

SENATE—Thursday, September 25, 1969

The Senate met at 12 o'clock noon and was called to order by the President pro tempore.

The Chaplain, the Reverend Edward L. R. Elson, D.D., offered the following prayer:

O Sovereign Lord of history and beyond, in whose sight a thousand years are but as yesterday when it is past, and as a watch in the night, we who live and move and have our being in the stream of history do not ask to see the distant scene. But we seek Thy guidance for today that our actions may be in the light of such knowledge we have of Thee and of Thy purposes. Give us clean hands, pure hearts, and a right spirit for this day. When we are unsure of tomorrow, or the final goal seems obscure, help us to walk and work in the faith that there will be light for tomorrow, that Thy hand is leading us and Thy love supporting us. Invest us with the spirit of the One who said "whoever would be greatest among you let him be the servant of all."

In His name we pray. Amen.

THE JOURNAL

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the reading of the Journal of the proceedings of Wednesday, September 24, 1969, be dispensed with.

The PRESIDENT pro tempore. Without objection, it is so ordered.

MESSAGES FROM THE PRESIDENT

Messages in writing from the President of the United States submitting nominations were communicated to the Senate by Mr. Leonard, one of his secretaries.

EXECUTIVE MESSAGES REFERRED

As in executive session, the President pro tempore laid before the Senate messages from the President of the United States submitting sundry nominations, which were referred to the appropriate committees.

(For nominations this day received, see the end of Senate proceedings.)

MESSAGE FROM THE HOUSE

A message from the House of Representatives by Mr. Hackney, one of its reading clerks, announced that the House had passed the bill (S. 574) to authorize the Secretary of the Interior to engage in feasibility investigations of certain water resource developments, with amendments, in which it requested the concurrence of the Senate.

The message also announced that the House had passed the bill (S. 713) to designate the Desolation Wilderness, Eldorado National Forest, in the State of California, with an amendment, in which it requested the concurrence of the Senate.

The message further announced that the House had passed a bill (H.R. 10481) to amend the act of March 2, 1931, to provide that certain proceedings of the Italian American War Veterans of the United States, Inc., shall be printed as a House document, and for other purposes, in which it requested the concurrence of the Senate.

The message also announced that the House had agreed to the following concurrent resolutions, in which it requested the concurrence of the Senate:

H. Con. Res. 338. Concurrent resolution authorizing the printing as a House document of hearings on science and strategies for national security in the 1970's by the Subcommittee on National Security Policy and Scientific Developments, and of additional copies thereof; and

H. Con. Res. 368. Concurrent resolution providing for the printing of copies of the eulogies on Dwight David Eisenhower.

ENROLLED JOINT RESOLUTION SIGNED

The message further announced that the Speaker had affixed his signature to the enrolled joint resolution (S.J. Res. 152) to provide for the temporary extension of rural housing programs and Federal Housing Administration insurance authority, and to extend the period during which the Secretary of Housing and Urban Development may establish maximum interest rates on insured loans and it was signed by the President pro tempore.

HOUSE BILL REFERRED

The bill (H.R. 10481) to amend the act of March 2, 1931, to provide that certain proceedings of the Italian American War Veterans of the United States, Inc., shall be printed as a House document, and for other purposes, was read twice by its title and referred to the Committee on Rules and Administration.

HOUSE CONCURRENT RESOLUTIONS REFERRED

The following concurrent resolutions were referred to the Committee on Rules and Administration:

H. Con. Res. 338. Concurrent resolution authorizing the printing as a House document of hearings on science and strategies for national security in the 1970's by the Subcommittee on National Security Policy and Scientific Developments, and of additional copies thereof; and

H. Con. Res. 368. Concurrent resolution providing for the printing of copies of the eulogies on Dwight David Eisenhower.

LIMITATION ON STATEMENTS DURING TRANSACTION OF ROUTINE MORNING BUSINESS

Mr. MANSFIELD. Mr. President, I ask unanimous consent that statements in relation to the transaction of routine morning business be limited to 3 minutes.

The PRESIDENT pro tempore. Without objection, it is so ordered.

ORDER OF BUSINESS

Mr. MANSFIELD. Mr. President, I suggest the absence of a quorum.

The PRESIDENT pro tempore. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDENT pro tempore. Without objection, it is so ordered.

EXTENSION AND REVISION OF THE FOOD STAMP PROGRAM—AUTHORIZATION FOR SECRETARY OF SENATE TO MAKE TECHNICAL AND CLERICAL CORRECTIONS

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the Secretary of the Senate be authorized, in the engrossment of S. 2547, dealing with the food stamp program, to make technical and clerical corrections.

The PRESIDENT pro tempore. Without objection, it is so ordered.

COMMITTEE MEETINGS DURING SENATE SESSION

Mr. MANSFIELD. Mr. President, I ask unanimous consent that all committees be authorized to meet during the session of the Senate today.

The PRESIDENT pro tempore. Without objection, it is so ordered.

ORDER FOR RECOGNITION OF SENATOR GOODELL

Mr. MANSFIELD. Mr. President, I ask unanimous consent that, at the conclusion of the morning business, the junior Senator from New York (Mr. GOODELL) be recognized for not to exceed 30 minutes.

The PRESIDENT pro tempore. Without objection, it is so ordered.

Mr. MANSFIELD. I ask unanimous consent that when the pending business be laid before the Senate, the distinguished Senator from California (Mr. CRANSTON) be recognized, so that at the conclusion of the 30 minutes he may carry on with the pending business.

The PRESIDENT pro tempore. Without objection, it is so ordered.

ORDER OF BUSINESS

Mr. TALMADGE. Mr. President, I ask unanimous consent that I may proceed for 10 minutes.

The PRESIDING OFFICER (Mr. HOLLINGS in the chair). Without objection, it is so ordered.

RESTORATION OF FEDERAL FUNDS TO GEORGIA SCHOOL SYSTEM

Mr. TALMADGE. Mr. President, on August 13 I wrote the Secretary of Health, Education, and Welfare to ask that Federal funds be restored to Georgia school

systems that have been cut off under title VI of the Civil Rights Act.

There are more than ample grounds for taking this action.

A suit has been filed by the Department of Justice against the State of Georgia, and the issue is now before the courts.

A very important ruling by the U.S. Fifth Circuit Court of Appeals indicates there is a fatal flaw in all the enforcement proceedings that have been brought to date under title VI and resulted in fund cutoffs.

Aside from these vital considerations, one of the most overriding concerns is the adequate education and nutrition of thousands of schoolchildren.

On September 3, I received an answer from Leon E. Panetta, Director, Office for Civil Rights. On a matter of such importance—affecting the welfare and education of thousands of needy children—I had hoped that Secretary Finch would condescend to respond himself.

Thirty-five school districts are involved. Six million dollars—about two-thirds of which comes from programs designed primarily to help the poor—are involved. Ten thousand children presently being deprived of badly needed school lunches are involved.

An adequate educational program for these and many, many other pupils, which is their birthright, is also involved.

In any event, I did receive an answer. Mr. Panetta said he shared my concern about "the effect of termination of Federal financial assistance on all children—black and white." Then, he ducked behind what he called HEW's responsibilities under the law.

For one thing, if HEW were genuinely interested in its responsibilities under the law, the Department would recognize that there is no authority in the Civil Rights Act for cutting off school lunch funds.

In fact, legislative intent to the contrary was expressly stated. It was not just implied. It was spelled right out, so that anyone could understand it, that school lunches were to remain inviolate.

The floor manager of the bill, Senator Humphrey, said it was not the intention of title VI to cut off school lunch funds. He did not want to see that happen. Neither did Senator PASTORE, the floor manager of title VI. He said in no uncertain terms that school lunch programs would not be jeopardized by title VI enforcement.

I do not know how it could have been made any clearer that title VI in no way would authorize the Federal Government to swoop down and cripple lunch programs for children who come to school hungry most of the time.

But this is what has been going on, contrary to the law, and contrary to the health and best interests of the children.

Now we have a new and significant ruling by the Fifth Circuit Court of Appeals—Taylor County, Fla., Board of Education against HEW—that accused HEW of abusing its authority under title VI. The court said HEW went beyond the law and congressional intent by making blanket cutoffs of Federal assistance to school districts. The court said there had

to be a finding of discrimination, program by program, within the school district and that there could be no "guilt by association."

In order to uphold such sweeping action by HEW, the court said it would have to assume, contrary to the law, that defects in one part of the school system automatically infect the whole. The court said this would be clearly disruptive of the legislative scheme and in violation of statutory requirements.

If HEW were genuinely interested in its responsibility under the law, it would be studying this decision very closely. It would take another look at some of the cutoffs it has made. It would follow the command of the circuit court in the Taylor County case and order a remand and reexamination of all the programs, in all the school districts, in every State where there have been cutoffs of Federal assistance.

This is what HEW ought to do, or else it should start moving toward restoring Federal funds to these school systems.

Secretary Finch apparently has taken some cognizance of the Taylor County area. He said on ABC television Sunday that pending the outcome of a possible appeal of the circuit court ruling, there would be no more Federal aid cutoffs. And it was also disclosed this week that Secretary Finch has remanded enforcement proceedings against 39 school systems—15 of them in Georgia—that were approaching the cutoff stage. This puts the cases back before the original hearing examiners for another look at them, in accordance with the Taylor County decision.

This appears to be an indication of recognition by HEW of the fact that there were flaws in the findings against these school systems, in view of the circuit court ruling, and hence the cases are being sent back again. If there were probable defects in these cases that were about to be cut off, then it is apparent that there were also defects in the enforcement against the 35 school systems that have already been cut off.

This is certainly worthy of Mr. Finch's close scrutiny. I, for one, do not see how HEW can continue to punish schoolchildren so long as this matter remains enmeshed in a judicial and bureaucratic entanglement.

I was somewhat encouraged to read, in the Atlanta Journal of September 17, a statement by Paul Rilling, Regional Director of HEW, on the Georgia situation. He said the Georgia lawsuit is the first of its kind in the Nation and Washington attorneys are currently examining Department policy to see if an exception should be made; that is, to see if funds could be restored to the 35 school districts.

Mr. Panetta also indicated in his letter that HEW is giving this matter every consideration.

These funds can and they should be restored without further delay. Georgia schoolchildren for too long have had to endure the debilitating effect of short-changed education. Punitive and coercive action such as this serves no useful purpose. It, in fact, has a devastating

effect upon the very ones that the law wants to help.

As I previously pointed out in the Senate, last spring I wrote to 122 school systems to determine how their educational programs and school lunch needs have suffered because of the loss of Federal assistance.

There were some typical comments. Said one school superintendent:

These funds have been missed. Local taxes have increased, some 43 jobs were lost, 41 of them Negro people, and all programs curtailed in many respects. . . . I would estimate an additional 500 students are not adequately fed, either at home or at school at the present. These 500 could be cared for nutritionally with restored E.S.E.A. funds.

Said another superintendent:

There were 1,386 children receiving lunches which were being paid for by Title I funds. All of these children would not have had the opportunity to eat in the lunchroom, had it not been for the Title I funds. Since this time, these children have gone without lunches.

Last Wednesday, September 17, the Georgia State Board of Education adopted a resolution, calling on Secretary Finch to restore Federal assistance.

The board of education said public education has been severely injured in several counties by the cutoff, and the children being penalized are primarily economically deprived families who would otherwise receive their greatest benefit from the federally funded programs.

Secretary Finch has received a copy of this resolution, and I wrote to him again yesterday to urge that HEW restore these funds so that educational programs which have been so severely damaged can be reinstated in areas where they are most needed.

I bring the resolution of the State board of education to the attention of the Senate and ask unanimous consent that it be printed in the RECORD at the conclusion of my remarks, along with a copy of my letter to Secretary Finch.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

GEORGIA STATE
DEPARTMENT OF EDUCATION,
Atlanta, Ga., September 17, 1969.
HON. ROBERT H. FINCH,
Secretary, U.S. Department of Health, Education, and Welfare, Washington, D.C.

DEAR SECRETARY FINCH: The State Board of Education, in regular session September 17, 1969, unanimously adopted the enclosed resolution requesting the restoration of federal funds to all school systems in the State of Georgia. Your decision to restore or not restore these funds will have an immeasurable effect upon the children of these systems. Therefore, I earnestly solicit your careful consideration of this resolution.

With kindest regards, I am
Sincerely,

JACK P. NIX,
State Superintendent of Schools.

RESOLUTION

Whereas, in numerous counties of the State of Georgia public education has been severely injured by the cut-off of federal funds by the United States Department of Health, Education and Welfare;

Whereas, the deprivation of such federal funds to the local boards of education responsible for the administration of public

education in these counties penalizes primarily the children of such counties, and in particular those children from economically deprived families who would otherwise receive the greatest benefit from the federally funded programs;

Whereas, the decision recently rendered by the United States Court of Appeals for the Fifth Circuit in *Board of Public Education of Taylor County, Florida v. Robert H. Finch*, (No. 26841), indicates that such withholding of federal funds by the United States Department of Health, Education and Welfare has in all probability been contrary to law with respect to most, if not all, of the affected local school systems within the State of Georgia; and

Whereas, a currently pending suit brought by the United States against the State Board of Education of the State of Georgia could materially affect relationships between the United States Department of Health, Education and Welfare and those local boards of education whose federal funds have been cut off by the Department;

Now therefore, be it resolved by the State Board of Education that the Honorable Robert H. Finch, Secretary of the United States Department of Health, Education and Welfare be and he hereby is called upon and urged to order the restoration of federal financial assistance to all local school systems within the State of Georgia which have heretofore had such assistance withheld or terminated by said Department; and

Be it further resolved that the Secretary be called upon and urged to withhold approval of any further or additional cut-off orders against any of Georgia's local school systems until final adjudication of the pending litigation between the United States and the State Board of Education of the State of Georgia.

JAMES S. PETERS,
Chairman.

Attest:

JACK P. NIX,
Executive Secretary.

SEPTEMBER 24, 1969.

HON. ROBERT H. FINCH,
Department of Health, Education, and Welfare,
Washington, D.C.

DEAR MR. SECRETARY: You will recall that on August 13 I wrote you to urge that federal assistance be restored to Georgia school systems cut off under Title VI of the Civil Rights Act now that the issue is primarily a responsibility of the Courts.

I was glad to hear from Mr. Panetta on September 3 and to learn that my recommendation is being considered. This is to reiterate my concern about the welfare and educational opportunities of children attending the 35 Georgia schools which have termination orders against them. I am sure you have by now received and had an opportunity to study the resolution adopted by the Georgia State Board of Education on September 17.

The Board noted the severe injury to public education in Georgia because of the cut-offs and pointed out, as I have for so long in the Senate, that the children suffering the most from this deprivation—the loss of funds for school lunches, special teaching, and other educational programs designed for the poor—are the ones that the law is actually meant to help. Such a punitive approach to the school problem has never made any sense to me, and it is deplorable that children would be denied their right to a full and adequate education in such a manner. The Georgia Board of Education has also urged the restoration of funds to these school districts.

Since August, I know you have closely studied the decision, as I have of the U.S. Fifth Circuit Court of Appeals in the *Taylor County, Florida* case. The Court clearly in-

dicated that in all probability there are fatal defects in all the termination orders brought to date and are thus contrary to the law. Your order of September 17 remanding the cases of 39 school districts back to the original hearing examiners indicates your awareness of the questionable status of current enforcement proceedings in view of the *Taylor County* case. You are to be commended for taking this action, and I was also pleased to hear your decision stated on ABC television Sunday that no more fund cutoffs will occur pending possible appeal of the Fifth Circuit ruling.

Because this problem has now been placed before the federal judiciary and because of the serious questions raised as to the legality of the termination orders already in force, I again urge you to restore federal assistance to these school districts so that educational programs that have been so severely damaged can be reinstated in areas where they are needed the most.

I will appreciate your continued consideration, and I hope that affirmative action can be taken at the earliest possible moment.

With every good wish, I am

Sincerely,

HERMAN E. TALMADGE.

SEVEN MORE CALIFORNIANS KILLED IN VIETNAM

Mr. CRANSTON. Mr. President, in the past 5 days since last Thursday, September 18, the Pentagon has notified seven more California families of the death of a loved one in Vietnam.

Those killed were:

Lance Cpl. Loyd D. Acosta, son of Mr. and Mrs. Harold L. Acosta of Norwalk; Pfc. Edward M. Hanson, son of Mr. and Mrs. Maynard E. Hanson of Ventura; Pfc. Michael A. Montellano, husband of Mrs. Eleanor Montellano of Los Angeles; S. Sgt. Jerry L. Ogren, husband of Mrs. Katherine A. Ogren of Stockton; Sp4c. Larry D. Strouse, son of Mr. and Mrs. Elmer L. Strouse of Granada Hills; Pfc. John W. Walker, son of Mr. and Mrs. George Walker of Orange; and Pfc. Thomas E. Young, brother of Miss Mary J. Young of San Diego.

They bring to 3,801 the total number of Californians killed in the Vietnam war.

REPLY TO CRITICISM OF DONALD RUMSFELD

Mr. DOMINICK. Mr. President, on September 23, 1969, the Senator from Texas (Mr. YARBOROUGH) had printed in the RECORD an article by Jack Anderson. In the RECORD the Senator from Texas stated that it was "an illuminating column" and that it "calls for an explanation from Mr. Rumsfeld."

The article, a copy of which I have, is entitled "Anti-Poverty Czar Embellishes Office," and was published in the Washington Post on Monday, September 22, 1969.

It seems to me perfectly apparent that neither Mr. Anderson nor the Senator from Texas have been to the OEO office. It so happens that we are marking up the OEO authorization bill at the present time and I took the opportunity this morning to go to the OEO office and talk to some members of the OEO, including the Director.

The following are some of the inaccuracies that are apparent in the column.

The column states:

To be prepared should his budget-cutting efforts prove tiresome, he has added a bedroom to his executive suite.

That is a total fabrication. The executive offices of OEO are at 1200 19th Street NW. They are on the eighth floor and consist of one room where Mr. Rumsfeld is, and that room has his desk and one table in it.

The article states:

Expensive lamps now give a soft, restful glow to the walls that were once lit by fluorescent tubes.

There is not a lamp in the office, either expensive or cheap, restful or not restful. There are three lamps, general GSA issue, in the reception area on the eighth floor.

The article states:

There were no carpets.

There are still no carpets in the entire building as far as I can see.

Here is an effort once again by Jack Anderson to try to implicate Republicans for some reason, by stating they are rolling around in luxury. The article is an absolute fabrication from beginning to end.

The column also states:

The stark photographs of poverty are gone from the walls, replaced by pastoral scenes.

There are some cardboard reproductions that he got on loan from the National Gallery. There are two of them. The poverty photographs are still there. The only other picture in the reception area is an official photograph of President Nixon. There is a picture of the House of Representatives in session, where Mr. Rumsfeld served for four terms. This could hardly be classed a "pastoral scene."

Mr. Anderson further states:

And as evidence of his new Cabinet rank, Rumsfeld has added the ultimate in executive status symbols: a private bathroom.

Mr. Rumsfeld is a member of the Cabinet as an Assistant to the President, not as Director of OEO. There is no private bathroom. There are only two bathrooms on the eighth floor, where Rumsfeld's office is located—one for ladies and one for men. I am informed Mr. Rumsfeld uses the latter. The men's bathroom is not a bathroom in that there is no bath. It is a four stooler. Mr. Rumsfeld has requested for the last 3 months to have the door handle fixed. It has not been fixed.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. DOMINICK. Mr. President, I ask unanimous consent that I may proceed for 3 additional minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. DOMINICK. I am just getting warmed up.

Mr. President, I do not understand how someone who is supposed to be a columnist of some significance in this country can write an article like this one and have it published when it is designed to create antipathy toward a person who is trying to do something for the poor, and when there is not one word of truth

in what he is saying about these accommodations and new type efforts within the OEO.

Mr. Anderson states:

Rumsfeld has carefully chosen Washington, the city with the highest proportion of blacks and the only city in America without a voice in Congress, to demonstrate his heavy hand on the budget.

Of all the inaccuracies in the column this item could be described as the worst distortion. It is full of innuendos. It just makes me wonder what kind of misinformation other columnists will bring up if this type of thing is allowed to go unchallenged.

Mr. Anderson indicates that Mr. Rumsfeld has "wielded an economy ax on programs for the poor." Well, in the 1969 fiscal year, expenditures were \$1.948 billion. The Nixon administration asked for \$2.048 billion. The authorization bill has not yet been reported from the committee. We are working on it right now. So we are asking for more money than was spent last year. In the meanwhile, the only possible thing that the OEO can do is to proceed under a continuing resolution and spend the same amount as it did before. That is what they are doing.

Mr. Anderson states \$1 million was lopped off the poverty budget for Washington. Statutes require a minimum distribution of its funds to States based on a poverty index. UPO's budget last year was 268 percent over the minimum and other States in the mid-Atlantic region were less than 5 percent over the minimum. UPO has an excessive amount of unused funds from last year. The other States are in danger of falling below the minimum. UPO funds had to be reduced to meet the legal requirements of the other States. UPO will decide which programs are cut, not OEO. There has been no attempt by OEO to withdraw any funds from the Washington credit union.

Thus, once again, there is nothing of this kind going on which is truthful, so far as the article is concerned. It is just one more fabrication.

Mr. Anderson refers to shutting down a program in Minneapolis. As a matter of fact, what they did with a \$2 million program was to temporarily suspend \$15,000 and after they had worked out some changes to insure the programs would operate for the benefit of the poor, it was reinstated 34 days later. The program has been going forward as it was before, only better, so far as its administration is concerned.

Mr. Anderson notes "Rumsfeld plans one sop for blacks." He is seeking a black to head VISTA. Obviously it would be highly desirable to have a member of a minority group in VISTA. Such input can help make the activities of that agency responsive to the people it seeks to serve. Rumsfeld would be criticized if he did not seek such persons.

Thus, it would seem to me that here again we have a typical distortion of what happened. Apparently, it was done without any investigation of the facts. Once again it was designed to create problems for the OEO in its relationship

with minorities and in OEO's efforts to try to help the poor.

