal Government constitutes the appropriate source for undertaking their support.

(3) Federal promotion of science and technology should emphasize quality of research, recognize the singular importance of stability in scientific and technological institutions, and for urgent tasks, seek to assure timeliness of results. With particular reference to Federal support for basic research, funds should be allocated to encourage education in needed disciplines, to provide a base of scientific knowledge from which future essential technological development can be launched, and to add to the cultural heritage of the Nation.

(4) Federal patent policies should be developed, based on uniform principles, which have as their objective the preservation of incentives for technological innovation and the application of procedures which will continue to assure the full use of beneficial technology to serve the public.

(5) Closer relationships should be encouraged among practitioners of different scientific and technological disciplines, including the physical, social, and biomedical fields.

(6) Federal departments, agencies, and instrumentalities should assure efficient management of laboratory facilities and equipment in their custody, including acquisition of effective equipment, disposal of inferior and obsolete properties, and cross-servicing to maximize the productivity of costly property of all kinds. Disposal policies should include attention to possibilities for further productive use.

(7) The full use of the contributions of science and technology to support State and local governmental goals should be encouraged.

(8) Formal recognition should be accorded those persons whose scientific and technological achievements have contributed significantly to the national welfare.

(9) The Federal Government should support applied scientific research, when appropriate, in proportion to the probability of its usefulness, insofar as this probability can be determined; but while maximizing the beneficial consequences of technology, the Government should act to minimize foreseeable injurious consequences.

(10) Federal departments, agencies, and instrumentalities should establish procedures to insure among them the systematic interchange of scientific data and technological findings developed under their programs.

TITLE II—OFFICE OF SCIENCE AND TECHNOLOGY POLICY

SHORT TITLE

SEC. 201. This title may be cited as the "Presidential Science and Technology Advisory Organization Act of 1976".

ESTABLISHMENT

SEC. 202. There is established in the Executive Office of the President an Office of Science and Technology Policy (hereinafter referred to in this title as the "Office").

DIRECTOR; ASSOCIATE DIRECTORS

SEC. 203. There shall be at the head of the Office a Director who shall be appointed by the President, by and with the advice and consent of the Senate, and who shall be compensated at the rate provided for level II of the Executive Schedule in section 5313 of title 5, United States Code. The President is authorized to appoint not more than four Associate Directors, by and with the advice and consent of the Senate, who shall be compensated at a rate not to exceed that provided for level III of the Executive Schedule in section 5314 of such title. Associate Directors shall perform such functions as the Director may prescribe.

FUNCTIONS

SEC. 204. (a) The primary function of the Director is to provide, within the Executive Office of the President, advice on the scientific, engineering, and technological aspects of issues that require attention at the highest levels of Government.

(b) In addition to such other functions and activities as the President may assign, the Director shall—

(1) advise the President of scientific and technological considerations involved in areas of national concern including, but not limited to, the economy, national security, health, foreign relations, the environment, and the technological recovery and use of resources;

(2) evaluate the scale, quality, and effectiveness of the Federal effort in science and technology and advise on appropriate actions;

(3) advise the President on scientific and technological considerations with regard to Federal budgets, assist the Office of Management and Budget with an annual review and analysis of funding proposed for research and development in budgets of all Federal agencies, and aid the Office of Management and Budget and the agencies throughout the budget development process; and

(4) assist the President in providing general leadership and coordination of the re-

search and development programs of the Federal Government.

POLICY PLANNING, ANALYSIS, AND ADVICE

SEC. 205. (a) The Office shall serve as a sources of scientific and technological analysis and judgment for the President with respect to major policies, plans, and programs of the Federal Government. In carrying out the provisions of this section, the Director shall—

(1) seek to define coherent approaches for applying science and technology to critical and emerging national and international problems and for promoting coordination of the scientific and technological responsibilities and programs of the Federal departments and agencies in the resolution of such problems;

(2) assist and advise the President in the preparation of the Science and Technology Report, in accordance with section 209 of this Act;

(3) gather timely and authoritative information concerning significant developments and trends in science, technology, and in national priorities, both current and prospective, to analyze and interpret such information for the purpose of determining whether such developments and trends are likely to affect achievement of the priority goals of the Nation as set forth in section 101(b) of this Act;

(4) encourage the development and maintenance of an adequate data base for human resources in science, engineering, and technology, including the development of appropriate models to forecast future manpower requirements, and assess the impact of major governmental and public programs on human resources and their utilization;