He goes on and on. I am not going down the whole list, but it just seems to me that everything he says in here is exemplified by his allegations that a bedroom is being added to a suite. There is no suite. There is no bedroom in the whole building, much less any so-called office. There are no carpets. There are but three lamps in the reception room. The rest of the lights are fluorescent just the way they were before. There is no private bathroom.

I would say that what we need is a little more responsibility in reporting, so that it does not have an emotional impact upon the efforts of those who are trying to do their best to help the poor and bring them into the mainstream of American life.

EXECUTIVE COMMUNICATIONS, ETC.

The PRESIDENT pro tempore laid before the Senate the following letters, which were referred as indicated:

REPORT OF FEDERAL CONTRIBUTIONS PROGRAM, EQUIPMENT AND FACILITIES

A letter from the Director of Civil Defense, transmitting, pursuant to law, a report of Federal Contributions Program, Equipment and Facilities, for the quarter ending June 30, 1969 (with an accompanying report); to the Committee on Armed Services.

REPORT OF FEDERAL CONTRIBUTIONS, PERSONNEL AND ADMINISTRATION

A letter from the Director of Civil Defense, transmitting, pursuant to law, a report of Federal Contributions, Personnel and Administration, for the fiscal year ended June 30, 1969 (with an accompanying report); to the Committee on Armed Services.

REPORT OF THE COMPTROLLER OF THE CURRENCY

A letter from the Comptroller of the Currency, transmitting, pursuant to law, a report of the Comptroller for the year 1968 (with an accompanying report); to the Committee on Banking and Currency.

PROPOSED AMENDMENT OF TITLE 35, UNITED STATES CODE, "PATENTS"

A letter from the Secretary of Commerce, transmitting a draft of proposed legislation to amend section 6 of title 35, United States Code, "Patents," to authorize domestic and international studies and programs relating to patents and trademarks (with accompanying papers); to the Committee on the Judiciary.

PROPOSED LEGISLATION ELIMINATING MANDATORY SUBMISSION FOR APPROVAL BY THE ATTORNEY GENERAL OF THE TITLE TO LANDS ACQUIRED FOR OR ON BEHALF OF THE UNITED STATES

A letter from the Attorney General of the United States, transmitting a draft of proposed legislation to amend section 355 of the Revised Statutes, as amended, to eliminate mandatory submission for approval by the Attorney General of the title to lands acquired for or on behalf of the United States, and for other purposes (with an accompanying paper); to the Committee on the Judiciary.

PROPOSED AMENDMENT OF THE IMMIGRATION AND NATIONALITY ACT

A letter from the Attorney General of the United States, transmitting, pursuant to law, a draft of proposed legislation to amend section 213 of the Immigration and Nationality Act, and for other purposes (with an accom-

panying paper); to the Committee on the Judiciary.

PETITIONS AND MEMORIALS

Petitions, etc., were laid before the Senate, or presented, and referred as indicated:

By the PRESIDENT pro tempore:

A letter from the President, State of New Mexico Constitutional Convention of 1969, Stanley, N. Mex., relating to U.S. servicemen captured in Southeast Asia; to the Committee on Foreign Relations.

A resolution adopted by the Grand Lodge of the Benevolent and Protective Order of Elks, Local Lodge No. 183, Savannah, Ga., praying for the enforcement of laws and the prosecution of dissidents; to the Committee on the Judiciary.

Resolutions adopted by the State Council of Tennessee, Junior Order, United American Mechanics, Knoxville, Tenn., relating to the right of persons to express their religious and spiritual convictions; to the Committee on the Judiciary.

REPORTS OF COMMITTEES

The following reports of committees were submitted:

By Mr. TYDINGS, from the Committee on the District of Columbia, without amendment:

S. 1484. A bill to abolish the commission authorized to consider a site and plans for building a national memorial stadium in the District of Columbia (Rept. No. 91-432); and

S. 2163. A bill to establish, in the House of Representatives, the office of Delegate from the District of Columbia, to amend the District of Columbia Election Act, and for other purposes (Rept. No. 91-433).

By Mr. TYDINGS, from the Committee on the District of Columbia, with amendments:

S. 2164. A bill to establish a Commission on Government for the District of Columbia (Rept. No. 91-434).

By Mr. YOUNG of Ohio, from the Committee on Armed Services, without amendment:

H.R. 10420. An act to permit certain real property in the State of Maryland to be used for highway purposes (Rept. No. 91-435).

EXECUTIVE REPORTS OF COMMITTEES

As in executive session, the following favorable reports of nominations were submitted:

By Mr. LONG, from the Committee on Finance:

Daniel Eldred Rinehart, of Maryland, to be a member of the Renegotiation Board.

By Mrs. SMITH of Maine, from the Committee on Armed Services:

Brig. Gen. Joe M. Kilgore, Air Force Reserve, and sundry other officers of the Air Force Reserve, for promotion in the Air Force Reserve;

Brig. Gen. George W. Edmonds, California Air National Guard, and sundry other officers, for appointment as Reserve commissioned officers in the U.S. Air Force.

Mr. STENNIS. Mr. President, from the Committee on Armed Services I report favorably the nominations of 195 flag and general officers in the Army, Navy, Marine Corps, and Air Force. I ask that these names be placed on the Executive Calendar.

The PRESIDING OFFICER. Without objection, it is so ordered.

The nominations, ordered to be placed

on the Executive Calendar, are as follows:

Vice Adm. Lot Ensey, U.S. Navy, for appointment to the grade of vice admiral on the retired list;

Rear Adm. Frederick H. Michaelis, U.S. Navy, for commands and other duties determined by the President, for appointment to the grade of vice admiral while so serving;

Rear Adm. Isaac C. Kidd, Jr., U.S. Navy, for commands and other duties determined by the President, for appointment to the grade of vice admiral while so serving;

Vice Adm. Bernard F. Roeder, U.S. Navy, for appointment to the grade of vice admiral on the retired list;

Vice Adm. Vernon L. Lowrance, U.S. Navy, for appointment to the grade of vice admiral, when retired;

John H. Cheffey, Ralph E. Faucett, and Francis L. Garrett, for promotion to the grade of rear admiral in the Navy;

Brig. Gen. Raymond E. Mason, Jr., and sundry other U.S. Army Reserve officers, for promotion as Reserve commissioned officers of the Army;

Brig. Gen. Daniel K. Edwards, and sundry other Army National Guard of the United States officers, for promotion as Reserve commissioned officers of the Army;

Rear Adm. Walter L. Curtis, Jr., U.S. Navy, for commands and other duties determined by the President, for appointment to the grade of vice admiral while so serving;

Maj. Gen. George Gray O'Connor, U.S. Army, to be assigned to a position of importance and responsibility designated by the President, for appointment to the grade of lieutenant general while so serving;

Brig. Gen. Robert Clinton Taber, Army of the United States (colonel, U.S. Army), and sundry other officers, for temporary appointment in the Army of the United States;

Maj. Gen. Alexander Day Surlis, Jr., U.S. Army, to be assigned to a position of importance and responsibility designated by the President, for appointment to the grade of lieutenant general while so serving;

Jonas M. Platt, and sundry other officers, for permanent appointment in the Marine Corps; and

Brig. Gen. James S. Cheney, to be the Judge Advocate General, U.S. Air Force, and appointment to the grade of major general.

Mr. STENNIS. Mr. President, in addition, I report favorably 98 appointments in the Army in the grade of major and below, 854 appointments and promotions in the Navy in the grade of captain and below, 139 appointments in the Marine Corps in the grade of colonel and below, and 7,902 appointments and promotions in the Air Force in the grade of captain and below. Since these names have already been printed in the CONGRESSIONAL RECORD, in order to save the expense of printing on the Executive Calendar, I ask unanimous consent that they be ordered to lie on the Secretary's desk for the information of any Senator.

The PRESIDING OFFICER. Without objection, it is so ordered.

The nominations, ordered to lie on the desk, are as follows:

Huey P. Lawery, and sundry other persons, for appointment in the Regular Air Force; Frederick E. Abandschein, and sundry other officers, for promotion in the Regular Air Force;

Larry M. Baker, and sundry other students of the Air Force Reserve Officer Training Corps, for appointment in the Regular Air Force;

John G. Abbott, Jr., and sundry other officers, for promotion in the Regular Air Force;

Johnny L. Montgomery, and sundry other

persons, for appointment in the Regular Army of the United States;

Nathaniel R. Robertson, and sundry other officers, for promotion in the Navy;

Robert L. Blake, and sundry other staff noncommissioned officers, for promotion in the Marine Corps; and

Hugh S. Aitken, and sundry other officers, for promotion in the Marine Corps.

By Mr. SPARKMAN, from the Committee on Banking and Currency:

Eugene A. Gulledd, of North Carolina, to be an Assistant Secretary of Housing and Urban Development.

BILLS INTRODUCED

Bills were introduced, read the first time and, by unanimous consent, the second time, and referred as follows:

By Mr. HART (for himself and Mr. Moss):

S. 2959. A bill to establish an Independent Consumer Council as an independent non-governmental organization to represent the economic interests of consumers of goods and services made available to them through the trade and commerce of the United States before Federal departments and agencies, to receive complaints and arbitrate voluntary adjustments thereof, to gather and disseminate information for the benefit of consumers, to authorize governmental assistance and support, and for other purposes; to the Committee on Commerce, by unanimous consent request.

(The remarks of Mr. HART when he introduced the bill appear later in the RECORD under the appropriate heading.)

By Mr. TOWER:

S. 2960. A bill for the relief of Jose Clemente Vivanco; and

S. 2961. A bill for the relief of Hildegard Mercedes Schlubach Ercklentz, Enno W. Ercklentz, Jr., Hildegard Ercklentz Merrill, and Alexander T. Ercklentz; to the Committee on the Judiciary.

By Mr. TYDINGS:

S. 2962. A bill for the relief of Divina Rondono; and

S. 2963. A bill for the relief of Julieta M. Gallmpin; to the Committee on the Judiciary.

By Mr. TOWER:

S. 2964. A bill for the relief of Ecaterini N. Economopoulou; to the Committee on Finance.

S. 2965. A bill to amend the Canal Zone Code to provide cost-of-living adjustments in cash relief payments to certain former employees of the Canal Zone Government, and for other purposes; to the Committee on Post Office and Civil Service.

(The remarks of Mr. TOWER when he introduced the bill appear later in the RECORD under the appropriate heading.)

S. 2959—INTRODUCTION OF A BILL ESTABLISHING AN INDEPENDENT CONSUMER COUNCIL

Mr. HART. Mr. President, for 10 years—starting with Senator Kefauver's first foresighted proposal—the Senate regularly has been asked to give consumers an organization to help them with their special problems.

His original idea was a Department of Consumers, which would absorb the consumer functions of several existing agencies. This idea has remained alive in Congress—and is yet today, with Representative BENJAMIN ROSENTHAL its able sponsor.

Senator Kefauver, 4 years later, amended the proposal to be an Office of Consumers—leaving consumer func-

tions in existing agencies but continuing plans for representation of consumers before Federal agencies and dissemination of product information.

In 1965, with Senator Kefauver taken from us, I undertook the lead in the Senate efforts to establish the Office of Consumers. While I will not accuse myself of half-hearted enthusiasm, I must honestly admit I felt unsure with the plan. This was not because I thought it would not be helpful but that it was not the best assistance we might conjure up for consumers.

By the last Congress, I had a modified proposal—for a National Consumer Service Foundation—which advanced the product information dissemination by using a nationwide computerized network.

Still, I kept tugging, attempting to produce the better plan for consumers that I remained convinced was possible.

Today I am introducing what I think is that better plan.

This proposal—for an Independent Consumer Council—makes two breaks from previous thinking—breaks which will give control to those it is to serve and which should increase effectiveness.

First, it will be far more independent of Government.

Only a cockeyed optimist can expect any agency established as an arm of the executive or Congress not to reflect constantly the prides and prejudices of its master.

If top appointments also are made by either the executive or Congress, the control of philosophy is even more absolute.

It simply is not realistic—and ignores human nature—to establish a consumers' watchdog on Government under those conditions and expect it to perform fully up to anticipations.

The Independent Consumer Council will neither be established as an arm of either branch of Government nor will it—after formation—be governed by appointees of either branch.

The initial Board members are named in the enabling legislation I submit today. But hereafter, positions on that Board will be filled by ballot of its local units.

Granted some funding will come from Federal appropriation—but it is planned that this should not be the major source of financing.

Thus the Board—and the Council—is in the complete control of its constituency, with no middlemen.

The second break this proposal makes from other envisioned consumer agencies is to establish local units.

This facet—in the months I have been discussing it—is what has caught the most generally admiring attention.

Alienation of citizens from their government is a source of great distress to many on both sides of the aisle in this body; it certainly is to me.

It is not youth alone who feel that their government—Federal and local—has taken on many aspects of a foreign power.

I fear a majority of our citizens see government as inaccessible and seemingly unresponsive to their needs and desires. Even those who assign no evil intent are frustrated almost beyond en-

durance by the maze of bureaucracy which forecloses getting a simple answer to a simple question. They simply cannot discover the right number to call, the right door on which to knock or the right address to write.

Basically the functions of the Council are three.

First, it would serve as an ombudsman.

The local unit would be the one-stop complaint center for gripes against government—Federal and local. No longer need a consumer—as a novice fumbling his way—endure being switched from office to office, from agency to agency simply to get something to which he is entitled.

The Council's experienced staff could make it almost simple to get a street light replaced, a sidewalk repaired, a tax bill adjusted or a social security check processed.

Anyone who questions the need for this help should direct his attention to the mushrooming growth of "Action Line" type columns in metropolitan—and even weekly—newspapers.

These have performed a great service—not only in solving individual problems but in educating consumers as to how to cope with similar ones.

The only complaint I have heard on the columns comes from publishers. They fear that the columns very popularity might be producing adverse public relations. So vast is the number of complaints that only a few can be dealt with in print. A majority of the people are left unaided—and probably more upset than when they started.

Obviously the answer is not to expect newspapers to devote the majority of their space to such columns but to try to perform the service so as to serve more consumers. This the Consumer Council could do.

The local units also would be a funnel for complaints consumers have about products or service they purchase.

In all fairness, I think the growth of the consumer movement in many ways has damaged unjustly many businessmen. Awakened consumers, determined to get full value from each dollar, are not too inclined to give business the benefit of the doubt.

Yet, let us face it: The customer is not always right—old saws to the contrary. In fact, if European experience under the ombudsman system is typical, the complainant is right only a small fraction of the time.

Figures there are that only 50 percent of complaints—after initial examination—are worthy of investigation and only about 10 percent worth remedial action.

If the facts are remotely similar here, a vast majority of the time businessmen are being bad mouthed when they do not deserve it.

On the other hand, a good percentage of the time consumers do deserve adjustments—which most find are hard to come by when they seek them alone.

And, as long as 90 or some related percentage of complainants think they are right—even if they are not—and receive no satisfaction their disenchantment with business grows and festers.

The second significant role for the council would be to serve as "peoples counsel." As such, it would be the voice of the consumer before government—and also the prod to see that agencies implement and enforce consumer legislation once it has been enacted.

To date, we have expected governmental agencies to represent consumers—and have criticized them if we thought they failed. I submit that perhaps the fault in the past has been not with the agencies but with the system which we expect them to operate.

First and foremost, agencies are judges. As such they are presented with documented and forceful arguments from the special interests. But, when they turn to the other side of the courtroom for the representative of the public, the seat is vacant.

Absent a brief for consumers, agencies are forced to rely more on intuition than fact to comprehend the consumers' side. Unfortunately for consumers, statistics, charts, and several talented spokesmen tend to overwhelm the persuasiveness of intuition.

No judge should have to operate in such a system. The Council would be expected to fill the existing void.

As peoples counsel, the Council also would appear in lawsuits to argue for the consumer. Further, under proper circumstances, it would be authorized to initiate suits on behalf of consumers to obtain economic relief.

The third and final role of the Council would be to disseminate product information. Supplied by manufacturers, government testing and testing done by the Council, this information would be disseminated with the most modern of technology available.

As I envision it, we would have a network nationwide of computerized outlets from which—at the deposit of a coin or two—the consumer would receive a printout of information on the product in which he is interested.

Then, at his leisure in his home, he could analyze the facts—far more complete than those now available to him for product decisions—and decide which model would best suit his needs.

The Council would not recommend one brand over another. But it would supply sufficient information for the consumer to balance the individual models against his needs. More and more, consumers do not accept the notion that the advertising claims alone must be their only basis for a shopping decision.

Mr. President, as I said at the beginning, for 10 years Congress has continuously propped up consumers' hopes that "any day now" they would get a full-time, fully staffed organization to help them.

The performance here has been like the popular stage play, "Promises, Promises."

I sense consumers have stopped asking "When?" and today are demanding "Now." We must deliver. Hopefully this proposal for an Independent Consumer Council will catch the imagination and support of sufficient Members of Congress to do just that.

There has been some question raised

as to whether this bill is inconsistent with other bills which would establish a statutory Office for Consumers in the executive branch. The answer is "absolutely not." In my book they would complement each other. My feeling is that the primary consumer need is an advocate—free from both Government and industry ties.

But such an advocate would lead a much easier life if there existed a statutory consumer post within the Government.

Given permanent status, an Esther Petersen, Betty Furness, or Virginia Knauer, would have additional tools with which to work with in the Government in the consumer interest. This is good. This is necessary. And much benefit will come of such a post.

But basically, such a post still is subject to the conflicting demands within the executive branch requiring compromise and, ultimately, direction by the President.

"Independence" is the key to a truly successful consumer effort. But the Independent Consumer Council would find its work simplified and its effectiveness increased if there existed a permanent consumer post within the executive structure.

Mr. President, I ask unanimous consent that the bill be received and referred to the Committee on Commerce.

The PRESIDING OFFICER. The bill will be received and, without objection, will be referred to the Committee on Commerce.

The bill (S. 2959) to establish an Independent Consumer Council as an independent nongovernmental organization to represent the economic interests of consumers of goods and services made available to them through the trade and commerce of the United States before Federal departments and agencies, to receive complaints and arbitrate voluntary adjustments thereof, to gather and disseminate information for the benefit of consumers, to authorize governmental assistance and support, and for other purposes, introduced by Mr. HART, for himself and Mr. Moss, was received, read twice by its title, and referred to the Committee on Commerce, by unanimous consent.

Mr. HART. Mr. President, I also ask unanimous consent that the biographies furnished to us by the members of the board of directors be printed in the RECORD, together with a letter from Aaron S. Yohalem.

There being no objection, the biographies and letter were ordered to be printed in the RECORD, as follows:

BACKGROUND AND BIOGRAPHY—CLAY BUCKHOUT, VICE PRESIDENT, TIME, INC.

Clay Buckhout, senior advertising and marketing executive for Time Inc., has been closely associated with the fields of marketing and of communications throughout his working career, which has spanned more than a third of a century.

During much of that career, he was an executive of Life, having joined the magazine in 1939, less than three years after it was launched by Time Inc., as assistant to the general manager. After a period during which he was on loan from Life to be publisher of the *Army-Navy Journal of Recogni-*

tion and other aircraft recognition manuals during World War II, he returned to the magazine. He was made Western Advertising Manager in 1946, Advertising Manager in 1947, and Advertising Director in 1948. He remained in that post until 1961. During that 13-year tenure, Life's advertising sales increased some 70%, from \$81,700,000 to \$138,000,000.

Buckhout was elected a Vice President of Time Inc. in 1957. In 1961 he left Life to take on a broad corporate assignment for the company, working with Board Chairman Andrew Heiskell on wide-ranging assignments connected with all the company's magazines and interests in the U.S. and abroad. In that capacity, his efforts have been concentrated in the field of marketing, and in advertising as the major communications tool of marketing.

He is International Vice President and Chairman of the International Committee of Sales & Marketing Executives-International, and is a member of the board and of the executive committee. Buckhout is also a member of the National Marketing Advisory Committee of the U.S. Department of Commerce. He was a founding trustee of the Marketing Science Institute, and is on its board and executive committee, and is a director-at-large, an executive committee member, and Chairman of the Planning & Steering Committee of the Advertising Council.

Buckhout is also active in a number of other trade and professional associations. He is a member of the National Economic Affairs Committee, the International Committee and the Marketing Committee of the National Association of Manufacturers. He is an Executive Committee member and Vice Chairman of the board of the Brand Names Foundation, and a member of the board of the Advertising Research Foundation. He is also a member of the United States-Japan Trade Council. In the publishing field, he served as Chairman of the Magazine Advertising Bureau for four terms and is on its Executive Committee. He is also on the board of the Publishers Information Bureau.

Born in New York City on June 13, 1910, Buckhout attended Loyola School in New York and was graduated from Fordham University in 1932. He took graduate work in transportation at Columbia University, after a brief period in which he did research in Europe for major airlines. He was one of the original members of General Air Express in 1933 and 1934, leaving that company prior to its merger with the Railway Express Company.

In 1934, Buckhout joined the New York Stock Exchange firm of McDonnell & Company, serving as a statistician and later as a branch manager. He left the company in 1938 to become Vice President and Advertising Manager of Balsa Wood Company, of Brooklyn and Ecuador. He left the firm to join Time Inc. the following year.

Buckhout was honored by Fordham University in 1957 with the Award for Achievement in the Field of Communication Arts. He is on the President's Committee of the University and an administrative trustee of the Fordham University Council, as well as a trustee of Finch College, New York City.

He is married to the former Martha Morgan, of New York City. They have two daughters, Mrs. Jerome K. Chase and Mrs. George T. Pollon. The Buckhouts have made their home since 1933 in Greenwich, Connecticut, where he is active in community affairs. He was chairman of the 1967 Community Chest Campaign for Greenwich, and he is currently a director of the Community Chest and Council Board.

TRU CLARK

Truman B. Clark, 48, President of the Tappan Division of The Tappan Company (Mansfield, Ohio), was born in Boston, Mas-

sachusetts, October 21, 1920. He moved to Mansfield with his family in 1935. After graduating from Mansfield Senior High School in 1938, he attended the Engineering College of the Ohio State University at Columbus, Ohio. He left there in his senior year to join Bell Aircraft Corporation as a project engineer at Buffalo, New York and Marietta, Georgia from 1942 through 1945.

He began his career with Tappan in 1946 as a District Sales Manager. In 1949 he placed fourth in the Tappan National Sales Contest. After a successful tour of duty in sales, Clark returned to Mansfield to become Manager of the War Products Division. In 1952 he became an assistant to the Vice President of Manufacturing and in 1954 was appointed Director of Engineering. In 1958 he was advanced to the position of Works Manager. Two years later he assumed the leadership of the Mansfield operation as its Manager.

Elected to the Board of Directors of The Tappan Company in February 1962, he moved to Los Angeles in March of 1962 to assume the duties of Executive Vice President and General Manager of O'Keefe & Merritt Company, a wholly owned Tappan subsidiary. Under his guidance sales grew substantially and in 1964 he was promoted to President and General Manager.

In August of 1966 he returned to Mansfield to become President of the Tappan Division and assumed leadership of the Mansfield, Ohio and Murray, Kentucky operations. In addition to this responsibility, Tru is a member of the Executive Committee of The Tappan Company which is the parent organization of all the corporate divisions. With his background in engineering, sales, manufacturing and administration, plus his penchant for getting the job done, he led the Tappan Division to a turnaround during 1967.

As a family man, he and his wife, Joan, are raising six attractive daughters and two young sons in a manner to be emulated. They reserve many weekends for their children and their friends. Favorite recreational activities are sailing, family outings (including travel trailer trips) and hiking.

Tru's business record places him among those who are men of accomplishment. In short, Truman B. Clark is a man among men and an able leader of our Tappan teams.

WILLIAM D. DRAKE, PH. D. IN INDUSTRIAL ENGINEERING, UNIVERSITY OF MICHIGAN, 1964

Professor William Drake is presently Chairman of the University-wide Ph. D. Program in Urban and Regional Planning at the University of Michigan. He is a past member of the Independent Study Board appointed by the U.S. Secretary of Commerce for assessing the impact of governmental policies on regional economic development. In 1965-66 Dr. Drake served as Deputy Executive Secretary for Technology on the President's Commission on Technology, Automation, and Economic Progress.

He is also a member of the Board of Directors of the Consumers Union.

RÉSUMÉ: JOHN J. FLYNN

Address: (Home) 954 Military Drive, Salt Lake City, Utah 84108. Telephone: 801-363-7742.

(Office) College of Law, University of Utah, Salt Lake City, Utah 84112.

Born: April 10, 1936, Chelmsford, Massachusetts.

Marital Status: Married (Sheila A. Flynn), 3 Children (John 6, Siobhan 5, Timothy 3).

Education: Primary: Chelmsford Massachusetts Public Schools 1942-1950; Chelmsford High School 1950-1954. College: Boston College, Chestnut Hill, Massachusetts, B.S. 1958 (with honors). Law School: Georgetown Law Center, Washington, D.C., LL.B. 1961. Graduate School: University of Michigan Law School, S.J.D. 1967.

Honors: 3 year scholarship, Georgetown Law Center; W. W. Cooke Fellow, University of Michigan 1961-1963; Order of Colf; Board of Editors, Georgetown Law Journal; Graduate of the Year 1961.

Publications (Representative List):
Federalism and State Antitrust Enforcement. (Michigan Legal Publications 1964).
49 Geo. L. J. 322 (Juvenile Delinquency Proceedings).
49 Geo. L. J. 144 (Evidence).
48 Geo. L. J. 594 (Interlocutory Appeals).
1966 Utah L. Rev. 351 (State Government).
1966 Utah L. Rev. 311 (Federalism).
51 A.B.A. J. 229 (Federalism).
52 Cornell L. Q. 829 (Antitrust).
53 Iowa L. Rev. 983 (Antitrust) reprinted.
1 Antitrust L. & Econ. Reprints Vol. 1.
1967 Utah L. Rev. 152 (Antitrust).
22 Vanderbilt L. Rev. 103 (Antitrust).
45 Texas L. Rev. 1301 (Antitrust).

Bar Membership: Member, Massachusetts Bar, Boston Bar, American Bar Association, A.B.A. Antitrust Section, Applicant, Utah Bar Association.

Legal Experience: Professor of Law, University of Utah 1963-Present. Visiting Professor of Law, University of Michigan 1966. U.S. Labor Department Intern 1960. Consultant in several major antitrust and unfair competition cases. Witness before Senate Antitrust Subcommittee and Senate Constitutional Amendments Subcommittee.

Fields of Specialization: Antitrust; Unfair Competition; Regulated Industries; Securities Regulation; Corporations; Patents; Trademarks and Copyright.

Community Service: Chairman; Board of directors, Community Mental Health Center. Board of Directors, Big Brothers of Utah. Board of Directors, American Civil Liberties Union, Utah Affiliate.

DR. HENRY A. HILL

Dr. Henry A. Hill, president of Riverside Research Laboratory, Inc., of Haverhill, Massachusetts. His doctorate in organic chemistry was granted by the Massachusetts Institute of Technology and he has held several posts with major chemical companies. He is a member of the National Commission on Product Safety and the Advisory Council to the Senate Consumer Sub-Committee. Dr. and Mrs. Hill and their son Anthony reside in Watertown, Massachusetts.

BIOGRAPHICAL STATEMENT OF BENNY L. KASS

Mr. Kass is a practicing attorney in Washington, D.C., specializing in the area of consumer affairs. He is a consumer consultant to a number of organizations, including the National Legal Aid and Defender Association and the National Consumer Law Center. Prior to entering into legal practice, he was Assistant Counsel to the Senate Subcommittee on Administrative Practice and Procedure—a position he held from November, 1965—March, 1969.

Mr. Kass received a Bachelor of Science degree in Journalism from the Medill School of Journalism, Northwestern University, in 1957. In 1960, he was awarded an LL.B. degree from the University of Michigan Law School. In 1967, he received his Master of Laws degree from the George Washington University Law School. Mr. Kass received an American Political Science Association Fellowship and spent 1967 studying the office and institution of Ombudsman. He is a member of Mayor Washington's Committee on Economic Development and Chairman of its Consumer Affairs Subcommittee.

From August of 1962 to November, 1965, he was Counsel to the Government Information Subcommittee (the Moss Subcommittee) of the House of Representatives. Prior to that, he served a year with the Air Force during the Berlin crises.

Mr. Kass was admitted to the Bar of the District of Columbia in September, 1960. He is a member of the American Bar Association

and the Federal Bar Association. He is married to the former Salme Lundstrom and has one daughter, Gale, born April 25, 1966, and one son, Brian, born in July of 1968. They reside in Chevy Chase, D.C.

Mr. Kass was recently appointed a Commissioner from the District of Columbia to the National Conference of Commissioners on Uniform State Laws. He was appointed to this position by Mayor Walter Washington, in August of 1969.

BIOGRAPHY: JAMES SCOTT KEMPER, JR.

Title: President.

Company: Lumbers Mutual Casualty Company.

Principal business: Insurance.

Business address: Mutual Insurance Building, Chicago, Illinois 60640.

Business phone: (312) 561-8000.

Other business affiliations:

Current: President, Kemperco, Inc., American Manufacturers Mutual Insurance Company; American Motorists Insurance Company; Kemperco Reinsurance Company; Chairman of the Board, Iowa Kemper Mutual Insurance Company; Economy Fire & Casualty Company; Richland-Knox Mutual Insurance Company; Director, Empire State Mutual Life Insurance Company; Stewart-Warner Corporation; The Calumet Publishing Company; Chairman of the Board of Trustees, The Insurance Institute of America, Inc. and The American Institute for Property and Liability Underwriters; Trustee, Underwriters Laboratories, Inc.

Former: Antitrust division, Department of Justice; private practice, New York, Chicago and Los Angeles.

Civic activities:

Current: Director, National Industrial Conference Board; National Council on Alcoholism, Inc.; President and Trustee, The James S. Kemper Foundation; Director, Boys' Clubs of America; Chicago Boys' Clubs; The American Red Cross, Mid-America Chapter; Member, Advisory Council, School of Business, Northwestern University; Trustee, The College of Insurance (New York); Wesley Memorial Hospital (Chicago); U.S. Council of International Chamber of Commerce; American Enterprise Institute; Member, Senior Advisory Board, National Strategy Committee of the American Security Council; Director, Freedom Studies Center of the Institute for American Strategy.

Former: Lieutenant Commander, USNR, World War II.

Home address: 530 Ash Street, Winnetka, Illinois 60093.

Home phone: XXXXX

Family names: wife, Joan Hoff Kemper. Daughters, Linda; Judith; Sons, James S. III; Stephens; Robert.

Education: Lawrenceville School, Lawrenceville, New Jersey, Yale University, A.B.; Harvard University, LL.B.

Fraternal affiliations: Alpha Sigma Phi.

Church affiliation: Episcopal.

Birthdate: April 8, 1914.

Birthplace: Chicago, Illinois.

Club affiliations: Chicago Club; Bohemian Club, San Francisco; Metropolitan Club, Washington, D.C.; Glen View Club; Saddle and Cycle Club; Economic Club of Chicago.

Kemper board affiliations: Director, Lumbers Mutual Casualty Company; Kemperco, Inc.; American Manufacturers Mutual Insurance Company; American Motorists Insurance Company; Federal Mutual Insurance Company; Fidelity Life Association; Federal Kemper Life Assurance Company; Economy Fire & Casualty Company; Sequoia Insurance Company; Iowa Kemper Mutual Insurance Company; Richland-Knox Mutual Insurance Company; Kemperco Reinsurance Company; Eitel Corporation.

BIOGRAPHICAL SKETCH OF OLGA M. MADAR

Olga M. Madar, a member of UAW Local 769, was elected to the UAW International

Executive Board as a board member-at-large at the 1966 convention, the first woman to achieve that distinction. Prior to that time, she had been director of the union's Recreation Dept. for 19 years.

She is currently director of the union's Dept. of Recreation and Leisure-Time Activities, the Dept. of Conservation and Resource Development, the servicing section of the Technical, Office and Professional Workers Dept. (TOP) and the newly-established Dept. of Consumer Affairs.

A native of Sykesville, Pa., she was graduated from Detroit's Northeastern High School in 1933 and received her Bachelor of Science degree from Eastern Michigan University in 1938. She now lives on Detroit's east side.

Her working career included jobs on the assembly line at the Chrysler Kercheval Plant and the Bower Roller Bearing Plant, both in Detroit, and at the Ford Willow Run Bomber Plant at Ypsilanti, Mich. during World War II.

She also worked as a recreational therapist at the Ypsilanti, Mich. State Hospital, taught school at Flat Rock, Mich. and then worked as recreation director for the now defunct UAW Local 50.

Prior to her election to the board, she had been on the staff of the International Union for 21 years, assigned to the Recreation Dept. After being appointed director of that department by UAW President Walter P. Reuther, her first assignment was to work with the union's Fair Practices Dept. to eliminate racial discrimination in organized bowling—a goal which was finally achieved in 1950. She also established the first UAW retirees centers.

As TOP Dept. servicing director, she has participated in major contract negotiations for white collar workers.

Currently one of her major projects is the campaign against water and air pollution and for conservation of our natural resources.

She is an officer or member of dozens of civic, recreational, professional, cultural and social work groups, including the American Youth Hostels, the UAW Retired Workers Activities Centers Board, the National Association of Social Work, the National Gerontological Society, the American Parks and Recreation Assn., the Michigan United Fund, the Michigan Welfare League and United Community Services of Metropolitan Detroit.

For eight years, she was a Detroit Parks and Recreation Commissioner and a board member of the Huron-Clinton Metropolitan Authority. As city recreation commissioner, she helped to establish the city's multipurpose centers for senior citizens and the Inter-Departmental Council on Aging.

Miss Madar was also instrumental in the establishment of a pilot program in Detroit called DART (Deprived Areas Recreation Team), geared to improving park and recreation facilities for inner city residents and to insuring maximum citizen participation in recreation planning and decision making.

Miss Madar has received numerous civic awards. Recent honors include a citation from the American Camping Association "for her support in the field of recreation and conservation and leadership in creating interracial-interfaith policy;" a citation from the Michigan United Conservation Clubs as "forest and park conservationist of the year;" the Fellowship Award of the Recreation Association of Michigan, and selection as one of Detroit's "Top Ten Working Women."

AUGUSTINE R. MARUSI

Augustine R. Marusi, chairman and president of Borden, Inc., joined the Borden Chemical Division in 1939 at its research laboratory in Bainbridge, N.Y.

A native of New York City, Mr. Marusi was graduated as a chemical engineer from Rensselaer Polytechnic Institute, Troy, N.Y., in

1936. He returned to Rensselaer in 1963, when he was awarded the honorary degree of Doctor of Engineering.

In 1946, following service with the U.S. Navy as commander of a minesweeper in the Pacific, Mr. Marusi returned to the Borden Chemical Division as sales manager at Kernersville, N.C. A year later, he was transferred to Brazil as a director and general manager of Alba, S.A., Borden's principal South American chemical operation.

Mr. Marusi returned to New York in 1952 and was named a vice president of the Chemical Division in charge of development. He became president of the Chemical Division in 1954, was elected a vice president of the parent company in 1955, a member of its board of directors in 1959, and an executive vice president in 1964.

Since February 1, 1967, Mr. Marusi has served as president of Borden, Inc., and since November 1, 1967, as its chief executive officer. On August 1, 1968, he assumed the additional position of chairman.

Mr. Marusi is a director of Chemical Bank, the American Sugar Company, the Bank of America, New York, The Advertising Council, Inc., the Grocery Manufacturers of America, Inc., the National Association of Manufacturers, and the National Industrial Conference Board, and a trustee of the Broadway Savings Bank, New York, N.Y., the Committee for Economic Development, the Rensselaer Polytechnic Institute. He is also a director of the Economic Club of New York.

BIOGRAPHY—MARGARET S. MORITZ

Born in St. Paul, Minnesota. Raised in So. Pasadena, California. Presently living in White Plains, New York.

Education: Graduate of U.C.L.A. 1936. Graduate work at U.C.L.A., University of Washington and College of Chinese Studies, Peking, China.

Family: Late husband was Executive, International Committee, YMCAs of the U.S. and Canada. Died 1968. Four children.

Professional Experience: Associate Executive, YWCA of U.C.L.A., 1937-1940. National Staff, YWCA, Topeka, Kansas, 1940-41. Library Aide, Wutridge School, Pasadena, 1962-64. Specialist, World Fellowship Education, International Division, YWCA of the U.S.A., 1968-

Volunteer Experience: YWCA Boards, New York and California. President YWCA of Pasadena, California 1964. National Board YWCA, 1952-68.

Served on following committees:

College University; Personnel; Leadership Development; National Nominating; Public Affairs; Convention Planning.

Girl Scouts: Brownie and Girl Scout Leader, Council Member.

League of Women Voters of White Plains: Vice-President, Board Member.

Volunteer Service Bureau of Westchester County: Chairman—Two conferences for training of Board Members.

President, Episcopal Church Women, St. Bartholomew's Church, White Plains, New York, 1958.

Foreign Travel: Asia, Europe, Middle East and Africa. (Lived in China one year 1948.)

BIOGRAPHY OF JAMES M. NICHOLSON, COMMISSIONER

Nominated by President Johnson as an FTC Commissioner on December 5, 1967. Confirmed by Senate Commerce Committee on December 12, 1967 and by U.S. Senate on December 13, 1967. Sworn in office on January 5, 1968 for a term that expires on September 25, 1969.

Political affiliation: Democrat.

Born: July 11, 1928 at Oklahoma City, Oklahoma.

Education: Attended public schools in Oklahoma City, Oklahoma; Washington, D.C.; Silver Spring, Maryland; Fairhaven, Massachusetts; Hempstead and Sea Cliff, New

York, A.B. degree, Knox College, Galesburg, Illinois, 1952. JD degree, Law School of the University of Michigan, 1954.

Career: Upon graduation from law school, Commissioner Nicholson began to practice law in Indianapolis, Indiana. From 1958 until his confirmation, he was a partner in the law firm of Cadick, Burns, Duck & Neighbours in Indianapolis, specializing in corporate law. Democratic nominee for the U.S. Congress from the Sixth District of Indiana in 1966. Admitted to Bars of Indiana; Federal District Courts; Court of Appeals, Sixth Circuit; and Supreme Court of the United States.

War service: Enlisted and served on active duty with the U.S. Navy from 1946 to 1948. Commissioned in the U.S. Army Reserve from 1950 to 1955.

Affiliations:

Chairman, Advisory Board of the Indiana School for the Deaf, Indianapolis Bar Association (Past Vice President, Member of Board of Managers), Indiana State Bar Association (Past member of House of Delegates, former Editor, *Res Gestae*; Co-author of Institute books on various legal topics).

American Bar Association (member of Sections of Antitrust, Administrative Law, and Taxation). Lawyers Association of Indianapolis (Past Director and Treasurer). American Judicature Society, Lawyers Club of Indianapolis.

Character and Fitness Committee for the Third Supreme Court Judicial District of Indiana by appointment of Indiana Supreme Court. Barristers Society, University of Michigan Law School. University Club of Indianapolis.

Phi Gamma Delta Fraternity, Phi Alpha Delta Law Fraternity. St. Paul's Episcopal Church, Indianapolis, Indiana. St. Luke's Episcopal Church, Bethesda, Maryland. Brotherhood of St. Andrew.

Marital status: Married to former Joan Barnes of Muncie, Indiana. They have four sons: James E., 17; William C., 15; Thomas B., 12; and John A., 9.

PHILIP G. SCHRAG

Assistant Counsel of NAACP Legal Defense and Educational Fund, Inc., Suite 2030, 10 Columbus Circle, New York, N.Y. (212 JU 6-8397), and of its National Office for the Rights of the Indigent (NORI). Mr. Schrag directs the Fund's consumer protection test litigation, including the recent case of *Sniadach v. Family Finance Corp.* (June 9, 1969), in which the U.S. Supreme Court abolished pre-judgment wage garnishment. The Fund's consumer protection litigation docket also includes a case testing the availability of consumers' class actions in New York (*Hall v. Coburn Corp.*), a consumer's action for punitive damages against a ghetto department store, and a test of consumer standing to enforce Section 43a of the Lanham Trademark Act of 1946. The Fund also plans a program of test litigation under the Truth-in-Lending Act and Regulations.

Chairman, Consumers' Advisory Council, New York City Dept. of Consumer Affairs. The Council, appointed by Mayor Lindsay to set goals and perform studies for the new municipal consumer protection agency in New York, has drafted a model municipal consumer protection act which has been introduced in the City Council at the Mayor's request. The Council has also published an analysis of the Uniform Consumer Credit Code, and is conducting an extensive investigation of retail instalment sales and credit practices and abuses in New York.

Author of "Bleak House 1968: A Report on Consumer Test Litigation", 44 N.Y.U. Law Review 115.

Lecturer in Law, Columbia University Law School, teaching a course in consumer protection law in the fall of 1969.

Education: A.B. Harvard College, 1964 (magna cum laude); L.L.B. Yale Law School 1967.

JUNE L. SEARS

Mrs. June L. Sears, Extension Home Economist, is employed with the Michigan State University Cooperative Extension Service.

In May, 1968, Mrs. Sears, Wayne and Oakland Counties Extension Home Economist, received a USDA citation for her outstanding service from Orville Freeman, Secretary of Agriculture. Mrs. Sears was cited for "unusual insight and understanding of people living under adverse conditions and for providing enlightened leadership to develop their desires to learn and gain self-respect by doing things for themselves."

Her work with low-income families in the two-county area has gained her state-wide and national recognition. Her office is in Wayne. She was recently named to the National Advisory Council to the U.S. Food and Drug Administration. In 1966 she was cited by the Negro Business and Professional Women's Association of Detroit for outstanding service. She is also in "Who's Who in American Women."

Mrs. Sears earned her B.S. and M.S. degrees from Wayne State University. She was named family living agent for the Michigan State University Cooperative Extension Service in 1963 after two years teaching home economics at Southwestern High School, Detroit. She is married and the mother of four children. Two of the children are at Eastern Michigan University and the other two (twins) are at home.

RÉSUMÉ: GARY BURNS SELLERS

Address: 14 Snow's Court N.W., Washington, D.C. 337-7246.

Marital Status: Married 9-11-68, Dorothy Davidson.

Education: Cranbrook School, Bloomfield, Hills, Michigan. Graduated 1953.

Wesleyan University, 1955, 1956, Middletown, Connecticut.

University of Michigan, 1954, 1957, A.B. 1957.

University of Michigan, Psychology, 1957-1960.

University of Michigan Law School, LL.B., 1963.

Graduate Work: University of Michigan, Psychology and Graduate Work, 1957-1960. University of Michigan Law School, LL.B., 1960-1963.

Professional Experience: Covington & Burling, Washington, D.C., 1963-1965. Preparation of briefs (before various regulatory agencies), legislative histories, and associated tasks, coverage of Congressional hearings and Supreme Court arguments on firm related business.

U.S. Bureau of the Budget, Washington, D.C., 1965 to 1969. Served as legislative attorney and program and budget examiner for Federal oil, energy and scientific research programs. Also drafted model State legislation and argued case before the Council of State Governments. Drafted and coordinated legislation for the White House for presentation to Congress.

Center for Study of Responsive Law, June, 1969—present. Serving as Counsel.

DAVID A. SWANKIN

David A. Swankin, former executive director of the President's Committee on Consumer Interests, assumed duties as the Washington representative of Consumers Union on August 15, Swankin, a lawyer and economist, was director of the Labor Department's Bureau of Standards.

In his new position with the nonprofit consumer testing and advisory organization Mr. Swankin works with and is available to governmental bodies and agencies that deal with the consumer and writes for *Consumer Reports* and other CU publications.