(5) initiate studies and analyses, including systems analyses and technology assessments, of alternatives available for the resolution of critical and emerging national and international problems amenable to the contributions of science and technology and, insofar as possible, determine and compare probable costs, benefits, and impacts of such alternatives;

(6) advise the President on the extent to which the various scientific and technological programs, policies, and activities of the Federal Government are likely to affect the achievement of the priority goals of the Nation as set forth in section 101(b) of this Act;

(7) provide the President with periodic reviews of Federal statutes and administrative regulations of the various departments and agencies which affect research and development activities, both internally and in relation to the private sector, or which may interfere with desirable technological innovation, together with recommendations for their elimination, reform, or updating as appropriate;

(8) develop, review, revise, and recommend criteria for determining scientific and technological activities warranting Federal support, and recommend Federal policies designed to advance (A) the development and maintenance of broadly based scientific and technological capabilities, including human resources, at all levels of government, academia, and industry, and (B) the effective application of such capabilities to national needs;

(9) assess and advise on policies for international cooperation in science and technology which will advance the national and international objectives of the United States;

(10) identify and assess emerging and future areas in which science and technology can be used effectively in addressing national and international problems;

(11) report at least once each year to the President on the overall activities and accomplishments of the Office, pursuant to section 209 of this Act;

(12) periodically survey the nature and needs of national science and technology policy and make recommendations to the President, for review and transmission to the Congress, for the timely and appropriate revision of such policy in accordance with section 102(a)(6) of this Act; and

(13) perform such other duties and functions and make and furnish such studies and reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

(b)(1) The Director shall establish an Intergovernmental Science, Engineering, and Technology Advisory Panel (hereinafter referred to as the "Panel"), whose purpose shall be to (A) identify and define civilian problems at State, regional, and local levels which science, engineering, and technology may assist in resolving or ameliorating; (B) recommend priorities for addressing such problems; and (C) advise and assist the Director in identifying and fostering policies to facilitate the transfer and utilization of research and development results so as to maximize their application to civilian needs.

(2) The Panel shall be composed of (A) the Director of the Office, or his representative; (B) at least ten members representing the interests of the States, appointed by the Director of the Office after consultation with State officials; and (C) the Director of the National Science Foundation, or his representative.

(3)(A) The Director of the Office, or his representative, shall serve as Chairman of the Panel.

(B) The Panel shall perform such functions as the Chairman may prescribe, and shall meet at the call of the Chairman.

(4) Each member of the Panel shall, while serving on business of the Panel, be entitled to receive compensation at a rate not to exceed the daily rate prescribed for GS-18 of the General Schedule under section 5332 of title 5, United States Code, including traveltime, and, while so serving away from his home or regular place of business, he may be allowed travel expenses, including per diem in lieu of subsistence in the same manner as the expenses authorized by section 5703(b) of title 5, United States Code, for persons in government service employed intermittently.

FIVE-YEAR OUTLOOK

SEC. 206. (a) Within its first year of operation, the Office shall, to the extent practicable, within the limitations of available knowledge and resources, and with appropriate assistance from the departments and agencies and such consultants and contractors as the Director deems necessary, identify and describe situations and conditions which warrant special attention within the next five years, involving—

(1) current and emerging problems of national significance that are identified through scientific research, or in which scientific or technical considerations are of major significance; and

(2) opportunities for, and constraints on, the use of new and existing scientific and technological capabilities which can make a significant contribution to the resolution of problems identified under paragraph (1) of this subsection or to the achievement of Federal program objectives or national goals, including those set forth in section 101(b) of this Act.

(b) The Office shall annually revise the five-year outlook developed under subsection (a) of this section so that it takes account of new problems, constraints and opportunities and changing national goals and circumstances, and shall extend the outlook so that it always extends five years into the future.

(c) The Director of the Office shall consult as necessary with officials of the departments and agencies having programs and responsibilities relating to the problems, constraints, and opportunities identified under subsections (a) and (b) of this section, in order to—

(1) identify and evaluate alternative actions that might be taken by the Federal Government, State and local governments, or the private sector to deal with such problems, constraints, or opportunities; and

(2) ensure that alternative actions identified under paragraph (1) of this subsection are fully considered by departments and agencies in formulating their budget, program, and legislative proposals.