Mr. Swankin, 35, has held several Federal consumer posts. Before serving as executive director of the President's Committee in 1965 and 1966, he was executive secretary of the President's Consumer Advisory Com-

mittee and executive assistant to the then Special Assistant to the President for Consumer Affairs, Mrs. Esther Peterson. In 1966, he co-authored a report that examined consumer programs of European governments and their relevance to Federal programs in the United States.

In announcing Swankin's appointment as Washington representative, the executive director of Consumers Union, Walker Sandbach, said:

"Although CU has not had a Washington representative for some years, we feel that the tempo of consumer activities at the Federal level is such that it is now desirable to reactivate that position. With a man of Mr. Swankin's experiences and abilities serving as the organization's eyes and ears in the Capitol, *Consumer Reports* will now be able to react more quickly to the need for certain in-depth stories about governmental issues affecting the consumer."

Mr. Swankin was appointed in 1968 as the director of the Bureau of Labor Standards, the same agency where he began his government career as a management intern in 1957. He had served as a staff assistant to the Assistant Secretary of Labor in 1962 and 1963, and as chief of the Section of Collective Bargaining in the Bureau of Labor Statistics in 1961.

Educated in public schools in Boston, he graduated from Brandeis University in 1954 with a B.A. degree. He received a master's degree in economics from the University of Wisconsin in 1957 and a law degree from George Washington University in 1962.

Mr. Swankin resides at 1604 Chimney House Road, Reston, Va.

AARON S. YOHALEM

Aaron S. Yohalem is one of the food industry's leading spokesman on consumer affairs.

He attended New York City schools and after graduating from New York University Law School in 1934, Mr. Yohalem became an associate of the law firm which counseled The Best Foods, Inc. He officially joined that company in 1943 as its corporate secretary and thereafter served successively in the posts of vice president in charge of the company's Canadian operations, vice president and assistant to the president, and executive vice president in charge of all operations. He was elected to the firm's Board of Directors in 1953.

In 1958 when Best Foods merged with Corn Products, he was elected vice president in charge of the Best Foods Division. In 1960 he was elected senior vice president of the company, and in 1963 joined the Board of Directors. He is currently a senior vice president and executive assistant to the president of CPC International Inc.

Mr. Yohalem has served as consultant to various government departments, testified before a number of Congressional committees, and has taken an active role in public affairs for the Grocery Manufacturers of America and the National Association of Manufacturers. He is now serving as chairman of the United States Chamber of Commerce Consumer Issues Committee. He is also a Director of the U.S. Chamber of Commerce and a Member of the Board of Trustees of the American Freedom from Hunger Foundation.

CPE INTERNATIONAL, INC.,

Englewood Cliffs, N.J., August 1, 1969.

Senator PHILIP A. HART,
Senate Office Building,
Washington, D.C.

DEAR SENATOR HART: You have paid me a signal honor by inviting me to serve on the first board of directors of the Independent Consumer Council, should your bill to create this organization be enacted into law.

As you know, I have no illusion that consumer problems do not exist. But I do not believe that the best interests of consumers and the economic system as a whole would be well served by the establishment of an

agency, in or out of government, which would have the responsibilities your bill would assign the council. Accordingly, as I have explained, I must reserve the right to oppose this bill.

Nevertheless, should Congress enact this legislation, responsible businessmen should be willing to participate in the leadership and direction of the proposed Independent Consumer Council in order to give it whatever benefit they can of their experience and judgment in the performance of the organization's responsibilities.

Thus, even though I may oppose this legislation publicly, in good conscience I cannot refuse to let my name be listed among the initial group of proposed directors. If Congress finds that the public interest requires the creation of the council, I will do all in my power to contribute to a balanced resolution of the complex problems facing consumers, government and business.

I am grateful for the confidence you have shown in me by your invitation.

Sincerely yours,

A. S. YOHALEM,

Senior Vice President and Chairman,
Consumer Issues Committee, U.S.
Chamber of Commerce.

Mr. MOSS, Mr. President, it is, indeed, a pleasure for me to join the distinguished Senator from Michigan (Mr. HART) in introducing a bill that would establish an Independent Consumer Council to represent and serve American consumers.

As chairman of the Subcommittee for Consumers of the Committee on Commerce, I have been actively trying to improve the lot of American consumers. In legislative oversight hearings and in hearings examining new legislative proposals I have encountered certain recurrent consumer problems.

The most disturbing problem to me is this: Within many existing governmental agencies the consumer interest is without effective representation. Only on rare occasions have advocates of consumer interests effectively participated in the formulation of important governmental policies or far-reaching agency decisions. In contrast, the advocates of special interest are very adept at penetrating the inner corridors of Federal and State administrative and legislative offices.

Periodically there have been inroads which reverse the general trend. Witness the recent action by the Federal Communications Commission when it appointed two of its staff members to represent consumer viewpoints during closed discussions about rate increases. But this action simply reinforces my fear that in most governmental decisions the consumer interest is often overlooked entirely or given secondary status. Such a situation should not persist.

I am aware of the fine efforts of certain consumer-oriented groups within existing departments. Dianne McKaig's efforts within the Department of Health, Education, and Welfare, for example, have been monumental; but she would be the first to admit that her strenuous efforts have given only slight consumer orientation to health, education, and welfare policy.

The President's Adviser on Consumer Interests has also been trying to provide consumer orientation in the different departments of the Government. Each time Mrs. Knauer bites into a good

American hot dog she probably gets indigestion by recalling the battle she waged with the Secretary of Agriculture over the permissible level of fat. Her victory may have been Pyrrhic—she may have won the battle but in all likelihood will lose the war.

Another problem facing the consumer is the way business firms listen to his complaints. The American consumer, in seeking to have his complaints heard, finds that the correspondence computers of American business are rather hard of hearing. The attrition of consumers in their battle with computers is great. Today it is questionable whether that pert young thing behind the customer complaint window can hear any better than the computer, for many times she is as curt as she is pert.

There are State and Federal governmental mechanisms for handling consumer complaints and there are such nongovernmental organizations as the Better Business Bureaus. I will want to explore their efficacy in hearings. I am also anxious to learn about the American Arbitration Association's proposals for mediation service in our large urban areas.

A third consumer problem is the lack of dissemination of product information which enables the consumer to make a rational choice in the marketplace. The governmental dissemination of objective product information—not endorsements of products but standardized information about them—is nonexistent. Only a recent lawsuit caused the Veterans' Administration to make public important test information on hearing aids. Nongovernmental dissemination of product information is not always designed to lead to rational consumer choice. By far the largest product information input is advertising. Seals of approval are not much more reliable. And too few people are readers of such publications as Consumer Reports which disseminates at least some objective production information.

Given the above mentioned recurrent consumer problems, I wholeheartedly support the objectives of the proposal for an Independent Consumer Council. In my view such an organization could serve very well the needs of the consumer.

By providing for the creation of local consumer units, the bill adopts a "grass-roots," nonpolitical, and independent orientation that is absolutely essential if consumer problems are going to be minimized. The national Council with a board of directors elected by local groups gives the consumer a vehicle for national coordination and national attack on common problems. In many ways the organization parallels that of many large corporations whose regional offices radiate from the central corporate spoke. The businessman has found that the tension and dialog between its regional offices and the home office foster creative solutions to the problems which he confronts. A similarly organized consumer organization could meet with similar success.

Because the Council by law could not engage in political activities, it would continually serve as a vehicle for the citi-

zen as consumer. There could be no ulterior motives, real or imagined, assigned to the board of directors who would be selected in a democratic fashion from various regions of the country.

The Council's independence from existing governmental structures would make it an ideal vehicle for conducting objective and sound studies of governmental and business policies which daily affect the lives of each of us as consumers. Such an input would be invaluable. Think of a study of competition policy which approaches the subject from the standpoint of the consumer free of certain business bias or preconceptions about governmental approaches for implementing such policies.

Because of the potential the Independent Consumer Council offers the American consumer, I have joined my distinguished colleague from Michigan (Mr. HART) in cosponsoring this legislation. I do not view this bill as a substitute for more intelligent governmental organization and approach to consumer problems, but I do see it as an important vehicle for fulfilling certain needs of the American consumer.

My colleagues and I on the Subcommittee for Consumers of the Senate Commerce Committee will use the bill introduced today as a "working paper" for more fully defining the means of meeting the consumer's need to have representation when governmental policies are formulated, to have effective avenues for hearing and justly disposing of consumer complaints, and to have objective product information disseminated.

After fully exploring these areas in committee, I feel my distinguished colleagues and I will be in a position to make some final judgments on the legislation and report favorably to this body a bill which will improve the lot of the American consumer. And if an Independent Consumer Council is created, I would hope that our hearing record would serve as a useful resource for the board of directors in launching their program.

S. 2965—INTRODUCTION OF A BILL TO PROVIDE COST-OF-LIVING INCREASES TO RELIEF PAYMENTS TO CERTAIN FORMER EMPLOYEES OF THE CANAL ZONE GOVERNMENT

Mr. TOWER. Mr. President, I introduce today for appropriate reference a measure which is designed to give a cost-of-living increase in cash relief to certain former employees of the Canal Zone Government. This measure would provide generally for workers whose services terminated prior to 1958, who are still residing in the Canal Zone area. The actual number to be covered is small, but their need is great; in an era when inflation has unfortunately become a way of life, the retirement benefits of these people who have served in the Canal Zone have simply not kept pace. In order for anything even resembling a reasonable program to be maintained, the passage of this measure by this body is a necessity.

Mr. President, a similar measure was recently passed by the House of Repre-

sentatives and is currently pending here in the Senate. I am introducing this measure separately here today, hoping that by so doing, I can spur action. The cost to the Government of the United States will be nothing, since these payments are a charge against Panama Canal tolls. The aid to these people, some of whom were workers on the Panamanian enterprise in its earliest days, will recognize the debt that this Nation owes them. We rarely have an opportunity to accomplish this much good for no real cost to us; I trust that this measure will receive expeditious consideration by this body.

The PRESIDING OFFICER. The bill will be received and appropriately referred.

The bill (S. 2965) to amend the Canal Zone Code to provide cost-of-living adjustments in cash relief payments to certain former employees of the Canal Zone Government, and for other purposes, introduced by Mr. TOWER, was received, read twice by its title, and referred to the Committee on Post Office and Civil Service.

ADDITIONAL COSPONSORS OF S. 1610 AND A JOINT RESOLUTION

S. 1610

Mr. BYRD of West Virginia. Mr. President, on behalf of the Senator from New Mexico (Mr. MONTOYA) I ask unanimous consent that, at the next printing, the name of the Senator from North Dakota (Mr. BURDICK) be added as a cosponsor of S. 1610, to allow credit under the Civil Service Retirement Act to certain Federal employees for service in Federal-State cooperative programs in a State.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 2899

Mr. CURTIS. Mr. President, I ask unanimous consent that, at the next printing, the name of the Senator from Nebraska (Mr. HRUSKA) be added as a cosponsor of S. 2899, to amend the Budget and Accounting Act, 1921, so as to require the submission of the budget on an administrative budget, rather than a unified budget basis.

The PRESIDING OFFICER. Without objection, it is so ordered.

SENATE JOINT RESOLUTION 148

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that, at the next printing, the names of the Senator from Indiana (Mr. BAYH) and the Senator from Hawaii (Mr. INOUE) be added as cosponsors of Senate Joint Resolution 148, to authorize the Department of Health, Education, and Welfare to make allocations to local educational agencies under Public Law 874 on full entitlements.

The PRESIDING OFFICER. Without objection, it is so ordered.

ADDITIONAL COSPONSOR OF A RESOLUTION

SENATE RESOLUTION 245

Mr. BYRD of West Virginia. Mr. President, on behalf of the Senator from New Mexico (Mr. MONTOYA) I ask

unanimous consent that, at the next printing, the names of the Senator from Indiana (Mr. BAYH) and the Senator from Texas (Mr. YARBOROUGH) be added as cosponsors of Senate Resolution 245, calling for the release of American prisoners of war.

The PRESIDING OFFICER. Without objection, it is so ordered.

ENROLLED JOINT RESOLUTION PRESENTED

The Secretary of the Senate reported that on today, September 25, 1969, he presented to the President of the United States the enrolled joint resolution (S.J. Res. 152) to provide for the temporary extension of rural housing programs and Federal Housing Administration insurance authority, and to extend the period during which the Secretary of Housing and Urban Development may establish maximum interest rates on insured loans.

TAX REFORM ACT OF 1969—AMENDMENT

AMENDMENT NO. 206

Mr. METCALF submitted an amendment, intended to be proposed by him, to the bill (H.R. 13270) to reform the income tax laws, which was referred to the Committee on Finance and ordered to be printed.

IMPROVEMENT OF HEALTH AND SAFETY CONDITIONS OF PERSONS WORKING IN THE COAL MINING INDUSTRY—AMENDMENTS

AMENDMENTS NOS. 207, 208, AND 209

Mr. COOPER submitted three amendments, intended to be proposed by him, to the bill (S. 2917) to improve the health and safety conditions of persons working in the coal mining industry of the United States, which were ordered to lie on the table and to be printed.

(The remarks of Mr. COOPER when he submitted the amendments appear later in the RECORD under the appropriate heading.)

ANNOUNCEMENT OF ADDITIONAL HEARINGS ON PESTICIDES AND THE FARMWORKER BY THE MIGRATORY LABOR SUBCOMMITTEE

Mr. MONDALE. Mr. President, as chairman of the Subcommittee on Migratory Labor of the Committee on Labor and Public Welfare, I wish to announce that hearings will be held by the subcommittee on September 29 and 30, 1969, to continue our investigation of the effects of pesticides on farmworkers. The hearings will commence at 9:30 a.m., in room 4232 of the New Senate Office Building.

Witnesses invited to testify at the September 29 hearing include Cesar Chavez, director of the United Farm Workers Organizing Committee, Jerry Cohen, counsel to UFWOC, and Manuel Vasquez, Washington representative of UFWOC; and also representatives of the

Food and Drug Administration of HEW, and the C. W. England Laboratories.

Witnesses invited to testify on September 30 include Anthony Bianco and John Giumarra, California grape growers; Paul Porter, a chemist with Shell Development Corp.; and Jerry Fielder, commissioner of agriculture, State of California.

NOTICE CONCERNING NOMINATIONS BEFORE THE COMMITTEE ON THE JUDICIARY

Mr. EASTLAND. Mr. President, the following nominations have been referred to and are now pending before the Committee on the Judiciary:

Harry D. Steward, of California, to be U.S. attorney for the southern district of California for the term of 4 years, vice Edwin L. Miller, Jr.

Jack V. Richardson, of Kansas, to be U.S. marshal for the district of Kansas for the term of 4 years, vice Vance W. Collins.

On behalf of the Committee on the Judiciary, notice is hereby given to all persons interested in these nominations to file with the committee, in writing, on or before Thursday, October 2, 1969, any representations or objections they may wish to present concerning the above nominations, with a further statement whether it is their intention to appear at any hearing which may be scheduled.

DEPARTURE OF GEORGE W. MURPHY, JR., FROM FEDERAL HOME LOAN BANK BOARD

Mr. SPARKMAN. Mr. President, I wish to congratulate George W. Murphy, Jr., for his 11 years of service to the Federal Home Loan Bank Board and to thank him for the substantial contribution he has made to good government during those years. Preston Martin, Chairman of the Home Loan Bank Board, recently announced that George has resigned as associate general counsel to enter the private practice of law here in Washington.

After 2 years of military service and a year with the Department of Justice, George joined the staff of the general counsel's office at the Bank Board in 1958. Since that time he has been closely associated with all aspects of the Board's operations. Under former Chairman Joseph P. McMurray, George served as Assistant Chief of the Opinions and Regulation Section, participating in the drafting of regulations and the preparation of legal opinions which have had a significant and continuing impact on the operations of the Home Loan Bank Board and the industry which it regulates.

In January 1968, during the chairmanship of John E. Horne, Mr. Murphy was appointed director of the Board's Legislative Division and served as one of the principal draftsmen of the Federal receivership provisions of the Bank Protection Act of 1968, the savings and loan provisions of the Housing and Urban Development Act of 1968, and the liquidity and premium prepayment pro-

visions of the 1968 rate control extension legislation.

George Murphy is a native of Hawley, Pa., and attended public schools there and in Washington, D.C. He was graduated from the College of Arts and Sciences, Georgetown University, in 1951 and received his bachelor of laws degree from Georgetown's law center in 1954. Georgetown awarded him a master of laws degree in 1959.

Mr. Murphy has had many occasions to work with the Senate Committee on Banking and Currency and its staff. During difficult times, his services have contributed substantially toward meeting the congressional purposes of providing for sound and economical home financing.

I am confident that his devotion to the public interest will continue in his new venture.

OIL IMPORT PROGRAM

Mr. KENNEDY. Mr. President, the oil import program, which costs the American consumer some \$6 billion a year, is currently being studied by a Cabinet task force. Five U.S. Senators have filed a submission with the task force urging abolition of the program. I believe the submission raises important questions of public policy. I ask unanimous consent that with a covering letter to Secretary of Labor Shultz, it be printed in the RECORD.

There being no objection, the items were ordered to be printed in the RECORD, as follows:

SEPTEMBER 16, 1969.

HON. GEORGE P. SHULTZ,
Secretary of Labor, Chairman, Cabinet Task Force on Oil Import Control.

DEAR MR. SECRETARY: Pursuant to notice in the Federal Register July 24, 1969 regarding second-round submissions to the Cabinet Task Force on Oil Import Control, we, the undersigned members of the United States Senate, attach a memorandum presenting our views on the initial submissions to the Task Force by other interested parties.

We submit our memorandum in the hope that it will assist the Task Force in formulating recommendations to the President. We urge that these recommendations be completed at the earliest possible date so that our constituents, American consumers and taxpayers, may be relieved at last of the burden they have been forced to bear for ten long years.

We and they have been encouraged by your work to date and expect that the promise of relief offered by that work will soon become a reality.

Respectfully submitted,

WILLIAM PROXMIRE,
EDMUND S. MUSKIE.

SUBMISSION TO THE CABINET TASK FORCE ON OIL IMPORT CONTROL

SUMMARY AND CONCLUSIONS

The Oil Import Program is a costly departure from the concept of a free competitive market and can only be justified if it enhances our national security. The burden of proving that the program achieves this objective, and is the best method of achieving it, should rest upon those who wish to maintain the program.

Our own analysis of the submissions so far received by the Cabinet Task Force indicates that the proponents of the present program have not met their burden. Other programs which are much less costly are

available to assure secure sources of oil for any conceivable emergency.

We conclude that the Task Force should recommend the abolition of the program, immediately if possible, or, at the latest within five years. Whatever timetable the Task Force adopts, it should, at a minimum, recommend the following interim measures:

(1) Immediate decontrol of Western Hemisphere oil imports to the U.S.

(2) Immediate decontrol of home heating oil (No. 2 fuel oil) imports from all sources.

(3) Immediate abolition of "historical" quotas.

(4) Commencement, if necessary, of direct federal programs to assure spare capacity.

The great mass of material submitted to the Cabinet Task Force on Oil Import Control makes a thorough analysis of each submission difficult. Therefore, we have concentrated, as we believe the Task Force should, on the submissions of those agencies charged with serving the national interest, rather than the submissions of private parties which, by and large, reflect attempts to justify the status quo or to promote parochial ends. We believe also that material received from qualified outside sources who are not special pleaders should receive special emphasis in the Task Force's deliberations.

The submissions of the Antitrust Division of the Justice Department and the Charles River Associates (C.R.A.) among others, as well as the economic data received by Senator Hart's Antitrust and Monopoly Subcommittee, demonstrate that the cost of oil import controls is enormous. Estimates vary, but perhaps the C.R.A. figure of \$6.2 billion annually is as good an estimate as any. Obviously an annual expenditure of this magnitude must be subjected to careful scrutiny.

As disturbing as the total cost of the program is the fact that the cost is spread so unevenly across the nation: with the Northeast, the Middle Atlantic, the Upper Midwest, the Southeastern coastal states, the Pacific Northwest, and Hawaii bearing a disproportionate burden. In these areas, prices for fuel, such as home heating oil, are far higher than in other parts of the nation, and are kept that way because of the Oil Import Program. In addition, despite the natural advantage its ports would have in terms of access to foreign sources of oil, no new refinery capacity has been built on the East Coast since the imposition of mandatory controls in 1959. As a result, the East Coast, which uses 45% of the nation's oil, has only 15% of the nation's refinery capacity.

These burdens should not be borne unless truly required in the interests of national security. Thus, we must carefully examine 1) the national security objectives which are supposed to be served by the program, 2) the extent to which the program actually serves those objectives, and 3) whether the same objectives could be served by less expensive alternative programs.

Although "national security" can be defined in many ways, it is generally conceded that with regard to the Oil Import Program, the term refers to our ability to assure sufficient oil supplies for our potential military requirement. Thus, the views of the Department of Defense are particularly relevant. And, the Department's submission makes several significant points:

First: Apparently without qualms, the Department currently purchases forty percent of its own oil needs from foreign sources. (97% of the oil for Vietnam comes from our supposedly least secure source—the Middle East.) Increasing import restrictions and raising domestic production would probably not alter this situation, since U.S. refinery outputs, which are so heavily oriented to gasoline (47% in 1968), cannot meet U.S. military requirements for fuels which are below the motor gasoline range.

Second: The DOD does not believe that continuity of oil supply would be a signifi-

cant problem in the aftermath of nuclear war since oil consumption and refining capacity would be so sharply reduced by the nuclear exchange. Nor do limited wars involving some of the producing nations pose a serious threat to our military capability. The foreign sources of oil are increasingly diverse and the denial of such sources is "not apt to be universal." It is most unlikely, for example, that the Caribbean will be affected by a limited war and this area has always increased supplies to the U.S. in times of crisis. It should be noted that the DOD rates Caribbean oil as secure militarily as our own Gulf Coast oil.