(d) The Director of the Office shall consult as necessary with officials of the Office of Management and Budget and other appropriate elements of the Executive Office of the President to ensure that the problems, constraints, opportunities, and alternative actions identified under subsections (a), (b), and (c) of this section are fully considered in the development of the President's Budgets and legislative programs.

ADDITIONAL FUNCTIONS OF THE DIRECTOR; ADMINISTRATIVE PROVISIONS

SEC. 207. (a) The Director shall, in addition to the other duties and functions set forth in this title—

(1) serve as Chairman of the Federal Coordinating Council for Science, Engineering, and Technology established under title IV; and

(2) serve as a member of the Domestic Council.

(b) For the purpose of assuring the optimum contribution of science and technology to the national security, the Director, at the request of the National Security Council, shall advise the National Security Council in such matters concerning science and technology as relate to national security.

(c) In carrying out his functions under this Act, the Director is authorized to—

(1) appoint such officers and employees as he may deem necessary to perform the functions now or hereafter vested in him and to prescribe their duties;

(2) obtain services as authorized by section 3109 of title 5 of the United States Code, at rates not to exceed the rate prescribed for grade GS-18 of the General Schedule by section 5332 of title 5 of the United States Code; and

(3) enter into contracts and other arrangements for studies, analyses, and other services with public agencies and with private persons, organizations, or institutions, and make such payments as he deems necessary, to carry out the provisions of this Act without legal consideration, without performance bonds, and without regard to section 3709 of the Revised Statutes (41 U.S.C. 5).

COORDINATION WITH OTHER ORGANIZATIONS

SEC. 208. (a) In exercising his functions under this Act, the Director shall—

(1) work in close consultation and cooperation with the Domestic Council, the National Security Council, the Council on Environmental Quality, the Council of Economic Advisers, the Office of Management and Budget, the National Science Board, and the Federal departments and agencies;

(2) utilize the services of consultants, establish such advisory panels, and, to the extent practicable, consult with State and local governmental agencies, with appropriate professional groups, and with such representatives of industry, the universities, agriculture, labor, consumers, conservation organizations, and such other public interest groups, organizations, and individuals as he deems advisable;

(3) hold such hearings in various parts of the Nation as he deems necessary, to determine the views of the agencies, groups, and organizations referred to in paragraph (2) of this subsection and of the general

public, concerning national needs and trends in science and technology; and

(4) utilize with their consent to the fullest extent possible the services, personnel, equipment, facilities, and information (including statistical information) of public and private agencies and organizations, and individuals, in order to avoid duplication of effort and expense, and may transfer funds made available pursuant to this Act to other Federal agencies as reimbursement for the utilization of such personnel, services, facilities, equipment, and information.

(b) Each department, agency, and instrumentality of the Executive Branch of the Government, including any independent agency, is authorized to furnish the Director such information as the Director deems necessary to carry out his functions under this Act.

(c) Upon request, the Administrator of the National Aeronautics and Space Administration is authorized to assist the Director with respect to carrying out his activities conducted under paragraph (5) of section 205(a) of this Act.

SCIENCE AND TECHNOLOGY REPORT

SEC. 209. (a) The President shall transmit annually to the Congress, beginning February 15, 1978, a Science and Technology Report (hereinafter referred to as the "Report") which shall be prepared by the Office, with appropriate assistance from Federal departments and agencies and such consultants and contractors as the Director deems necessary. The report shall draw upon the information prepared by the Director pursuant to section 206 of this Act, and to the extent practicable, within the limitations of available knowledge and resources, discuss such issues as—

(1) a review of developments of national significance in science and technology;

(2) the significant effects of current and projected trends in science and technology on the social, economic, and other requirements of the Nation;

(3) a review and appraisal of selected science- and technology-related programs, policies, and activities of the Federal Government;

(4) an inventory and forecast of critical and emerging national problems the resolution of which might be substantially assisted by the application of science and technology;

(5) the identification and assessment of scientific and technological measures that can contribute to the resolution of such problems, in light of the related social, economic, political, and institutional considerations;

(6) the existing and projected scientific and technological resources, including specialized manpower, that could contribute to the resolution of such problems; and

(7) recommendations for legislation on science- and technology-related programs and policies that will contribute to the resolution of such problems.

(b) In preparing the Report under subsection (a) of this section, the Office shall make maximum use of relevant data available from the National Science Foundation and other Government departments and agencies.

(c) The Director shall insure that the Report, in the form approved by the President, is printed and made available as a public document.

TITLE III—PRESIDENT'S COMMITTEE ON SCIENCE AND TECHNOLOGY

ESTABLISHMENT

SEC. 301. The President shall establish within the Executive Office of the President a President's Committee on Science and Technology (hereinafter referred to as the "Committee").

MEMBERSHIP

SEC. 302. (a) The Committee shall consist of—

(1) the Director of the Office of Science and Technology Policy established under title II of this Act; and

(2) not less than eight nor more than fourteen other members appointed by the President not more than sixty days after the Director has assumed office (as provided in section 203 of this Act).

(b) Members of the Committee appointed by the President pursuant to subsection (a)(2) of this section shall—

(1) be qualified and distinguished in one or more of the following areas: science, engineering, technology, information dissemination, education, management, labor, or public affairs;

(2) be capable of critically assessing the policies, priorities, programs, and activities of the Nation, with respect to the findings, policies, and purposes set forth in title I; and

(3) shall collectively constitute a balanced composition with respect to (A) fields of science and engineering, (B) academic, industrial, and government experience, and (C) business, labor, consumer, and public interest points of view.

(c) The President shall appoint one member of the Committee to serve as Chairman and another member to serve as Vice Chairman for such periods as the President may determine.

(d) Each member of the Committee who is not an officer of the Federal Government shall, while serving on business of the Committee, be entitled to receive compensation at a rate not to exceed the daily rate prescribed for GS-18 of the General Schedule under section 5332 of title 5, United States Code, including traveltime, and while so serving away from his home or regular place of business he may be allowed travel expenses, including per diem in lieu of subsistence, in the same manner as the expenses authorized by section 5703(b) of title 5, United States Code, for persons in Government service employed intermittently.

FEDERAL SCIENCE, ENGINEERING, AND TECHNOLOGY SURVEY

SEC. 303. (a) The Committee shall survey, examine, and analyze the overall context of the Federal science, engineering, and technology effort including missions, goals, personnel, funding, organization, facilities, and activities in general, taking adequate account of the interests of individuals and groups that may be affected by Federal scientific, engineering, and technical programs, including, as appropriate, consultation with such individuals and groups. In carrying out its functions under this section, the Committee shall, among other things, consider needs for—

(1) organizational reform, including institutional realinement designed to place Federal agencies whose missions are primarily or solely devoted to scientific and technological research and development, and those agencies primarily or solely concerned with fuels, energy, and materials, within a single cabinet-level department;

(2) improvements in existing systems for handling scientific and technical information on a Government-wide basis, including consideration of the appropriate role to be played by the private sector in the dissemination of such information;

(3) improved technology assessment in the executive branch of the Federal Government;

(4) improved methods for effecting technology innovation, transfer, and use;

(5) stimulating more effective Federal-State and Federal-industry liaison and cooperation in science and technology, including the formation of Federal-State mechanisms for the mutual pursuit of this goal;

(6) reduction and simplification of Federal regulations and administrative practices and procedures which may have the effect of retarding technological innovation or opportunities for its utilization;

(7) a broader base for support of basic research;

(8) ways of strengthening the Nation's academic institutions' capabilities for research and education in science and technology;

(9) ways and means of effectively integrating scientific and technological factors into our national and international policies;

(10) technology designed to meet community and individual needs;

(11) maintenance of adequate scientific and technological manpower with regard to both quality and quantity;

(12) improved systems for planning and analysis of the Federal science and technology programs; and

(13) long-range study, analysis, and planning in regard to the application of science and technology to major national problems or concerns.

(b)(1) Within twelve months from the time the Committee is activated in accordance with section 302(a) of this Act, the Committee shall issue an interim report of its activities and operations to date. Not more than twenty-four months from the time the Committee is activated, the Committee shall submit a final report of its activities, findings, conclusions, and recommendations, including such supporting data and material as may be necessary, to the President.

(2) The President, within sixty days of receipt thereof, shall transmit each such report to each House of Congress together with such comments, observations, and recommendations thereon as he deems appropriate.

CONTINUATION OF COMMITTEE

SEC. 304. (a) Ninety days after submission of the final report prepared under section 303 of this Act, the Committee shall cease to exist, unless the President, before the expiration of the ninety-day period, makes a determination that it is advantageous for the Committee to continue in being.