Third: The only serious problem in terms of oil shortages would arise in the event of a protracted conventional hostility. Even here, however, DOD states that "In the foreseeable future, partial or complete denial of foreign oil to this nation would not, to any important degree, limit our capability for military action and/or negotiations." DOD does suggest that a protracted conventional war might have a severe impact on the oil situation in Western European nations and in Japan. But clearly we should not bear the cost of assuring these nations an emergency oil supply. As the Antitrust Division submission emphasizes, it "seems inappropriate that the entire cost of allied security needs for oil should fall on the American consumer and taxpayer." There is no justification for this massive form of foreign aid to very prosperous nations.

Fourth: DOD acknowledges that "any type of extended emergency involving the United States and its allies cannot be adequately fueled by the United States alone, and therefore reliance must also be placed upon other free-world resources such as Canada and the Caribbean area. . . . Our national security dictates that we have in existence dependable, capable, and willing overseas sources to satisfy our petroleum needs on a global basis." Thus, DOD does not believe it is possible for us to achieve self-sufficiency in oil. Its submission argues against the policy of distorting our economy in a futile attempt to achieve such sufficiency. In fact, DOD appears to encourage development of overseas sources as essential to our own security.

The overall impression given by the DOD submission is that increased imports pose no serious threat to United States military interests. Some of those imports would obviously come from areas—e.g. Canada and the Caribbean—which DOD already relies on and deems completely secure. The remainder of the imports would come from diverse sources—Middle East, North Africa, West Africa, Indonesia—so that any denial of sources would not be "universal."

A careful analysis of the Interior Department's statistics (Table II-1) also demonstrates that there is no pressing national security justification for the present restrictions. Interior estimates that without import controls but with maximum production, domestic crude oil production in 1975 will be only 1.25 million b/d (11.3%) less than it would be if the present controls are retained. In 1980 domestic production without controls would be 3.36 million b/d (26.4%) less than production with present controls. These figures are based on a conservative estimate of the amount of low-cost Alaskan oil that will be produced in the next decade. Furthermore, not all of the projected decrease in production would be permanent; some idle facilities could be re-opened in an emergency. And, finally, much of the imported oil which would account for the decrease in domestic production would come from secure sources such as Canada and the Caribbean.

If it is determined that some special governmental effort is needed to maintain an emergency spare capacity, the Oil Import Program is not the best way to achieve this objective. As the Antitrust Division submis-

sion emphasizes, "the preservation of reserve productive capacity is (presently) maintained, if at all, by state regulatory action which is made possible by the existence of the import restrictions." These state measures are designed for a variety of purposes, "e.g. incentives for local industry development, the production of tax revenues, the protection of health and safety, the prevention of waste, and the protection of correlative property rights." They are *not* designed to meet national security needs. Thus, "it would appear more desirable to insure the existence of adequate reserves by methods under the direct control of the National Government."

Several possible methods of federal control have been proposed. First, the government could construct extensive storage facilities. Since imports will increase only gradually after present controls are eliminated, such facilities could be completed before there is any massive increase in imports. It should be noted that C.R.A. estimates the annual Mobil places the cost in the 45-60 cent range and Shell Oil places the cost at 64 cents. Under the C.R.A. estimate, we could store 1.2 billion barrels (the Interior Department's projected decrease in annual domestic crude production by 1980 due to removal of controls) for only about \$648 million. Second, the government could subsidize or otherwise promote the research necessary to make practicable the exploitation of shale oil and oil from coal in the United States and tar sands in Canada. Third, if pro-rationing is considered the best method of assuring adequate reserves, the government could establish a national system of pro-rationing of large, efficient fields designed to achieve national security, and only national security, objectives. For example, the government could require large domestic producers to operate at 85% of maximum efficient production, which would have only a small impact on the price of U.S. oil but would assure substantial reserve capacity. Fourth, a direct payment could be made to domestic producers based on the number of feet of exploratory wells drilled.

It has been suggested that, in the short run any method of direct federal action will be as expensive as the present import control system. Even if this highly doubtful proposition were so, the direct methods would have two advantages. First, they would impose the costs of assuring adequate reserves equally on all Americans—taxpayers or consumers—rather than imposing disproportionate burdens on the consumers of certain regions. Second, they would permit us to make a much more accurate estimate of the costs of assuring adequate reserves.

In the long run, the advantages of direct federal action over import controls are enormous. Based on a projected seven billion barrel annual demand for oil in 1980, the cost of the present program would be approximately \$10.5 billion in that year. By comparison, any alternative method is cheap. Equally important, a direct government program would, in the words of the Antitrust Division submission, "avoid the anticompetitive consequences of the present import quotas and state market demand production limitations." It would create an oil industry which "would be tougher, healthier, and more competitive, better able to provide for our needs more efficiently and at a lower cost." Obviously, this is the kind of industry which will best be able to meet our civilian and military requirements in the decades to come.

II

In light of the foregoing analysis we recommend the abolition of the Oil Import Program, immediately if possible, or, at the latest, within five years. A five-year phase-out would clearly provide sufficient time to cushion the economic dislocations in certain areas. Abolition of the program within this

period would obviate the need for approval of foreign trade zones to afford relief to American consumers.

Whatever timetable the Task Force adopts, it should, at a minimum, recommend the following interim measures:

1) Immediate decontrol of imports of Western Hemisphere crude oil and refined products. DOD considers all of this oil at least as secure as U.S. Gulf Coas oil which moves to the East Coast by water. Immediate increases in imports of this lower cost oil will reduce U.S. prices and stimulate competition, thereby leading to more efficient production and operation by our domestic industry.

2) Immediate decontrol of home heating oil (No. 2 fuel oil) imports from all sources. The severe burdens which import quotas on this oil imposes on certain sections of the country makes immediate decontrol the only appropriate policy.

3) Immediate abolition of "historical" quotas. The Departments of Commerce and Interior, and the Antitrust Division, agree there is no justification for the "historical" allocation of quotas.

4) Commencement, if necessary, of direct federal programs to assure emergence spare capacity.

RIISING LEVEL OF TEXTILE IMPORTS THREATENS THE AMERICAN INDUSTRY

Mr. TALMADGE, Mr. President, there is increasing concern in Congress and in the administration about the rising level of textile imports that threaten to disrupt the American industry and throw hundreds of thousands of our people out of work.

This is a critical situation. It grows more critical every day. The volume of low-wage textile imports entering this country has reached staggering proportions. Last year they were more than double what they were just 5 years ago. During the first 6 months of this year, imports are already running 13-percent higher than last year's record level. It is estimated that some 227,000 textile apparel job opportunities are being lost because of imports.

Japan has been the worst offender in recent years. She has flooded the American market with cheap textiles and erected strict barriers against products from the United States and other countries.

We are prepared to negotiate voluntary textile import agreements. But if we cannot do that, then it becomes the duty of Congress to legislate controls to protect this industry that is so important to our Nation's economy. On Monday, September 22, the Macon Telegraph published an outspoken editorial on this problem. I ask unanimous consent that it be printed in the RECORD.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

TEXTILE INDUSTRY MUST HAVE HELP

Last year scores of bills were introduced in Congress to impose quotas on textile imports but none became law and the nation's textile industry has been forced to carry on against increased competition from "Made in Japan" products.

Secretary of Commerce Maurice Stans went to Tokyo two months ago to persuade the Japanese government it should slacken its exports of textiles to the U.S., but he failed.

Five Japanese officials have now just returned home after a week in Washington

where congressmen from textile producing areas sought to impress the visitors with the need of some relief for American textile interests. It is not likely they succeeded any more than did Secretary Stans.

Department of Labor studies indicate a loss of 100,000 jobs a year in the U.S. textile industry if present import trends continue.

The Nixon administration has given lip service both to free trade and to relief for the domestic textile industry, but he seems unsure which deserves priority.

While Secretary Stans pushes for textile quotas, President Nixon's special representative on trade matters, Carl J. Gilbert, advocates freer trade.

The prospect of hundreds of thousands of unemployed workers in the U.S. textile industry should persuade the administration what its trade policy on textiles should be.

OPPORTUNITY IN RURAL AMERICA

Mr. DOLE, Mr. President, much publicity is given to the pressing needs of our urban areas. While we must take action to alleviate the many problems of our cities, we cannot forget that there is a rural America that also deserves our attention. What is taking place on the farms and in the small towns of America has a direct relationship to the growth of our urban population.

There are people in the rural areas who are seeking to reverse the economic and population trends. My State of Kansas has many citizens who are seeking to attract industry and are finding better ways to utilize the great resources of Kansas. By diversifying our agriculture, we are adjusting to the weather and an increasingly complicated economy.

More important, many people are working at the local level without Federal or State money to solve their problems. It is through their private efforts that Kansas will continue to contribute to the Nation.

I ask unanimous consent that a truly heartening description of the efforts made by the people of Ulysses, Kans., be printed in the RECORD. The article, published in the National Observer, was written by a former Kansan who demonstrates a true understanding of the opportunities in southwest Kansas.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

A SMELL OF SUCCESS COVERS THE DUST BOWL—UNDERGROUND WATER AND A GAMBLING SPIRIT CHANGE THE HIGH PLAINS

ULYSSES, KANS.—The Dust Bowl sprang from drought, wind, and wrong-headed farming. This unhappy combination turned the high plains of Kansas, Oklahoma, Texas, Colorado, and Nebraska into a monster that spewed blackness into the air, making day into night in the Midwest and putting a dingy ring around the sun as far off as Maine.

So Godforsaken and bereft of promise seemed the high plains that those who lived there, red-eyed and choking on its dirty air, lost their faith in the land. Thousands fled, some to gentler climates in the East, others, like the Joads in *The Grapes of Wrath*, to the promised land of California.

There still is little rain on the high plains, and the wind blows as fierce as ever. But a combination of different factors, this time a happy combination, has brought a revolution in the agriculture and the economy over

the last 10 years of what once was the heart of the Dust Bowl.

It seems almost a vision to drive the country roads now, at harvest time, and see tomatoes growing in the old Dust Bowl, and cucumbers, sugar beets, popcorn, dry beans, and, of all things, cantaloup. The Dust Bowl has become a Vegetable Bowl. And the money to accomplish this has come not from hyperfunded Federal programs but from the savings of the struggling farmers and their willingness to go into debt.

The most important component of this revolution is the discovery that water far, far below the surface—200 to 600 feet down—could be pumped to the surface economically. It is economic partly because of another subsurface resource: a natural-gas field under so much pressure that the gas can be piped to the top and fed as fuel to the engines that pump up the water.

This precious water resource in a region that gets only 10 to 18 inches of rain a year—"You ought to be here on the two afternoons when we get it," remarks one rueful native—has thrown open previously unaccessible agricultural doors. Feed-grain crops, for example, are producing so well under irrigation that a whole new industry has been attracted to western Kansas—feeding cattle in lots that handle up to 30,000 head a day.

Just how dramatic the change is could be seen—could even be smelled—several days ago in one of the fields of A. G. McCray, who farms 6,000 acres west of Ulysses. A tall, lean man with a wind-burned face, Mr. McCray stood in the middle of thousands of tomato plants, supervising their harvest by huge, automated machines that scooped up whole plants three rows at a time, shook the fruit loose into bins, and discharged the residue out the rear.

The air was pungent with the smell of the tomatoes. And mixed in was the unmistakable aroma of fresh water, a smell noticeable only in country where it is rare. Mr. McCray pointed across the road to the adjoining field, also his, where two throbbing motors pumped water into rows of milo.

Other of Mr. McCray's acres grow cucumbers and corn, also through the use of water piped through a system of pipes. And he also grows wheat on dry land.

"I came here in '39 when the dust was still blowing," says Mr. McCray, squinting against the sun. "Course then we didn't grow any milo or corn or tomatoes. Just wheat. Now you can't make any money on wheat—lucky if you can meet your expenses. What little I plant is just to have something to hold the land down."

To hold the land down. It was a hard lesson learned by the high-plains farmers. The rich loam that is capable of producing so much when conditions are just right can be blown to destruction when conditions are wrong.

There is nothing to slow down the wind, not mountains, not hills, not even trees. The prairie stretches out from Mr. McCray's fields so flat and unbroken that the grain elevators of tiny towns 20 miles away stand like distant castles on the horizon.

It is a land of open spaces and few people, where pleasures are small and close to home. The major topics of conversation in Ulysses on a recent week end were the performance in a nursing home of 4-H Club singers and the approaching Home Products Dinner, which features food produced on the hoofs and in the fields of Grant County, of which Ulysses is the county seat.

The teen-agers here don't look like their counterparts in urban and suburban areas. Their dress is more subdued, their hair is shorter—both the boys and girls—and their demeanor much calmer. To them, marijuana is just another weed that grows wild in the country.

The kids' principal recreations are riding

around in cars, catching the one new movie a week feature by the sole theater in town, and stopping in at a restaurant with friends to drink Cokes, smoke cigarettes out of sight of their parents, and gossip.

CHURCH SOCIALS AND WEATHER

Their parents pass the time at church socials and in talk of the weather, crops, and how Ulysses has grown from a fading little prairie crossroads 20 years ago to a bustling little city of 4,200. "There's not much else to do here," says a housewife who moved to Ulysses as a newlywed from a city in eastern Kansas 20 years ago. "There's no really good place to eat out, so most folks just stay home. But if you like small-town life, where you know everybody and everybody knows you, it's a nice place to live."

Local boosters like to talk about the Ulysses airport, which services mainly private craft; it has more take-offs and landings per year than the airport at Garden City, the nearest sizable city (population 12,000).

One mark of the region's prosperity is that many farmers own their own planes: Indeed, the Ulysses airport would be even busier except for the farmers' habit of landing their craft on county roads in front of their homes. And although most farmers hedge their bets and predict financial disaster every coming month, many of them are buying tractors with air-conditioned cabs and radios, so they will be cool and entertained while they plow.

When Ulysses folk yearn for special recreation, they usually drive 200 miles to the mountains in Colorado. They like to say that the state or Federal Government some day will dam up the Cimarron or another stream to create a reservoir for fishing and boating, but so far it is a distant dream. One drawback to storing precious water in a reservoir is that so much of it is lost to evaporation. Summer temperatures sometimes soar to 120 degrees. In winter, it can drop to 40 degrees below zero.

Weather is a constant subject for conversation, since it so intimately affects how people live. The role that weather—no rain, high wind, hot sun—played in creating the Dust Bowl is well remembered. And as recently as 1954, during a bad blow, dust and tumble weeds piled up to the second-floor windows of the Hotel Ralsmore in Ulysses. There was a fire call during the storm, and the dust was so thick that two firemen had to walk alongside their truck to guide it to the blaze. Somewhere up above, the sun was shining.

"The old timers like to tell about how hard the wind blows out here," says Leroy Martin, who manages the feed mill of a farmers' co-operative in Ulysses. "My dad farmed around here until 1930, when he got blown out and moved east. He used to say that he didn't mind the wind blowing the dust around in the fields, but when he came in to eat dinner and couldn't see his wife sitting at the other end of the table, that was too much."

Lack of moisture now is a constant concern; decades ago, before the farmers moved in, it was less of a problem. When the high plains were first settled, the native buffalo grass had roots down so solid and deep that the sod could be cut out in blocks and used to build homes. The sod was nature's way of overcoming the semiarid climate; what little rain there was, the sod captured and held.

William Allen White, the famous Emporia, Kan., journalist, grew up when there was still some unbroken prairie left, and his description, in his autobiography, of what happened to it is hard to improve on: "In all the prairies across these latitudes, the plow has come and filled the brooks. Even the verdure of the prairies and the pastures is different. The brooks are dry. The land has changed."

Thus the plows won the range wars against

the cattlemen in the late 1800s. Then Menonites from southern Russia introduced drought-resistant winter wheat, and the foundation for the enormous wheat crops of years to come was secure.

But even with drought-resistant wheat, farming on the high-plains is chancy. "Back in the eastern part of the state, where there's more moisture, if they miss one wheat crop they think it's really bad," says Marshall Walker, agricultural agent for Grant County. "We've missed seven in a row. It was froze out two years, the drought got it two years, the aphids two years, and the grasshoppers one."

So Mr. McCray and other high-plains farmers are trying to transform their life's work from a gamble to a dependable, stable source of income, and it is to irrigation that they have turned.

But theirs is no ordinary irrigation story. No Federal millions have been spent on a Hoover Dam or on an intricate and expensive ditch network. No state or regional commission has put its weight behind the financing for the vast irrigation system needed in a land where trends are measured by what happens on millions of acres, where single farms often include thousands of acres.

The farmers have done it themselves. It costs about \$20,000 to drill and equip one of these high-plains wells, and the farmers have dug into their savings or, more typically, have gone into debt to finance their own water systems.

State officials estimate there are 5,000 of these wells now operating just in the southwest 14 counties of Kansas, which is the heart of the Dust Bowl, and thousands more in surrounding high-plains regions of Texas, Oklahoma, Colorado, and Nebraska.

"I'm pretty well convinced that it's the largest irrigation system in the world built with private capital," says Milam Jones, horticulture specialist for Kansas State University at Manhattan.

Mr. Jones' job is to encourage growing what are called "specialty" crops, which in this land of grain growers means vegetables and fruits. So far, these crops make up a small part of the whole in the southwest 14 counties—10,000 acres of dry beans, 22,000 in sugar beets, 5,000 in popcorn, and a few hundred more in tomatoes, cantaloup, and cucumbers.

But Mr. Jones envisions the transformation into a Vegetable Bowl. His reasoning: The high plains are closer to the big Eastern markets than the major produce-growing areas in the Western states; moreover, high land prices out West are making produce growing uneconomic, while land prices on the prairie are far lower.

He says the biggest handicap is the lack of processing plants. Tomatoes now must be shipped to Colorado for canning, for example, and it is unlikely that the tomato crop will increase dramatically until a processor decides to build in western Kansas.

THE POPCORN INDUSTRY

But even if the specialty crops are still minor, they have made an impact. The existence of the popcorn crop resulted in the creation in Ulysses of a company to process it. Madison Traster, president of Southwestern Bean, Inc., reports that the company grossed \$325,000 last year and shipped its bulk popcorn all over the country and to Peru, Mexico, Greece, Cyprus, and Japan.

"People in Iowa and Illinois told us we were crazy, that we could never grow popcorn out here," says Mr. Traster. "Well, we still have our violent weather to contend with—the high winds, the blizzards, the temperature extremes—but we're learning methods to cope with these problems."

The most impressive evidence of the new agricultural practices can be seen simply by driving down the county roads. Such a trip 20 years ago would have shown a barren landscape—the wheat would have been har-

vested weeks earlier and nothing would have grown up to replace it.

Now the corn in some fields stands 12 feet high. The milo is thick and top-heavy with deep red seeds, its growth spurred by irrigation. These are the crops whose expansion in the high plains is measured by tens of thousands of acres, the crops that are fattening thousands of cattle being brought in from the range lands of Texas and Oklahoma.

A few figures: There were 433,000 acres of milo and other grain sorghums planted in the 14 southwestern Kansas counties in 1956. Last year the total was 864,000 acres, and 300,000 of the increase had come in just the previous two years. Similar statistics for corn are 3,500 acres in 1956 and 90,000 in 1968.

Better fertilizers, insecticides, and farming practices contributed to the increases, but irrigation brought most of it. And the growth of the cattle-feeding industry is spurring even more increases. One huge feed lot near Garden City handles 30,000 head a day, requiring 10,000 bushels of grain a day. There are half a dozen feed lots just as big and dozens of smaller ones scattered throughout southwest Kansas.

The feed lots are attracting still another related industry, meat packing. New plants have opened in Garden City and Dodge City in Kansas, and in Guymon, just across the line in Oklahoma. A new plant will open in Liberal, Kan., this fall, and two more are being planned for other communities.

Typical of the feed lots is one managed near Ulysses by Tex Demuth, a rangy, hard-working young man who gets about his feed lots on a horse. With his cowboy boots, spurs, and hat, Mr. Demuth would have fit into the landscape 100 years ago, but nothing else in his operation is reminiscent of former times.

Every operation is dedicated to getting the cattle as fat and tender as possible with the greatest efficiency. The grain, for example, is steamed and then rolled out so its starch will be fully digested rather than passed through. And feed lots are experimenting with feeding each animal three pounds of plastic pellets, which stay in the animal's rumen indefinitely to serve as roughage, rather than a more expensive daily portion of alfalfa.

"QUITE A REVOLUTION"

Remarks Mr. Demuth, just before riding off to a far corner of his feed lot: "It's been quite a revolution around here. It doesn't look like the same country as five years ago, and if you come back in another five you won't recognize it again."

Despite his optimism and that of others, however, there are a few sobering concerns about the future. Just as the land once was abused by overuse and neglect, the underground water supply could be endangered.

Once it was thought that the underground water in southwest Kansas was part of a vast artesian system constantly recharged by runoff from the Rocky Mountains. The high plains slope eastward from the mountains about 10 feet to the mile, and indeed there are places in Kansas where the underground water pressure built up by this downhill run is so high that pumps are not needed to bring it up.

But geologists now say that a fault in the earth's crust in Colorado diverts this mountain water from southwest Kansas. Thus it is theorized that the water the farmers have been pumping into their fields comes initially from those paltry few inches of rain a year and from seepage from the Arkansas and Cimarron rivers and smaller streams.

The Kansas Water Resources Board studied underground-water use in the six counties in the southwest corner of the state in 1968. The board concluded that if irrigation continues to be added at the present rate of 20,000 acres a year, the water supply could be exhausted within 45 years.

These concerns have prompted discussion about forming regional water-resources

agencies to control water use. On a more theoretical level have been discussions about huge Federal programs to bring water up from the Mississippi in Louisiana, or down from the Missouri River in Nebraska.

"I know that sounds pretty farfetched," says Kansas State University's Milan Jones. "But if you stop and think of all the Dutch have done to get water out, it doesn't sound so farfetched after all."

LITTLE MOVEMENT IN VIETNAM POLICY

Mr. EAGLETON. Mr. President, despite much motion there has been little real movement in U.S. Vietnam policy. We have witnessed a change in style but not in content. We talk of negotiations but still pursue military victory.