(b) If the President determines that it is advantageous for the Committee to continue in being, (1) the Committee shall exercise such functions as are prescribed by the President; and (2) the members of the Committee shall serve at the pleasure of the President.

STAFF AND CONSULTANT SUPPORT

SEC. 305. (a) In the performance of its functions under sections 303 and 304 of this Act, the Committee is authorized—

(1) to select, appoint, employ, and fix the compensation of such specialists and other experts as may be necessary for the carrying out of its duties and functions, and to select, appoint, and employ, subject to the civil service laws, such other officers and employees as may be necessary for carrying out its duties and functions; and

(2) to provide for participation of such civilian and military personnel as may be detailed to the Committee pursuant to subsection (b) of this section for carrying out the functions of the Committee.

(b) Upon request of the Committee, the head of any Federal department, agency, or instrumentality is authorized (1) to furnish to the Committee such information as may be necessary for carrying out its functions and as may be available to or procurable by such department, agency, or instrumentality, and (2) to detail to temporary duty with the Committee on a reimbursable basis such personnel within his administrative jurisdiction as it may need or believe to be useful for

carrying out its functions. Each such detail shall be without loss of seniority, pay, or other employee status, to civilian employees so detailed, and without loss of status, rank, office, or grade, or of any emolument, perquisite, right, privilege, or benefit incident thereto to military personnel so detailed. Each such detail shall be made pursuant to an agreement between the Chairman and the head of the relevant department, agency, or instrumentality, and shall be in accordance with the provisions of subchapter III of chapter 33, title 5, United States Code.

TITLE IV—FEDERAL COORDINATING COUNCIL FOR SCIENCE, ENGINEERING, AND TECHNOLOGY

ESTABLISHMENT AND FUNCTIONS

SEC. 401. (a) There is established the Federal Coordinating Council for Science, Engineering, and Technology (hereinafter referred to as the "Council").

(b) The Council shall be composed of the Director of the Office of Science and Technology Policy and one representative of each of the following Federal agencies: Department of Agriculture, Department of Commerce, Department of Defense, Department of Health, Education, and Welfare, Department of Housing and Urban Development, Department of the Interior, Department of State, Department of Transportation, Veterans' Administration, National Aeronautics and Space Administration, National Science Foundation, Environmental Protection Agency, and Energy Research and Development Administration. Each such representative shall be an official of policy rank designated by the head of the Federal agency concerned.

(c) The Director of the Office of Science and Technology Policy shall serve as Chairman of the Council. The Chairman may designate another member of the Council to act temporarily in the Chairman's absence as Chairman.

(d) The Chairman may (1) request the head of any Federal agency not named in subsection (b) of this section to designate a representative to participate in meetings or parts of meetings of the Council concerned with matters of substantial interest to such agency, and (2) invite other persons to attend meetings of the Council.

(e) The Council shall consider problems and developments in the fields of science, engineering, and technology and related activities affecting more than one Federal agency, and shall recommend policies and other measures designed to—

(1) provide more effective planning and administration of Federal scientific, engineering, and technological programs.

(2) identify research needs including areas requiring additional emphasis.

(3) achieve more effective utilization of the scientific, engineering, and technological resources and facilities of Federal agencies, including the elimination of unwarranted duplication, and

(4) further international cooperation in science, engineering, and technology.

(f) The Council shall perform such other related advisory duties as shall be assigned by the President or by the Chairman.

(g) For the purpose of carrying out the provisions of this section, each Federal agency represented on the Council shall furnish necessary assistance to the Council. Such assistance may include—

(1) detailing employees to the Council to perform such functions, consistent with the purposes of this section, as the Chairman may assign to them, and

(2) undertaking, upon request of the Chairman, such special studies for the Council as come within the functions herein assigned.

(h) For the purpose of conducting studies and making reports as directed by the Chairman, standing subcommittees and panels of the Council may be established.

ABOLITION OF FEDERAL COUNCIL FOR SCIENCE AND TECHNOLOGY

SEC. 402. The Federal Council for Science and Technology, established pursuant to Executive Order 10807, issued March 13, 1959, as amended by Executive Order 11381, issued November 8, 1967, is hereby abolished.