We still cling to the hope that Saigon will rally and Hanoi will fold. We verbalize that hope as "Vietnamization"—the ability of the South Vietnamese to fight for their own country.

Mr. President, I fear that dependence on this policy offers little real hope for peace.

I ask unanimous consent that two recent and excellent articles which discuss "Vietnamization" and the prospects for its success be printed in the RECORD.

There being no objection, the items were ordered to be printed in the RECORD, as follows:

[From Christian Science Monitor, Sept. 23, 1969]

TIME FOR WHOM?

(By Joseph C. Harsch)

WASHINGTON.—Now at least we should be able to find out whose side time really favors in Vietnam. And the answer may not be pleasant for Washington.

The whole theory behind the slow "second round" of United States troop withdrawals is that time favors the Saigon regime and its military position.

SHORT-FALL

In the official view of the "establishment" in Saigon the Viet Cong forces are nearly at the end of their capacity to go on fighting, and North Vietnam is incapable of making up for the difference much longer.

If there is any truth behind this theory then by the end of the year a true military victory for Saigon and its allies ought to be apparent.

President Nixon allowed himself to hope that he might be able to get even more than 100,000 Americans out of Vietnam by the end of this year. But his present timetable calls for only reducing the total by some 60,000.

This short-fall is a concession to those who argue that given "just a little more time" the long-sought "victory" will become real, and palpable.

Well, perhaps so.

And perhaps President Nixon really had no choice.

Who in his position would have announced a bigger cut at the risk of triggering a panic in Saigon itself which could well leave nothing but wreckage from the long years of American effort in Vietnam?

END OF RESOURCES

There is "the other side" of the coin. On that other side is the possibility, just as likely to be true as is the theory of "time on our side," that the Saigon regime itself will never survive the departure of American forces no matter how long delayed.

The awesome danger Mr. Nixon really faced in arriving at this troop withdrawal decision was that a larger withdrawal announced at this time would cause such a collapse in

South Vietnam that the American forces there might even have to fight their way back to the beaches.

Who is nearest collapse—the Saigon side or the Hanoi side?

Conceivably, both are near the end of their resources.

If you accept that possibility then the argument is a strong one indeed for keeping up the American effort just a little longer.

But if you take as your premise the possibility (perhaps the probability) that the Saigon regime is viable only with an American military underpinning then the issue really is only one of when that underpinning is withdrawn and Asia solves an Asian problem in its own way.

Since 1945, Asia has been trying to solve its problem in Vietnam one way, and Western forces have attempted to prevent that solution and impose a different solution.

First the French carried the burden. Then the United States took it up. But always the essential effort has been to impose a Western concept of a solution upon a part of Asia.

CONCESSION

We are really back now where all this started in 1945 and 1946.

At that time the State Department favored letting Indochina (North Vietnam) solve its own problem its own way.

Serious thought was given to preventing the French from attempting to reestablish their authority. It could have been done. French military resources were sparse. The French expedition which recaptured Halphong and Hanoi could never have been mounted without American consent. That consent might have been withheld. Many in Washington wanted to withhold it.

Mr. Nixon has adopted as his general policy toward Asia one of "disengagement from the mainland of Asia." But he has put off for another three months the radical step in that direction. In effect, he has given the Saigon regime another three months for "shaping up."

One can only hope that it is not a wasted and expensive concession.

[From Newsweek magazine, Sept. 24, 1969]

THE ILLUSION OF VIETNAMIZATION

(By Maynard Parker)

(NOTE.—The watchword of American officials in Washington and Saigon these days is "Vietnamization," the process of turning over to the South Vietnamese the main burden of fighting the war in their homeland. Last week, Newsweek's Saigon bureau chief cabled his personal assessment of the program and its implications.)

All during the 1960s, through a series of fumbling half steps and half measures, the United States became hopelessly bogged down in a land war that it did not seek and did not want. Now the nation wants an end to the war. But the government is moving toward this goal with the same kind of stumbling steps, the same ambivalence, that first led it into the quagmire; and this erratic route may bring a conclusion no less tragic than the original process of involvement.

There can be little doubt that the Nixon Administration is pinning its main hopes on Vietnamization. In sum, this means that it has temporarily avoided the problem of a political solution to the war and has set out again in pursuit of a military victory—this time through the proxy of the South Vietnamese Army. How else can one explain the fact that, two weeks ago, President Nixon missed an opportunity presented by Ho Chi Minh's death, to advance a new peace proposal? Or that last month the American Embassy in Saigon did not murmur a complaint when President Nguyen Van Thieu appointed one of his own military colleagues as his new Premier?

Six months ago, when I stopped off in Paris on my way back to Vietnam, I was assured by

all four sides that the war was running down—an assumption shared by many ordinary Americans. But now it is September, and due partly to North Vietnamese stonewalling and partly to President Thieu's intransigence, there has been no visible progress toward peace. There is little remorse in official Saigon over the failure of the talks. Fate has given the U.S. command a second chance to bring the war to an end on its own terms, and the generals believe they can do it with Vietnamization.

The strategy has definite attractions for both President Nixon and President Thieu. On the one hand, it will not force the South Vietnamese leader to broaden his government in order to win popular support; on the other, it will not compel Mr. Nixon to ram compromises, such as a coalition government, down Thieu's throat. As for the U.S. command in Saigon, it has been heartened by a secret report that argues that the domestic "public-opinion bomb could be defused" by withdrawing an average of 10,000 U.S. troops a month until after the 1972 U.S. Presidential election. Then the pullout would end and the remaining 250,000 men would settle in for the duration. As one strategist expressed it: "We'd put the war on page seventeen."

PREMISE

To the contrary, it seems to me that Vietnamization could put the war back on page one in headlines as bold as ever before. For one thing, it is based on a premise that few Americans would tolerate: that large numbers of U.S. troops will be fighting in Vietnam for perhaps another decade. The Administration talks of turning over the bulk of the fighting to the South Vietnamese by the end of 1971. But no one here believes that the Army of the Republic of Vietnam will be ready by then to cope with Hanoi's regulars. Admittedly, the ARVN has improved. But in general its performance remains mediocre. Most ARVN divisions still cling to the relatively safe coastal areas, and the desertion rate still runs an appalling one man in five each year. All indications are that the ARVN's improvement will continue to be agonizingly slow, and that the Americans will still have to do much of the fighting. Given the ARVN's weaknesses, it seems highly debatable that a 250,000-man U.S. force—which would include a sizable number of combat troops—can hold the same ground that half a million GI's are now working night and day to defend.

The reduced American force might well be subjected to savage North Vietnamese attacks, and there is strong reason to believe that the ARVN might offer little help. The siege of the U.S. Special Forces camp at Ben Het earlier this year offered an ominous hint of things to come. ARVN troops refused to defend a U.S. artillery battery, and when an American engineer company was ambushed, South Vietnamese officers refused to go to its aid. Relations between the allied armies are already so strained, in fact, that the U.S. command has drawn up contingency plans for fighting the South Vietnamese, if necessary, during a final American withdrawal.

Thus, it seems to me that the weekly U.S. death toll might continue to hover between 150 and 200, even with only half the present number of GI's in South Vietnam. And unless the war is ended by an over-all negotiated settlement, South Vietnam—as well as Laos and Cambodia—will remain terribly vulnerable to Communist conquest.

BEND

The only alternative to Vietnamization—and the only hope for ending the war—is to push the Saigon government into a compromise with the Communists. Such a compromise must allow the Viet Cong's National Liberation Front to share power in direct proportion to its popular support. So far, President Thieu has hardly begun to bend. True, he invited the NLF to join with him in

holding elections. But in almost the same breath, he warned that he would jail anyone who espoused a coalition government, or who used the word "withdrawal" instead of "replacement" to describe the American pullout. Thieu's police have already jailed scores of non-Communist opposition members. What, the Viet Cong must be asking themselves: What would happen to them if they surfaced to take part in a national election?

Similarly, Thieu's choice of Gen. Tran Thien Khiem, the ranking general in the South Vietnamese Army, to head his "peace cabinet" represents a retrenchment on the right. It may be too much to ask Thieu, a rigid anti-Communist who was handpicked by the U.S. to fight the war to the bitter end, to willingly turn his government into an instrument of reconciliation. But if the war is ever to end, that is precisely what must be done. South Vietnam needs a predominantly civilian government, one that cares more about making peace than waging war. The only way to get it is through firm American pressure. With nearly 40,000 Americans already dead, this is no time for conventional diplomacy. President Thieu must be made to understand that his best chance for survival—indeed, his only chance—lies in compromise with the Communists. And as risky as that policy will be, Thieu must realize that if he rejects it, he will force the U.S. to make a deal with Hanoi behind his back.

At the national level, Thieu must make concessions to the non-Communist left, by bringing its leaders into his government. Thieu's position is as strong as it will ever be; NLF sympathizers amount to no more than 35 percent of South Vietnam's people. If Thieu and the other non-Communist factions cannot handle this minority in a political struggle once foreign troops withdraw, then something is so fundamentally wrong that another decade of American occupation can hardly be expected to cure it.

Past: At the local level, American officials must encourage the *de facto* cease-fires—called "accommodations"—that have already become common in this war. Especially in the Mekong Delta, it is normal procedure for commanders to stop fighting, either when a stalemate has been reached or when both sides wish to harvest crops. In the past, the U.S. has opposed such settlements. But encouraging accommodations might bring peace to large parts of the countryside without waiting for progress in Paris.

Certainly, a policy of accommodation at the national and local levels entails risk. But sooner or later, some such risk will have to be taken. The alternative is to proceed with Vietnamization, a program that promises only more fighting—much of it by Americans. Vietnamization will solve none of the basic causes of this conflict. It provides neither a method of reconciliation nor a means for the total withdrawal of foreign troops. As anthropologist Gerald Hickey has warned: "If an effort is not made at accommodation, people in the U.S. had better be prepared for many years of fighting."

FUNDING OF POLLACK CONVERSION PROGRAM

Mr. BROOKE, Mr. President, fishing is one of this country's oldest industries, and like many it has not stood well the test of time. Depleted fisheries stocks, foreign competition, high interest rates, internal divisions, water pollution, and many other factors have all wreaked havoc with this proud and once productive industry. Now the fishing fleets of New England are coming to the end of the road.

The Senators and Congressmen of New England have continually sought Federal aid to try and reverse the seem-

ingly inexorable tide of deterioration of her fleets and the demoralization of her fishermen. They have met with varying degrees of success. The plethora of bills introduced on their behalf has not generally received the attention they deserved and we have been forced to rely upon the few workable, existing programs for themselves have up to now lacked the unity and organization most necessary to the effective presentation of their case.

This year, the most exigent of all problems facing the New England fishing industry was the lack of haddock. Haddock is one of New England's staple food fish, and the species that the majority of New England fishermen depend upon for their livelihood. The drop in haddock landings has been incredible. In fact, they are now at their lowest point in the last 40 years. Marine biologists tell us that the only program that might save our haddock from almost total annihilation is a total moratorium on fishing in the Georges Bank area. The International Commission on North Atlantic Fisheries recently responded by declaring a partial moratorium on all haddock fishing by participating foreign nations who fish this once plentiful fishing ground. The fishermen of New England worked closely with the Bureau of Commercial Fisheries by assisting the Bureau's representatives to the ICNAF conference to present the conditions existing on the Georges Banks to the other nations at the conference. At the same time, work was going forward involving both the Bureau and the fishermen as they sought a viable alternative to haddock. The best substitute was found to be pollack.

The fishermen started to concentrate their efforts on making a success of this replacement program. This desire to help themselves brought about a major conference in mid-July in Gloucester, present at which were not only representatives of the fishermen, but the processors, and other important elements of the fishing community. From this meeting came a greater organization, coordination, and, most importantly, a momentum that would bring some success to the modest fishing boat conversion and pollack marketing programs that were being undertaken.

The Senate, in its decision to delete from the Department of the Interior appropriation the amount of \$563,000 for research on pollack fishing, has seriously damaged the work of an entire summer. The momentum developed has been eliminated, and the possibility of continued heavy fishing of depleted haddock stocks will go on because the development of a logical alternative has not gone forward. Most important, with this cut in funds, the faith and confidence of the men of this industry that the Federal Government can respond effectively to their dilemma has been obliterated. At best, the money sought from the Interior appropriations bill is not great. It represents a start on what we hope will be a very significant program. Without it, however, any progress we might have made will be lost. I hope that when this measure is considered in conference, this

small but critically important cut will be restored to the Interior budget.

Mr. President, just this morning the New York Times published a timely and incisive article on the condition and mood of the fishing fleet and fishermen of Gloucester. This is a painfully accurate description of the present state of the industry in New England. I ask unanimous consent that the article be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

U.S. FISHING INDUSTRY FOUNDERS IN A SEA OF FOREIGN SHIPS

(By Paul L. Montgomery)

GLoucester, MASS.—The days of glory are gone for this old fishing port. Only old men can remember when the harbor was full of schooners, their masts a forest of timber, or how the herring gulls clouded the sky following the fleet home.

Now in the dawn the rusty trawlers crawl out from the dilapidated piers while the gulls shift uneasily from foot to foot on the roof peaks. As often as not they come back half-loaded, their crews cursing the sleek, 300-vessel foreign fishing fleet that rules the rich grounds these fall days from Cape Ann to Montauk Point.

Since 1961, when the Soviet Union made its first probes in the Grand Banks, foreign ships have come in increasing numbers, staying longer and moving inexorably west and south to the 12-mile fishing limit off the northeastern coast.

Each year the vessels range farther and fish closer to shore. In August, 1968, 213 foreign fishing vessels were sighted in northeastern waters by the Bureau of Commercial Fisheries. They included 118 ships from the Soviet Union, 35 from Poland, 31 from East Germany and 29 from West Germany.

THROUGH FULL SEASON

This August the figure was 325, including 212 Soviet vessels, 37 from Poland, 40 from East Germany and 24 from West Germany. Most of the vessels, some of them twice as big as the largest American ship out of Gloucester, have stayed into September, and more ships have arrived.

The bureau's plane spotted 243 foreign vessels last week in the Georges Bank area east of Cape Cod. The national breakdown was 143 Soviet, 33 East German, 18 West German, 29 Polish, 14 Spanish, four Norwegian, 1 Rumanian and one Japanese.

There are also about 60 Soviet ships in the fishing grounds between Montauk Point and Nantucket. Earlier this year, single vessels from Israel, Greece, Bulgaria and Cuba were seen off the coast on what appeared to be exploratory missions.

Every year, the foreign fishing season off the American coast gets longer. Last year, for the first time, the Soviet fleet followed the herring south to Virginia and stayed late into the winter. The Germans and the Poles are expected to join the Russians this year.

While marine biologists and economists give many reasons, not only over-fishing, for the decline of the once-proud Gloucester fishery, the fishermen see only one—the seemingly omnivorous and often intimidating foreign fleet.

The other afternoon on the Seven Seas Pier, the Phyllis A. was unloading its small catch of haddock and whiting while the crew grumbled about low prices and stiff competition.

"LAST POUND" NEARING

The foreign ships were "only 23 miles from here," said the captain, "right out there like a picket fence keeping the fish out. You can't even turn around it's so crowded."

"We're on our last legs," said Joseph F.

Grace, the Mayor of the town and chairman of the Gloucester Fisheries Commission, at the group's September meeting. "Every nation is out there racing to get that last pound of fish out of the sea. One day, they are going to discover they have that last pound."

The Mayor was making a plea for industry support for Senator Edward M. Kennedy's Fisheries Development Act of 1969, which seeks to "help our fishing industry recover from the crisis situation it is now in" through technical and financial assistance for conservation and new equipment.

The other day in the Fisherman's Institute, a rest home for old men of the sea, Seymour L. Harnish, a former captain, was talking about the old days.

"I'll be 91 if I live to see the 15th day of November coming," he said, "and, my gracious, I hope to tell you the difference between then and now is like night and day."

In the dim lounge of the institute a soap opera flickered on the television. Mr. Harnish, wearing a battered felt hat, occasionally glanced at the screen through his thick glasses. In a corner, two men bent over hand-whittled cribbage boards.

"I was captain of the Romance in 1914," Mr. Harnish said, continuing: "That's the year war broke out. We had 19 men, purse-seining mackerel. I come home with 180 barrels of salt mackerel at \$20 a barrel. Why now you can't even hear tell of salt mackerel. People don't eat them any more."

FOREIGN ADVANTAGES

Mr. Harnish turned his attention to the foreign fleet.

"They're tearing up the feeding bottom," he said. "It stands to reason they must have cleaned up their own grounds on the other side, now they're over here cleaning up ours. I won't say it has destroyed our fishing yet, but if they keep on they will."

Mr. Harnish said the foreign ships enjoyed two big advantages—cheap labor and use of nets with smaller mesh than that permitted for American fishermen. "They get men on those boats living for months almost like convicts," he said. "You can't get our men to do that."

Down near the wharves, Sam Ciaramentaro was assembling a net at his chandler's shop. He is 54 and gave up fishing for a shore job in 1947. "I've got two boys; I wouldn't send them fishing," he said. "You waste your life out there, that's all."

Mr. Ciaramentaro said his business had dropped 20 per cent in the last few years. He said the foreign fleet was certainly part of the problem. "We don't have the vessels to compete with them, we're getting pushed around," he declared. "I've got nothing against anybody, Russian or American, working for a living, but not when you got to push somebody else around."

"We're all spoiled," he went on. "We wouldn't eat herring like the Russians are catching. Our young housewives want these prepared fish sticks they just have to heat and they're ready to go. You can't compete with that."

While most of the fish caught by foreign ships is for their own country's consumption, an increasing amount is finding its way back to the United States as imports. This is particularly true of blocks—frozen, compressed slabs of filleted fish that are used in making fish sticks and other prepared products.

Gorton's of Gloucester, which was founded in 1755, imports blocks from Poland. The blocks are made on the Polish ships from fish caught perhaps 50 miles from the factory, taken to the French territory of St. Pierre and Miquelon off Newfoundland for transfer to American freighters, then moved to Gorton's. Gloucester fishermen concede they cannot compete with the Polish prices.

The trend has had its effect on Gloucester, which was founded in 1623. The port's annual fish landings used to total about 350 million

pounds; last year they totaled 97.6 million pounds.

The fleet, mostly vessels individually owned by Portuguese-American and Italian-American entrepreneurs, has shrunk from more than 200 ships 10 years ago to 110 now. Last year, one new vessel was added to the fleet while two older ones sank.

DROP IN FISHERMEN

There are about 1,000 fishermen in the town, compared with the total 10 years ago of 1,800. Crews of the ships share 60 per cent of the ships' catch as their wages; the owners get 40 per cent.

Although the Government has a grant and loan program that can pay up to half of the cost of new fishing vessels, the fisherman complain that it takes too long and is too complicated to get the Federal money, and very difficult to get the capital they need for their own share.

"We are the farmers of the sea," said Mayor Grace. "The Government pays our farmers money not to grow crops, and here we are trying to make a living and bring money into this country and we get very little help at all."

Gloucester still has hopes of reversing the decline of its fishing, and particularly of stemming fish imports. In the United States last year, 58 per cent of food fish and 76.2 per cent of all fish products were imported. The figure for food fish imported in 1960 was 41.4 per cent.

Mayor Grace, however, is something less than optimistic. "In the face of all the subsidies for fishing being handed out in all these other countries," he said at the fisheries commission meeting, "we should give an accolade to the American fisherman just for surviving."

ADDRESS BY PRESIDENT WERNER A. BAUM, UNIVERSITY OF RHODE ISLAND

Mr. PELL. Mr. President, on September 10, 1969, Werner A. Baum, president of the University of Rhode Island, Kingston, R.I., opened the academic year with a noteworthy statement concerning the problems of the university today. Speaking to the approximately 9,000 faculty and students assembled, Dr. Baum also made this statement something of a review of his impressions gained during his first year as president of the university.

I was greatly struck by the insights and views of Dr. Baum and would like to share them with the Senate. His speech discussed the complete spectrum of university problems; the unrest about Vietnam, the dislike of certain recruiting activities, the need for black involvement, and the right of student participation in the university governance.

As his statement is read, one recognizes a deep understanding of not only what has happened but, also of the reasons as to why it is happening, coupled with a discussion of the role of the university in the State of Rhode Island and as part of the general mainstream.

Another incisive portion of Dr. Baum's statement was the need for the campus moderates to make themselves heard. He discussed in detail how a small, but vocal minority, can all too easily disrupt a great university and how this pattern is not new. I quote:

I lived through something like this once before, in Germany in the early 1930's, though I was too young to comprehend it at the time. The majority of scholars did not want

to get involved in the preservation of their universities as free centers of intellectual activity. "Leave me be, all I want to do is my organic chemistry, or my medieval literature," was the common reaction. The result is history.

In the name of reason, scholarship, and the future of universities, I implore you, moderates: speak up—be counted! Governing boards and administrations are powerless without your active support.

I believe that statement clearly sums up a view which has all too often not been stated and I should like to congratulate Werner Baum on a most important contribution. I ask unanimous consent that the complete text of the statement be printed in the RECORD.

There being no objection, the address was ordered to be printed in the RECORD, as follows:

ADDRESS BY PRESIDENT WERNER A. BAUM AT OPENING CONVOCATION, URI, SEPTEMBER 10, 1969

I have spent a year getting to know our University and you. I believe I now have a fair understanding of our students, our faculty, and of the situation in which we work. With confidence based on that understanding, I can now speak to you of our duties and responsibilities, of our challenges and opportunities, of what we can and must do, and of what we cannot and must not do. So let's get down to the hard facts.

We face no identity crisis. We are a university, a public university. We exist because man is a creature who has replaced instinct with cultural tradition, with reason, and with the resulting fruits of contemplative thought. It is our function to seek and to transmit knowledge, and to teach students the processes whereby understanding and truth are made known.

There follow certain patterns of conduct within our community.

Being founded upon faith in knowledge and intelligence, we must defend their free operation. We must rely upon reason, wisdom, and truth to combat error. We are obligated to see that the conditions under which questions are examined are those which give play to intellect rather than to passion.

We shall be an open campus, with the widest latitude for the presentation of ideas. The primary test of acceptability is not the idea itself, but the mode and manner of its presentation. Orderly and peaceful presentations, even mass demonstrations and other non-obstructive forms of protest, are the right of any member of this community.

The University of Rhode Island is the creature of the State. It will not aid nor will it condone actions contrary to the laws of the State. Specifically included is a law of the State of Rhode Island and Providence Plantations which makes it illegal to obstruct the use of the property of another or to obstruct another in the prosecution of his lawful business or pursuits in any manner.

During the last academic year the Student Senate, the Faculty Senate, and the Board of Trustees affirmed not only the right of individuals to speak, but also the right of individuals to listen. Further, it was made clear by all these parties that we do not condone any disruption of normal university activities, any denial of access to or egress from university buildings, or any threat or actual use of force.

I call upon each of you, individually and collectively, to abide by these standards of conduct as you did last year.

The disruption which marked higher education on some other campuses last year is a cancer on the body academic. Nowhere is force or blackmail more out of place than in a university, the house of reason and persuasion. The academic community must rid it-

self of this cancer here and now, before malignancy destroys our vitality and our hard-won, precious independence to change society through orderly means. I do not expect this cancer to appear on our campus. But if it should, I will act promptly to eradicate it.

Our world is beset with problems, and the deep concerns and impatience of youths and adults are not hard to understand. We now know that the wars to end war did not succeed. We face the threat of "the bomb" and other lethal weaponry and we know that, as far as can be predicted from history, weapons are eventually used in war. We know that throughout the world more individuals are undernourished and ill than are well. Students and faculty in common support the ideal that medical care, good nutrition, good environment, equal rights, and freedom are birthrights. But we must realize that the University of Rhode Island, important as it is to us as the focal point of our lives, has limits to its capability to deal with these problems.

During the discussions in connection with the Dow Chemical Company incident last December, I was beset with such questions as "What is the University going to do to stop the war in Viet Nam?" and "What is the University going to do to destroy the military-industrial complex?" As an institution, of course, we can do very little. Not only are such problems of a scope beyond our means, but we are not a political action organization. Indeed, a completely independent posture is essential to our institutional role as a critic of society. When the university considers political, social or sectarian movements they are dissected and examined—not advocated—and the conclusion is left, with no tipping of the scales, to the logic of the facts.

Our most important contribution to the world's problems is the education of men and women who will help to solve such problems, or better yet, who will be wise enough to prevent such problems from developing in the first place.

On the other hand, there are many problems which are in our domain and upon which we can and must work. Within our university, for example, there is the ever-present problem of improving the process of information transmission. And our faculty needs to search for ways to improve its teaching by experimenting with new techniques and evaluating their effectiveness. And our students need to maintain the challenge to the faculty and to themselves so that this university continues to strive to become a community of scholars.

Two other problems which are critical to us and which I wish to discuss in some detail are the internal governance of our university, and the expansion of opportunities for young black citizens to study with us.

First, the matter of internal governance. The record clearly shows that the now dying Board of Trustees was consistently careful to distinguish between the policy decisions for which it was legally responsible and the internal administration of institutional affairs. I hope, trust, and believe that the new Board of Regents will be equally careful in treading this delicate but important line. The record of the past year also convinces you, I hope, that the Chancellor does not seek to be a super-president or to violate the integrity of the University as an organism with its own personality, hopes, and ambitions. And I trust I have convinced you that I do not intend to administer this institution unilaterally, arbitrarily or capriciously.

We have made great progress, far more than most universities, in making decisions on a broad base of participation. During the past year, to cite some examples, students and faculty in the College of Arts and Sciences collaborated in development of a new Bachelor of Arts curriculum which is now waiting consideration by the Faculty

Senate; significant changes were made in our social regulations, based on recommendations of a student-faculty-administration committee and wide discussion within the various constituencies of the University; meetings of the Faculty Senate were attended by students, and students were appointed to all University committees of consequence.

Neither this University—nor any university—will ever be a model democracy. For one thing, no community of our size can be operated in a town-meeting fashion with everyone having a part in every discussion. What's more, the vast majority of our population is transient. Even more important is the fact that a university *should* not be a democracy; as I have pointed out before, the very reason for the existence of the university is that some people know more than do other people. If any student does not believe this to be the case, he is wasting his time, his money, and the taxpayers' money, and he should go somewhere where there are people who do know more than he does. The final decision-making authority must reside in the places where there is competence, responsibility, and accountability. This in no way negates the need for the widest possible input into the decision-making process. We must move further.

I believe that the greatest weakness in our system at this point lies in the University's legislative process. I hope we can strengthen this area as a result of the study now being made by the Student Life Committee. The Student Senate and the Faculty Senate are too disparate in their power and responsibility. They are poorly coordinated, and the administration is in a virtually impossible position when the two disagree. I hope that we can find a way, without detracting from the responsibility which is appropriately that of the faculty, of developing a unicameral body which deals with matters of joint responsibility.

What is more, we should recognize that major elements of the University are not completely disenfranchised in the legislative branch. The librarians, the professional personnel of the student services area, of the business area, and of the development area, and the classified personnel so critical to our total welfare, have no legislative vote whatsoever. If we are to govern ourselves even quasi-democratically, it seems to me only proper to provide a voice and a vote to these citizens of our society.

I hope many of you this year will devote a fraction of your time and energy to our problem of self-governance, so that we may build an even better framework for our basic job of teaching and learning.

Let me now turn to the problem of black students on our campus. This problem is almost unique in our case, because of the smallness of Rhode Island and the low proportion of black citizens.

Our past history is not a good one. While it is unfair to oversimplify by saying that there has been "systematic exclusion" of Blacks from the University, it is time that there has been insignificant enrollment of Blacks because there has not been equality of opportunity. This we must rectify, not because of guilt feelings or demands for reparations, but because our welfare requires that every individual have the opportunity to develop his potential to the fullest.

We are making significant progress. Our enrollment of black students this year, when the final figures are in, will certainly be very much higher than it was last year.

A substantial increase in black enrollment this fall is due to continuation and expansion of the Special Program for Talent Development which includes the pre-matriculation program which we operate on behalf of the three state institutions of higher learning. This summer we had approximately 50 black students on our campus in this program, to prepare them for entry as regular freshmen into one of the institutions, and it

is probable that about 20 of them are starting at URI this week. They will continue to receive both substantial financial assistance as well as special tutorial aid as they require it. And of last year's smaller class, about a dozen have returned for their sophomore year at URI.

In addition, our black enrollment is increased due to a commendable special effort by our Curriculum in Community Planning and Area Development. As a result of collaboration between the United States Department of Housing and Urban Development, the Rhode Island Department of Community Affairs, and our faculty in Community Planning and Urban Development, we have received a training grant of \$55,000. These funds are supporting five black graduate students in the professional master's degree program, each student receiving a stipend of \$3,500 per year and payment of tuition and incidental expenses. In addition, the funds provided for six black high-school graduates in a sub-professional program on campus this summer, and these students will now work for the Rhode Island Department of Community Affairs and will be part-time undergraduate students.

The membership of these black students in our community will broaden educational experiences for all of us.

We are spending large sums of public and private moneys to support black students who have academic potential but do not have adequate financial resources. As I cannot treat this matter in detail now, I have asked Mr. DeBucchi, our Director of Financial Aid, to address the next general faculty meeting and place the facts before the faculty. I might also suggest that the Student Senate invite Mr. DeBucchi to make the same presentation.

But we must do more. And by doing more I do not mean necessarily increasing the number of black students to some magic percentage of our enrollment. Rather, I mean making certain that every student has that opportunity most appropriate to his own personal development, be it a vocational program at Rhode Island Junior College, the college-parallel program at RLJC, attendance at URI, or something else. As the State University, we must take a leadership role in this critical educational problem.

The first task is to increase the pitifully small number of black high school graduates who are prepared to enter higher education. An innovative effort is about to be made in this area by our Special Program for Talent Development with funds from the United States Department of Housing and Urban Development under its Model Cities Program. This year we are initiating a special tutorial program in three Providence high schools for juniors and seniors with the goal of increasing the number of black high school graduates who will be prepared and motivated to attempt higher education.

I call upon all members of the University community to do all in their power to work with the State Department of Education, local school boards, and individual schools and students, to increase significantly the proportion of black youngsters who complete high school and have the preparation and desire to seek the opportunities of a college education.

Then, among the Junior College, the College, and ourselves, we must seek to provide each graduate with that further opportunity most appropriate to him. I do not think we should care whether, in any given year, most of these students go to one institution or another. The talent of the individual must govern this decision. The individual must not be sacrificed for the sake of appearances. And our standard of expectations must not be lowered. When I drive over a bridge, I could care less whether the design engineer was white, black, yellow, or red. But I want the bridge to be safe and efficient.

In Rhode Island we must capitalize on our advantage of small numbers. We must work individually with the black student pool, and we must generate the necessary funds from State sources and through such grants as the one to our Curriculum in Community Planning and Area Development. We can and will evolve solutions which are likely to succeed in Rhode Island though they would be impossible if we had a situation such as New York or California.

I want to close with a plea, a plea addressed to most of you, who have come to be called "the silent majority." You must not, you cannot remain silent any longer with respect to the quality of life on our campus.

I believe most of you are moderates, as I am. I do not believe for one instant that our universities are so bad that revolution is either necessary or justified. On the contrary, they are magnificent institutions. But I do not believe that we are perfect and that the status quo is the ultimate. There is ample room for betterment, but that betterment should be evolutionary rather than revolutionary; it should come about by collaboration, in good faith, by compassionate men. We stand now in danger from extremists on both sides. Equally threatening are the revolutionary extremists of the left and the repressive extremists of the right. Either can kill all we hold dear about the life of the mind. Only the majority in the middle can save our freedom to inquire and to teach. But it will not save it if it remains silent.

I lived through something like this once before, in Germany in the early 1930's, though I was too young to comprehend it at the time. The majority of scholars did not want to get involved in the preservation of their universities as free centers of intellectual activity. "Leave me be, all I want to do is my organic chemistry, or my medieval literature," was the common reaction. The result is history.

In the name of reason, scholarship, and the future of universities, I implore you, moderates: speak up—be counted! Governing boards and administrations are powerless without your active support.

CHICAGO TRIBUNE EDITORIALS OF MERIT

Mr. MURPHY. Mr. President, two editorials published in the Chicago Tribune of September 23 are, in my opinion, of particular merit. One, entitled "More Bungling," takes a penetrating look at the ineptitude of the Federal Government's war on poverty. It points to several matters which this newspaper feels OEO Director Donald Rumsfeld might give his attention to immediately. I agree.

The second editorial entitled "Mr. Eban Tells It Like It Is," concerns the noteworthy address to the 24th session of the United Nations General Assembly by Israel's Foreign Minister Abba Eban.

I ask unanimous consent that these editorials and an article written by the Tribune's William Jones, and published on the same day, be printed in the RECORD.

There being no objection, the items were ordered to be printed in the RECORD, as follows:

MORE BUNGLING

The federal government's so-called war on poverty has been going on for four years. Nobody expected that all poverty would be eliminated in such a short time, but it was hoped that the office of economic opportunity would develop a fairly efficient organization and that some progress would be made in determining how deserving families could be helped to climb out of poverty.

The hopes were vain. Almost every week brings new revelations of bungling. The latest disclosure here is that an audit is being made to restore order in the financial affairs of the Cook county OEO, which was so badly managed that it failed to pay \$329,000 in federal withholding taxes on income, and then reported the amount as access income at the end of the year.

Eventually the tax delinquency was discovered, and the agency had to borrow from a Chicago bank to pay its bills. Charles D. Hughes Jr., executive director of the agency, accurately described its problems as "best characterized as the result of incompetent activities."

So far there has been no showing of large scale fraud, but incompetent management also is wasteful. The taxpayers who supply funds for the OEO have a right to expect that its managers know what they are doing. As things stand, too many OEO programs are made up of the blind leading the blind.

While the war on poverty was under the direction of President Lyndon Johnson's Democratic administration, it was often charged that the main purpose was not to cure poverty but to consolidate the poor into a voting bloc which would demand an ever larger system of government handouts. Now the Republicans are in charge, at least in the top posts, and Donald Rumsfeld, director of the OEO, has promised more orderly and efficient operation.

Mr. Rumsfeld, a former congressman from the north shore suburbs, has some acquaintance with affairs in Cook county, and we trust he will insist on a measure of competence in the spending of antipoverty funds here.

Another matter for the attention of Mr. Rumsfeld is the part taken by Mrs. Frances Loman of East Chicago Heights in the affairs of the Cook county OEO. An investigation by THE TRIBUNE and Better Government association has shown that Mrs. Loman and her husband, Charles B. Loman, formerly were active in the Communist party in New York. A communist newspaper credited them with recruiting 17 persons into the party in 1944. In 1959 Charles Loman was suspended from positions on the national committee of the United States Communist party and as chairman of the Kings county, N.Y., branch of the party.

Mrs. Loman became a director of the Cook county OEO in 1966. Last May she was elected treasurer of the agency. She now says she is a registered Democrat.

With her record, it is hard to understand why she was named the financial officer of the organization which distributes more than 3 million dollars a year in Chicago suburban communities. Surely there must be somebody who is better qualified.

MR. EBAN TELLS IT LIKE IT IS

The swamp gas of vituperation and pious attitudinizing at the United Nations is seldom penetrated by a gleam of truth. The address of Abba Eban, Israel's eloquent foreign minister, at the 24th session of the U.N. general assembly was an exception to the dreary rule.

He said the U.N., in another year of frustration and deadlock, had "receded still further toward a marginal role in world affairs. Its resonance has diminished; and its flame is burning low. . . . The truth is that the effective currents of action and discourse amongst nations now flow mostly outside these walls. . . ."

"Since the summer of 1968, peace and freedom have been convulsed in Europe by the flagrant soviet invasion of Czechoslovakia; in southeastern Asia by the continued fighting in Viet Nam; in northeastern Asia by ominous lightning flashes on the Russian-Chinese border; in the middle east by the formal and effective Egyptian denunciation

of the cease-fire; in Africa by the agony of millions in the Biafran region of Nigeria."

The security council, Mr. Eban observed, has been silent about these and other tragic events, and the gap between the vision and the reality of "sovereign nations united in a covenant of law and peace" grows wider year by year.

That gap has been apparent since the earliest days of the U.N., as this newspaper was among the first to note. We were scorned by deluded "liberals" as a voice of the troglodyte right when we warned our readers against confusing the vision and the reality. Now we are told by Israel's foreign minister, one of the most experienced and most enlightened delegates to the U.N., that its resolutions are adopted "by fortuitous majorities without regard to their equity or prospect of fulfillment" and "lack moral or judicial force."

Mr. Eban also was far more realistic than President Nixon in assessing the iniquitous role of the Soviet Union in world affairs. The President had repeated an earlier statement that we are moving from an era of confrontation to an era of negotiation with the Russians. He had appealed for the help of all U.N. members in persuading Hanoi to enter into serious peace negotiations, but had not mentioned the Soviet Union's support of North Viet Nam, without which it could not continue the war. Andrei Gromyko, the Soviet foreign minister, boasted the next day after Mr. Nixon spoke: "We pride ourselves on the fact that the Soviet Union's assistance is multiplying the capabilities of free Viet Nam in its arduous and heroic struggle."

Mr. Eban, discussing the Soviet Union's activities in the middle east, said it "played a sinister role in the developments leading up to the 1967 war" and later intensified the pace of hostilities by renewing the arms race and uncritically supporting Arab intransigence in efforts to promote peace negotiations.

Mr. Nixon is not likely to find the Russians any more cooperative in negotiations for stability in the middle east or disarmament or anything else than they have been in respect to the Viet Nam war. He should be reminded by Mr. Eban's speech that it is dangerous to confuse the vision with the reality.

SCATHING REPORT RAPS LOCAL POVERTY OFFICE (By William Jones)

An official of the United States department of labor has issued a scathing report on the operations of the Cook County Office of Economic Opportunity, Inc., which calls for a shake-up in the higher echelons of management.

In addition, the report charges the war on poverty agency with giving poor counseling, failing to keep records, and mixing federal funds from a number of programs into one account. The report accuses program officials of failing to tell their own staff members about provisions of anti-poverty programs.

VIOLATIONS ARE CITED

The report, obtained by THE TRIBUNE and Better Government association, cites repeated violations of federal guidelines thru Oct., 1968, even tho the labor department began issuing warnings during the summer of 1967.

In other developments:

1. Donald Rumsfeld, director of the federal office of economic opportunity, ordered two investigators from his Washington office to Chicago for a full report on financial difficulties in the county poverty agency.

2. CCOEO issued a statement claiming disclosures by THE TRIBUNE Sunday that the agency is on the brink of financial chaos are incorrect.

The labor department report critical of CCOEO operations was issued in March over

the signature of Richard E. Palmore, director of the department's manpower division in Chicago. In an interview last week, Palmore accused the agency of renting equipment purchased with OEO funds to labor department programs within the same office.

GUIDELINES ARE VIOLATED

"I assume they did this because it made more cash available to them, but it is a violation of all federal guidelines," Palmore said. "Our most serious complaint, however, involved the mixing in one bank account of labor department funds with those of the office of economic opportunity. I demanded that this be straightened out in February. When a man mixes my money up with someone else's, I want to know what is happening to my money."

Palmore said that when he recommended a shake-up in CCOEO leadership, "I was talking about a whole lot of people, including Mr. Hughes." Palmore said the labor department is powerless to replace administrators because they are hired and fired by the board of directors of the not-for-profit agency.

Charles D. Hughes, executive director of the suburban poverty agency, said Palmore's report should "more properly be aimed at the board of directors." Hughes said he learned of the renting of equipment by one program to another and ordered an immediate halt to it.

DISPUTES PALMORE'S CHARGE

Hughes said he did not know what Palmore was talking about when he referred to the mixing of funds from several programs into a single account.

The statement issued yesterday by CCOEO was released over the signature of the Rev. John Hlificker, president of the board of directors of the program. The statement denied there had been any loss of funds and said an estimated \$330,000 in delinquent federal payroll taxes would be paid "upon completion of federal reports."

"Further penalties [if any] paid to the internal revenue service, will, of course, not cost the taxpayers money, because any amount will be paid to the government," the statement said. "At the present time, we have no reason to believe that this situation involves anything except a lag in record keeping."

HISTORIC STEP TO END HUNGER IN AMERICA

Mr. McGOVERN. Mr. President, it is with particular pleasure that I address the Senate today. Yesterday afternoon, the Senate took a historic step. It decided to eliminate hunger and malnutrition in the United States.

The sense of the Senate that it would no longer abide hunger in this land of plenty was a decision that cut across party and ideology. It showed once again more conclusively than ever before, that hunger is not a Democratic or a Republican issue, not a liberal or conservative issue, and not a northern or a southern issue. It is above all a human issue, perhaps the one human issue to which we all respond with the same compassion.

There were differences over what were the best ways to accomplish our common objective—how much money we should authorize, what administrative procedures we should lay down. For the most part, these differences were resolved. And, we said when it was over that hunger would no longer be allowed to stalk the land.

The Senate does not, however, have the only or final say. Our colleagues in the House of Representatives must also

come to a decision on this matter. I hope that they will see fit to do so and soon.

In this regard, I would like to comment briefly on the position of the President and the present administration. I have previously applauded the President's message in which he said that the moment had arrived to put an end to hunger in America for all time. But I was also critical of the measure that he proposed to achieve that end. I did not believe it was enough to do the job—not enough money, not the right rules. The measure that the Committee on Agriculture and Forestry reported to the floor of the Senate resembled in large part the position of the administration.

It was for this reason that I and eight other members of the Select Committee on Nutrition decided to introduce our substitute measure, a measure that we felt was truly commensurate with the problem that we were setting out to solve.

The administration chose to oppose the substitute. It instructed its representatives to lobby in the corridors and private offices behind this Chamber in an 11th-hour effort to defeat the substitute. It told the Senate Agriculture Committee that it could not spend more than its own inadequate budget recommendation of \$610 million. Its spokesmen announced in August that welfare families with children under its new family assistance program would no longer get food stamps—a policy which it fortunately reversed in September. These are not actions designed to fulfill a promise to end hunger in America for all time.

Now the question has moved to the House. The administration will have another opportunity to take a position as the issue is debated and voted upon there. It will have the opportunity to support measures that only go part way toward ending hunger or ones that go all the way. I sincerely hope that this time, the administration, recognizing the full need, will use its energies and good auspices, not to prevent the best possible measure from being passed, but to insure that it becomes the law of the land.

PHOTOGRAPHIC EXHIBIT IN OFFICE OF SENATOR TOWER

Mr. TOWER. Mr. President, I invite the attention of the Senators to a photographic exhibit in the reception room of my office.

The pictures were taken by residents of Texas.

There are 12 photographs in all, and they reflect the color and diversity of Texas life.

I am proud of these pictures—all of them taken by students of the Famous Photographers School of Westport, Conn.—and I invite Senators and their staffs to stop by my office and see them.

It is a great pleasure for me to show these photographs. I know others will enjoy them, too.

The photographers and the titles of their works featured in "The Face of Texas" exhibits are:

Lanier H. Bell, of San Angelo, "Round-up."

Robert W. Boyle, of Houston, "Bluebonnets."

Clyde A. Bush, of Waco, "House of Worship."

Albert Carter, of Austin, "Head Start Children."

Van G. Cook, of Amarillo, "Sunset at Home."

Gene D. Hovey, of Houston, "Girl With Guitar."

H. H. Jackson, of Lubbock, "Quarter Horse Racing."

Madeline Jeffress, of Amarillo, "Plant of the Century."

Emil D. Prieto, of Houston, "Bar Mitzvah Rehearsal."