TITLE V—GENERAL PROVISIONS

AUTHORIZATION

SEC. 501. (a) For the purpose of carrying out title II of this Act, there are authorized to be appropriated—

(1) $750,000 for the fiscal year ending June 30, 1976;

(2) $500,000 for the period beginning July 1, 1976, and ending September 30, 1976;

(3) $3,000,000 for the fiscal year ending September 30, 1977; and

(4) such sums as may be necessary for each of the succeeding fiscal years.

(b) For the purpose of carrying out title III of this Act, there are authorized to be appropriated—

(1) $750,000 for the fiscal year ending June 30, 1976;

(2) $500,000 for the period beginning July 1, 1976, and ending September 30, 1976;

(3) $1,000,000 for the fiscal year ending September 30, 1977; and

(4) such sums as may be necessary for each of the succeeding fiscal years.

STATUTORY REPEAL

SEC. 502. Sections 1, 2, 3, and 4 of Reorganization Plan Numbered 2 of 1962 (76 Stat. 1253) and section 2 of Reorganization Plan Numbered 1 of 1973 (87 Stat. 1089) are repealed.

AMENDMENT

SEC. 503. Section 4 of the National Science Foundation Act of 1950 (42 U.S.C. 1863) is amended by striking out subsection (g) and by redesignating subsections (h), (i), and (j), and all references thereto, as subsections (g), (h), and (i), respectively.

And the Senate agree to the same.

OLIN E. TEAGUE,
DON FUQUA,
JIM SYMINGTON,
MIKE MCCORMACK,
RAY THORNTON,
C. A. MOSHER,
MARVIN L. ESCH,
Managers on the Part of the House.

TED KENNEDY,
WARREN G. MAGNUSON,
FRANK E. MOSS,
WALTER F. MONDALE,
JOHN V. TUNNEY,
WENDELL H. FORD,
BARRY GOLDWATER,
J. GLENN BEALL, JR.,
PAUL LAXALT,
Managers on the Part of the Senate.

JOINT EXPLANATORY STATEMENT OF THE COMMITTEE OF CONFERENCE

The managers on the part of the House and the Senate at the conference on the disagreeing votes of the two Houses on the amendment of the Senate to the bill (H.R. 10230) to establish a science and technology policy for the United States, to provide for scientific and technological advice and assistance to the President, to provide a comprehensive survey of ways and means for improving the Federal effort in scientific research and information handling, and in the use thereof, and for other purposes, submit the following joint statement to the House and the Senate in explanation of the effect of the action agreed upon by the managers and recommended in the accompanying conference report:

The amendment of the Senate struck out all after the enacting clause in the House bill and substituted new language. The Committee of Conference agreed to accept the Senate amendment with certain amendments and stipulations proposed by the conferees.

The substantive changes made by the Senate amendment, together with further amendments and modifications by the Committee of Conference are as follows:

TITLE I—NATIONAL SCIENCE, ENGINEERING AND TECHNOLOGY POLICY AND PRIORITIES

Both versions of the bill contained comprehensive statements designed to establish a national science and technology policy. The statements were similar in many respects and often duplicative.

The Committee of Conference substituted a compromise which (1) follows the Senate title, (2) adopts the House style and format, and (3) contains all the significant substantive elements of the policy findings and declarations of each bill.

TITLE II—THE OFFICE OF SCIENCE AND TECHNOLOGY POLICY

This title establishes an Office of Science and Technology Policy within the Executive Office of the President. House and Senate versions differed, and have been resolved, in the following ways.

1. *Associate Directors*—The House bill authorized the President, at his discretion, to appoint up to four Assistant Directors for the new office. The Senate amendment differed in that it designated the four as "Associate" Directors and required that they be confirmed in office by the Senate. The managers on the part of the House concurred in the Senate change. [Sec. 203]

2. *Annual Report*—The House required "timely" reports from the new office on its activities and on issues or problems involving important scientific and technological considerations. The Senate amendment required "annual" reports in this area. Managers on the part of the House concurred in the Senate amendment with minor editorial changes. [Sec. 209(a)]

3. *Civil Service Requirements*—The bill passed by the House stipulated that the appointment of officers and employees by the Director of the Office conform to Civil Service requirements. The Senate amendment contained no such requirement. In conference, the managers on the part of the Senate accepted the House provision. [Sec. 207(c)]

4. *Contract and Hearing Authority*—The Senate amendment contained broader consultant and contract authority for the new office than did the House bill; it also gave the Director authority to obtain information through the conduct of hearings, which the House bill did not. The managers on the part of the House concurred in the Senate position. [Sec. 208(a) (2) and (3)]

5. *National Security Council and Domestic Council*—The House bill provided that the Director of the new Office should advise the President on, among other things, scientific and technological considerations involved in national security. The Senate amendment removed this provision, but provided that the Director serve as advisor to the National Security Council when requested by the Council to do so. The Senate amendment also provided that the Director of the Office be made a member of the Domestic Council. The conferees settled these differences by incorporating all three provisions with such editorial changes as were necessary to prevent duplication or conflict. [Sec. 204(b)(1); Sec. 207(a)(2) and (b)]

6. *Five-Year Outlook*—The Senate amendment contained a provision calling for a five-year outlook, or projection, of scientific and technological issues, situations and conditions likely to warrant special attention within that period, and for appropriate inputs to the Office of Management and Budget and the executive departments and agencies in the formulation of Administration budgets with respect to research and

developments. The outlook would be updated annually. The House bill did not contain a similar provision. Managers on the part of the House agreed to accept the Senate provision with minor modifications. [Sec. 206]

TITLE III—PRESIDENT'S COMMITTEE ON SCIENCE AND TECHNOLOGY

1. *Title*—The House bill had entitled this special study group as a "Survey" committee. The Senate amendment re-titled it as an "Advisory" committee. Conferees agreed to compromise on the title indicated above.

2. *Mandatory Provisions*—The House bill contained a mandatory requirement that the Committee be set up as specified. The Senate amendment made the Committee's creation optional with the President. The managers on the part of the Senate concurred in the House provision. [Sec. 302(a)]

3. *Membership Qualifications*—Both House and Senate versions specified qualifications for membership on the Committee, but the Senate amendment contained broader language and more specific considerations. The conferees agreed to keep the House language but added the specific categories for balanced membership as set out in the Senate version. [Sec. 302(b)]

4. *Lifetime and Continuation of Committee*—The House bill provided that the Committee have a lifetime of two years and that the President review and submit the Committee's report—directed toward the examination and analyzation of the total Federal science and technology effort with appropriate findings and recommendations—to the Congress within 60 days, together with his own comments and recommendations. The Senate amendment was essentially the same, except that it provided for a one-year study and also permitted the President to extend the life of the Committee as he saw fit. The conferees agreed to the two year House plan, but provided for an interim report after one year and a final report after two years. Conferees also agreed to the Senate provision for extension of the Committee's lifetime at the discretion of the President. [Sec. 303(b) and Sec. 304]

TITLE IV—FEDERAL COORDINATING COUNCIL FOR SCIENCE, ENGINEERING AND TECHNOLOGY

This title was not in the House bill but was added by the Senate amendment.

The effect of this title is to make the existing Federal Council for Science and Technology, set up by Executive Order in 1959, a statutory body with the Director of the new Office as chairman. The current Council is an interdepartmental group representing all Federal agencies with significant research and development missions, whose function is to maintain general liaison of the overall government effort in science and technology. The title adds no new functions. It does change the name of the present Council, emphasizes its mission, and places it on a statutory basis. In interpreting this title, reference should be made to the following statement from the Senate Report (94-622): "These functions are purely advisory in nature and involve no exercise of authority over the participating agencies, whose participation is governed by their applicable statutes." Managers on the part of the House agreed to accept this title.

TITLE V—GENERAL REVISIONS

1. *Authorization*—The House bill provided only general authorization of such sums as might be necessary to carry out the provisions of the Act. The Senate amendment authorized a total of $1,250,000 for Fiscal Year 1976 and the transitional quarter (July 1, 1976–September 30, 1976), and $3,000,000 for Fiscal Year 1977 for Title II of the Act; it authorized a total of $1,250,000 for Fiscal Year 1976 and the transitional quarter, and $1,000,000 for Fiscal Year 1977 for Title III of the Act. Conferees agreed to the Senate total authorization figures for titles II and III for Fiscal Year 1976, the transitional quarter, and Fiscal Year 1977. Beyond that period, however, conferees agreed to authorize such sums as might be necessary. [Sec. 501] It should be noted that the sums authorized parallel closely those which the Administration has indicated it plans to expend for these areas in the next two years.

2. *National Science Foundation Act*—The House bill repealed one clause in the Organic Act of the National Science Foundation which requires an annual report from the National Science Board on the status of science and technology in the United States. The Senate amendment did not contain this provision. Managers on the part of the Senate agreed to the House provision. [Sec. 503]

OTHER SUBSTANTIVE DIFFERENCE

State and regional science and technology

The Senate amendment contained a separate title comprised of two principal elements. The first of these was a 52 member inter-governmental advisory panel to assist the Director of the new Office in his duties by providing special inputs relative to State and local needs and issues. The panel was to be composed of the Director of the Office, the Director of the National Science Foundation, and one member appointed by the Governor of each State. The second element was a Federal grant program, to be administered by the National Science Foundation, to assist the States in forming or strengthening a science, engineering and technology advisory mechanism within State governments. Each State could receive a maximum of $200,000 for this purpose upon proper application.

The House bill contained no similar title.

The Committee of Conference agreed to drop the title, as such, but to incorporate into Title II a scaled-down version of the inter-governmental panel. The panel's function shall be to (1) identify and define civilian problems at the State, regional and local levels which science, engineering, and technology may assist in resolving or ameliorating; (2) recommend priorities for addressing such problems; and (3) advise and assist the Director in identifying and fostering policies to facilitate the transfer and utilization of research and development results so as to maximize their application to civilian needs. [Sec. 205(b)]

At the same time, conferees agreed to express their unanimous conviction (1) of the soundness of the concept that State and local governments would profit from their own science advisory systems; (2) that such systems could be made more effective through appropriate liaison with the Federal government, and (3) that greater cooperation and improved financial arrangements between the States and localities and the National Science Foundation are in order, including adequate additional financial support of programs designed to increase a State's capacity for wise application of science and technology to State and local needs.

Conferees further agreed to recommend to the appropriate committee members of both the Senate and House that immediate consideration be given to effecting these matters at the earliest opportunity. Such consideration should include the current annual authorization for the National Science Foundation, which has not yet been reported from the Committee on Labor and Public Welfare of the Senate.

"Engineering" terminology

The House bill, in its general terminology, used the phrase "science and technology" throughout as reference to the generic matter with which it was dealing. The Senate amendment employed the phrase "science, engineering and technology" for the same purpose.

The Committee of Conference agreed that the judicious use of each phrase was appropriate in accordance with the particular subject matter being described. Consequently, the term "engineering" was employed in certain areas and omitted in others, as follows:

1. "Engineering" has been retained in Title I, which deals with general national policy and priorities, and in Title IV which deals with all Federal research and development activities on a government-wide basis. It has not been used in either Title II or Title III, both of which deal with entities that are limited to the functions, administration and discretion of the President's immediate Executive Office.

2. The term "engineering" has also been employed in all instances where the Act is concerned with manpower, with human resources or with education, training or retraining of scientific personnel.

3. Engineering has been included in those critical parts of the Act where qualifications for offices created by the legislation are involved. It has also been incorporated into the State-advisory panel established by the new Policy Office [Sec. 205(b)] and into the operation of the President's Committee on Science and Technology with reference to its two-year survey of Federal science operations. [Sec. 303]

4. The "manpower" clauses, which the Senate amendment contained and which were designed in part to emphasize the Nation's engineering needs, have also been retained by the conferees. [Sec. 101(a)(4) and (5);] An important new clause to ensure appropriate inputs from the engineering community into the Federal policy-making process has been added. [Sec. 102(b)(5)]

5. In most other parts of the Act, the House terminology has been retained.

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RAY THORNTON,
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BARRY GOLDWATER,
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Managers on the part of the Senate.

MORE EFFECTIVE DISASTER RELIEF LAWS

(Mr. MEEDS asked and was given permission to address the House for 1 minute, to revise and extend his remarks and include extraneous matter.)

Mr. MEEDS. Mr. Speaker, I would like to take this opportunity to briefly summarize legislation I have introduced today designed to make the disaster-relief laws in this country much more effective.

As I am sure many of you know, Washington State suffered one of the most devestating floods in its history last December. Millions of dollars of damage resulted, as homes, crops, livestock, and businesses were either destroyed or damaged in the face of the rising waters. Upon the urging of the Washington State congressional delegation and Gov. Dan Evans of our State, much of the State was declared a disaster area, including most of the counties within my own congressional district.

The residents of Washington State were, of course, very relieved when this declaration was made and the promise of Federal help was extended to them.