George A. Richardson, of El Paso, "House of Worship."

Richard J. Steigerwald, of Sheppard Air Force Base, "Sky High."

Cecil C. Stibbens, of Grand Prairie, "Sunday Racers."

NATIONAL GOVERNORS' CONFERENCE POLICY STATEMENTS ON EDUCATION

Mr. PELL. Mr. President, at its recent annual meeting, the National Governors' Conference adopted various policy statements on education. I believe that we should be aware of the Governors' views, for many of them deal with issues that are of current concern to the Senate.

I was especially pleased that our own Rhode Island Governor, Hon. Frank Licht, expressed his concern about the funding of the Federal student assistance programs, specifically the need for continued funding of the national defense education student loan program. Governor Licht proposed an amendment to the staff-prepared policy statement, and it was adopted. I wish to congratulate him for bringing this issue to the attention of the Governors, who by their action further impress upon us the need for a balanced, well-funded Federal student assistance program.

I ask unanimous consent that the education policy statements adopted at the annual meeting of the Governors be printed in the RECORD.

There being no objection, the statements were ordered to be printed in the RECORD, as follows:

EDUCATION

1. Assumption by the federal government of far greater responsibility for the financing of education. Such increased federal financial participation should take the form of general grants to the states for educational purposes. Both the legislation and federal regulations for such a program should leave maximum flexibility to states and localities to develop programs to meet their most urgent needs. The basic purpose of such a program would be to help meet the rapidly rising basic costs of education, not to stimulate new supplementary programs.

2. Adequate advance funding of existing federal programs commensurate with critical educational needs.

3. Consolidation of existing federal grant-in-aid programs for education into broad functional categories, thereby increasing the ability of states and localities to design programs within broad federal policy guidelines to meet critical needs in individual states and localities.

4. Maximum administrative simplification of planning, application, allocation, accounting and reporting procedures for all consolidated grant-in-aid programs to assure that the intended purpose of consolidation of

grants is not subverted through detailed administrative requirements.

5. Consideration by the President of establishing an Intergovernmental Commission on Education broadly representative of local, state and federal officials and educational personnel to furnish guidance to the Congress, the executive branch of the federal government and the states, for more effective educational programs, and to continually review the goals, quality and cost of our educational system.

6. Provision in federal programs for joint federal-state-local development of standardized statistical data and other information necessary for sound analysis of educational needs and programs. Such standardized and comparable data is essential for educational planning at all levels of government.

7. Immediate funding of student loan program by guaranteeing interest at the prime rate of student loans.

8. The federal government should not cut back the funding of the National Defense Education Loan Program.

THE PHILADELPHIA PLAN

Mr. ERVIN. Mr. President, the contractors and employees in six trades which do business in Philadelphia are now hemmed in the center of what has become a senseless and embittered struggle between the executive and legislative branches of Government. It is a struggle characterized by semantic pitfalls and obscure issues rather than by reasonable differences, and it is a struggle which exacts a price from the contractors and workers of Philadelphia every day.

The major issue involved in this struggle, the Labor Department's revised Philadelphia plan, is clear. Mr. George Shultz, the Secretary of Labor, believes that Executive Order 11246 provides his Department with the authority to fix standards of minority group employment on Federal building projects. He believes that setting specific percentage ranges for minority employment is a legitimate part of the "affirmative action" programs sanctioned by that Executive order. Last Tuesday the Justice Department issued a memorandum supporting his position.

The Labor Department has taken the position that its standards of minority employment are in the form of percentage "ranges" and therefore do not constitute racial quotas which are prohibited by title VII of the Civil Rights Act of 1964. Further, the Labor Department argues that the revised Philadelphia plan is a creature of the Executive order and does not fall within the purview of title VII.

The Comptroller General of the United States, Mr. Elmer Staats, disagrees. To him, and I wholeheartedly agree, the revised Philadelphia plan does indeed impose an illegal racial quota system on Federal contractors. Mr. Staats also believes that other elements of the plan ignore the intent of Congress as expressed in title VII. For those reasons, he has refused to permit any Federal funds to be spent on projects implemented under the plan. The response of Mr. Shultz was that the Labor Department will pursue the revised Philadelphia plan with or without the Comptroller General's approval.

No man of good will will argue that a man should be denied the right to work because of his racial origin. Experience and ability alone should be the sole criteria.

But however much one may approve of the goal of equal employment opportunity for all citizens, one cannot approve of the Labor Department's plan to increase artificially and illegally the number of minority group members working in these six trades in Philadelphia.

Mr. President, it seems to me that despite the fact that the Labor Department has established its standards as somewhat flexible "ranges," the revised Philadelphia plan does indeed impose an illegal quota system. I believe it does so for this reason: If one Federal contractor is penalized by the Labor Department for failing to meet his affirmative action goal and cannot demonstrate good faith, then that contractor has been penalized for failing to meet a racial quota. And the penalties which an errant contractor faces are severe indeed. He can be barred from further Federal contracts, have his current contract pulled from under him at great personal expense, or even be taken to court by the Justice Department.

What I am saying, Mr. President, is that the contractors in Philadelphia are in an untenable position. On the one hand, they must meet their minority employment goals or else risk grave penalties. On the other, they take the chance of violating title VII if they comply with the Labor Department's wishes.

Late last week, my office was paid a visit by a contractor from Philadelphia who has had experience under both the revised and the original Philadelphia plans. I think his statement was particularly significant. He said:

If the union sends me ten white electricians to work on a job, ten men with seniority in the union, what am I supposed to do? Can I say, "Well, I can take the first seven of you, but the rest of you can go home because the Office of Federal Contract Compliance says I need three minority group workers on this job?" To me, that's discrimination. But when I go to the OFCC and try to tell them about it, they say, "That's not our problem. We are under Executive Order 11246." That doesn't help me at all.

Mr. President, a contractor in this man's position is being forced to break the law to help eliminate discrimination over which he has no control. Congress did not intend that this should be so when it enacted the Civil Rights Act of 1964. That bill's legislative history clearly shows that contractors are not to be held responsible for the actions of labor unions. Moreover, the act was never intended to disrupt seniority systems.

What the Labor Department is trying to do, Mr. President, is attack the unions through the contractors. The power of organized labor in the United States dictates that prospective Federal contractors all over the country, not only in Philadelphia, must recruit their employees from union ranks. The contractors actually have little control over the composition of their employees, and no control over the composition of the unions. This

situation makes the Philadelphia plan quite startling, for in effect, it punishes one man for another man's actions.

The Labor Department has argued that special conditions exist in Philadelphia, conditions of discrimination so blatant that unusual measures are needed to correct them. I would answer that whatever conditions exist there, they do not warrant the disregard of our laws. It is no excuse for the Labor Department to plead that the Philadelphia plan is a creature of Executive Order 11246; such Executive orders historically are considered to be instruments to implement legislation, not to negate it. It is no more reasonable for the Labor Department to argue that its plan is not subject to title VII than it would be for a State to revert to the doctrine of interposition. When a congressional act and an Executive order conflict, the Executive order must fail.

Further, I have serious questions about the conflict between the revised Philadelphia plan and the "equal protection" clause of the Constitution. On what grounds, for example, does the Labor Department justify exempting from the plan those contractors who execute Federal contracts worth less than \$500,000? Is the Labor Department less concerned about the so-called "rights" of minority group workers employed on small jobs than those of employees working on large jobs?

In short, Mr. President, I believe that however commendable the goal of providing equal employment opportunity for all citizens, that goal is not served by the revised Philadelphia plan. When one contractor is penalized because he fails to hire enough minority group employees, and another is not so penalized, there is patent discrimination. When otherwise qualified workers with seniority are turned away from their jobs because of minority quotas, there is discrimination. Discrimination undoubtedly will occur under the plan, whether or not the Labor Department admits it. The flood of litigation which may arise from the plan could continue for years.

The Philadelphia plan is ill-conceived, and it should be relegated to some obscure bureaucratic wastebasket. The Labor Department should try again, bearing in mind the unalterable fact that one breed of discrimination is no more legal than another. The Department should respect the purpose of an Executive order and take care that it does not assert supremacy over the Congress and violate congressional intent as well as law.

The Subcommittee on Separation of Powers was established by a resolution sponsored jointly by our esteemed majority leader and the late beloved minority leader to investigate the extent to which each branch of the Government was impinging upon the rights and duties reserved to the other two under the Constitution and laws of the United States. I think this Philadelphia plan fiasco constitutes a perfect example of how the executive branch can deliberately take a clear and plain law and manipulate its meaning out of existence. Such blatant violations of the separation of powers doctrine must not and will not be tolerated.

The revised Philadelphia plan is an

instrument of waste, frustration and fear. While the OFCC harasses contractors in Philadelphia, threatening them with prosecution and financial ruin if they do not comply with its wishes, construction costs on Federal projects continue to rise. The contractors of Philadelphia are frustrated, and the employees are fearful. We are seeing the results of those fears in Pittsburgh. The Philadelphia plan, far from moving toward the goal of equal employment opportunity for all, is pulling us farther apart.

Yes, Mr. President, the Labor Department should try again. For surely there can be found a legitimate plan which insures equal employment opportunity according to ability and yet does not violate title VII of the Civil Rights Act of 1964 and the obvious intent of the Congress in passing that act. As it is now drawn, the revised Philadelphia plan is little more than an instrument of harassment designed to enforce an unenforceable quota system. The Constitution of the United States gives to Congress the lawmaking power which clearly relegates Executive orders to some position less exalted than that attributed to Executive Order 11246 by the Labor Department. And the Congress, in exercising its legislative authority, has declared that quota systems, whatever they may be called, are illegal. That should end the matter.

COMMISSION ON POPULATION GROWTH AND THE AMERICAN FUTURE

Mr. PERCY. Mr. President, yesterday, the Committee on Government Operations reported to the Senate S. 2701 to create a Commission on Population Growth and the American Future. This is an administration bill introduced by Senator MUNDT which I am pleased to cosponsor and support. It is, moreover, an important bill for it will help us to recognize and solve the problems generated by population growth and movement.

Today there are some definite and even disturbing trends in population movement in our country. We are all aware of the shift of people and industry from rural to already congested urban and suburban regions. We also know that 40 percent of our people are congregated in primarily 38 major areas; that during the 1960's the population increase in metropolitan areas doubled the increase in outlying regions. And we now realize that 63 percent of our population inhabits only 1 percent of our land area.

But we do not know what these trends mean, what their consequences may be. We must know, however, if our Nation is to accommodate and provide for the additional 100 million people we will have by the year 2000.

President Nixon astutely recognized this need to analyze our population trends when he sent to the Congress his message urging the creation of a Commission on Population Growth. At that time he raised such pertinent questions as "Where and how will future generations of Americans live; how will we feed, house, and educate them; what will their effect on our natural resources and environment be?"

These questions must be answered. We must know now the probable course of population growth; the resources in the public sector of the economy that will be required to deal with this growth; and the ways increased population will affect the activities of all levels of government.

We now have the opportunity to obtain the answers to these questions by enacting S. 2701. I urge that we take this opportunity. We owe it to our Nation and our future generations of Americans who must live in the circumstances we have created.

THE PESTICIDE PERIL—LVI

Mr. NELSON. Mr. President, with alarm spreading across the Nation about the dangers to our environment from the use of hard pesticides, increasing information on effective alternatives is becoming available to the home gardener.

Marguerite Baumgartner recently wrote an excellent article published in the Stevens Point, Wis., Daily Journal, in which she recommended several books which offer advice on home gardening without dangerous pesticides. She said of the current battle over DDT and related pesticides that—

In spite of the desperate effort of the agricultural chemical industry, whose business will be hurt, to discredit the evidence as well as the scientists who devoted their efforts without recompense, in spite of a prolonged and costly hearing which still is not settled, the effort has been hailed as a landmark.

At long last the public is getting the facts and is demanding action. Militant legislators on both state and national levels are getting popular support for curbs on the use and sale of hard pesticides. Not enough, and too late to save many things, but a start we can all support.

Then comes the invariable question—we still have pests; what should we use instead?

And this is a question, not only for the professional exterminator and the government agencies involved in massive eradication programs, but for every man or woman who pushes a little button on a spray bomb or buys a can of "bug dope" at the local store.

I ask unanimous consent that Miss Baumgartner's article be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

BAN DDT—AND USE WHAT INSTEAD?

(By Marguerite Baumgartner)

For the better part of a year Wisconsin's battle over DDT has been raging in ever-widening circles.

After the initial shock and flurry of Rachel Carson's "Silent Spring," almost 10 years ago, the world has tried to forget her dire predictions and to belittle her facts. But new facts have continued to rear their ugly heads and thrust themselves upon the consciousness of thinking men and women.

Regardless of what good has been achieved by DDT and its affiliates in the past, this earth and its atmosphere have been overdosed.

Conservation organizations and conservation publications have devoted increasing efforts to alert the public to the irrefutable perils of pesticide contamination, before time runs out.

Spectacular action was taken in New York's Suffolk County. Michigan took up the cudgel last year (See the July issue of Audubon Magazine), and though both legal battles were lost, the resulting publicity achieved very satisfactory results.

In the fall of 1968 the storm broke in Wisconsin. During the winter and spring the events at Madison have made headlines throughout the country. Our file is chocked with clippings from metropolitan dailies and small town weeklies from Maine to Oklahoma to Oregon, with magazines ranging from general interest slicks to small school alumni bulletins.

Anyone who has read this far surely has been aware of the DDT hearings conducted by the state Department of Natural Resources. Initiated on request of the Citizens Natural Resources Association (CNRA) and supported by many other conservation groups and individuals throughout the country, the hearings made public a mountain of evidence, engineered by a dynamic little group called the Environmental Defense Fund (EDF).

In spite of the desperate effort of the agricultural chemical industry, whose business will be hurt, to discredit the evidence as well as the scientists who devoted their efforts without recompense, in spite of a prolonged and costly hearing which still is not settled, the effort has been hailed as a landmark.

At long last the public is getting the facts and is demanding action. Militant legislators on both state and national levels are getting popular support for curbs on the use and sale of hard pesticides. Not enough, and too late to save many things, but a start we can all support.

Then comes the invariable question—*we still have pests; what should we use instead?*

And this is a question, not only for the professional exterminator and the government agencies involved in massive eradication programs, but for every man or woman who pushes a little button on a spray bomb or buys a can of "bug dope" at the local store.

"Every man and woman" add up to a massive total, with immeasurable potential for correction or further degradation of our sick environment.

The answers fall into several categories, and some are far from new.

The final chapter of "Silent Spring" discusses some fascinating possibilities. There are biological controls—the introduction of natural enemies which are known to prey upon or infect and destroy the pest species.

More recently the sterilization and release of male insects has proved remarkably successful in reducing infestations.

There are lures and repellants which change the life patterns of insects, or lead specific pests to their destruction without contaminating the whole environment.

Instead of non-selective, non-soluble, long-lived chemical insecticides, there are specific, equally effective methods utilizing viruses, bacteria and microbes, far safer in the long run.

These are large scale operations which we mere people cannot employ ourselves, but need to demand of our public agencies and professional eradicators.

The problems so dramatically presented in Rachel Carson's "Silent Spring" are as glaringly crucial today as they were in 1962. For a first or fifth reading, there are copies of her book in both our city and university libraries.

Another little volume might well be part of the personal library of every householder. One of the Little Golden series, the paperback edition is a tremendous bargain at \$1.

Entitled "Insect Pests," it includes specific descriptions and treatment for over 350 pests of home, garden, field and forest. For general information on insect control, the 14 introductory pages are worth many times the price of the book.

In terse, simple, readable language, the author discusses natural controls, biological controls, physical and mechanical controls, cultural controls, the new methods of using sterilants, hormones and ground silica.

The chapter on chemical insecticides is heavy with warnings: "Most insecticides are dangerous to people and other animals as

well as to pests. Read and follow carefully the instructions on the label." "Keep out of reach of children." "Mark container poison."

Especially dangerous and long-lived are the chlorinated hydrocarbons. Beware of products containing (read all small print!) DDT, methoxychlor, TDE, DDE, benzenehexachloride, lindane, toxophene, chlordane, dieldrin, aldrin, engrin and heptachlor. The organophosphates are even more lethal to the higher animals including man. These include parathion, demeton, TEPP and DDVP.

Least toxic of the chemicals are methoxychlor and melathion—but by this time the names all sound alike and I prefer not to push a button of any kind.

And so it was with joy and relief that I discovered a no-poison guide to a beautiful garden.

There are a number of such books listed by bookstores and libraries. Classics are "Trumm's Gardening Without Poisons," and the magazine "Organic Gardening" (Emmaus, Pa.)

Mine was written by Janet Gillespie, a very eloquent housewife and gardener, wife of the headmaster of a private school. This small volume, with the improbable title of "Peacock Manure and Marigolds," reminds us that grandmother had many ways of protecting her garden from pests—natural fertilizers (including manure from her pet peacock), gardens bordered with marigolds whose rank odor fenced out insects.

There were also such sane and forgotten methods as the selection of hardy breeds, pairing compatible plants, encouraging the birds by leaving some unkempt spots, and even (horrors!) picking off the unwelcome bugs by hand.

Since we "garden" only the wild things that come to us naturally, I am not too good a judge of which of her methods might be of most significance to the most readers. I found it all fascinating reading, and it almost made a gardener out of me.

But for those who have been horrified by the expose of the hard pesticides and are asking "what now?" this book has many answers, as homely and specific as a neighbor's advice across the fence.

"Peacock Manure and Marigolds" has been ordered for the city library. Meanwhile, my copy is available on loan.

FISHING INDUSTRY DECLINE

Mr. KENNEDY. Mr. President, on August 11, I introduced the Fisheries Development Act of 1969. The bill is intended to set up the machinery for a revitalization of the American fishing industry. The bill is a revision and expansion of a similar bill I introduced in 1967.

Hearings on this and other bills important to the fishing industry have been scheduled for October 22 and 23. I think that the Senator from Michigan (Mr. HART), who is chairman of the Commerce Committee subcommittee which will hold the hearings, deserves the thanks of all of us concerned with the future of our fishing industry.

My bill, S. 2825, can reverse the decline of the American fishing industry, and help to restore that industry to the pre-eminent position it once enjoyed. Today, the New York Times addressed itself to the plight of the fishing industry in Gloucester, Mass. However, the article could have been written about any of the once-great fishing ports of Massachusetts or New England. I urge Senators, who share my concern in this matter, to lend their most active support to the many bills now pending before us which deal with the various aspects of the problems facing the Nation's fishing industry.

In an effort to further acquaint the Senate with the seriousness of these problems, I ask unanimous consent that the article be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

U.S. FISHING INDUSTRY FOUNDERS IN A SEA OF FOREIGN SHIPS

(By Paul L. Montgomery)

GLOUCESTER, Mass.—The days of glory are gone for this old fishing port. Only old men can remember when the harbor was full of schooners, their masts a forest of timber, or how the herring gulls clouded the sky following the fleet home.

Now in the dawn the rusty trawlers crawl out from the dilapidated piers while the gulls shift uneasily from foot to foot on the roof peaks. As often as not they come back half-loaded, their crews cursing the sleek, 300-vessel foreign fishing fleet that rules the rich grounds these fall days from Cape Ann to Montauk Point.

Since 1961, when the Soviet Union made its first probes in the Grand Banks, foreign ships have come in increasing numbers, staying longer and moving inexorably west and south to the 12-mile fishing limit off the northeastern coast.

Each year the vessels range farther and fish closer to shore. In August, 1968, 213 foreign fishing vessels were sighted in northeastern waters by the Bureau of Commercial Fisheries. They included 118 ships from the Soviet Union, 35 from Poland, 31 from East Germany and 29 from West Germany.

THROUGH FULL SEASON

This August the figure was 325, including 212 Soviet vessels, 37 from Poland, 40 from East Germany and 24 from West Germany. Most of the vessels, some of them twice as big as the largest American ship out of Gloucester, have stayed into September, and more ships have arrived.

The bureau's plane spotted 243 foreign vessels last week in the Georges Bank area east of Cape Cod. The national breakdown was 143 Soviet, 33 East German, 18 West German, 29 Polish, 14 Spanish, four Norwegian, 1 Rumanian and one Japanese.

There are also about 60 Soviet ships in the fishing grounds between Montauk Point and Nantucket. Earlier this year, single vessels from Israel, Greece, Bulgaria and Cuba were seen off the coast on what appeared to be exploratory missions.

Every year, the foreign fishing season off the American coast gets longer. Last year, for the first time, the Soviet fleet followed the herring south to Virginia and stayed late into the winter. The Germans and the Poles are expected to join the Russians this year.

While marine biologists and economists give many reasons, not only over-fishing, for the decline of the once-proud Gloucester fishery, the fishermen see only one—the seemingly omnivorous and often intimidating foreign fleet.

The other afternoon on the Seven Sea Pier, the Phyllis A. was unloading its small catch of haddock and whiting while the crew grumbled about low prices and stiff competition.

"LAST POUND" NEARING

The foreign ships were "only 23 miles from here," said the captain, "right out there like a picket fence keeping the fish out. You can't even turn around it's so crowded."

"We've on our last legs," said Joseph F. Grace, the Mayor of the town and chairman of the Gloucester Fisheries Commission, at the group's September meeting. "Every nation is out there racing to get that last pound of fish out of the sea. One day, they are going to discover they have that last pound."

The Mayor was making a plea for industry support for Senator Edward M. Kennedy's Fisheries Development Act of 1969, which seeks to "help our fishing industry recover from the crisis situation it is now in" through technical and financial assistance for conservation and new equipment.

The other day in the Fisherman's Institute, a rest home for old men of the sea, Seymour L. Harnish, a former captain, was talking about the old days.

"I'll be 91 if I live to see the 15th day of November coming," he said, "and, my gracious, I hope to tell you the difference between then and now is like night and day."

In the dim lounge of the institute a soap opera flickered on the television. Mr. Harnish, wearing a battered felt hat, occasionally glanced at the screen through his thick glasses. In a corner, two men bent over hand whittled cribbage boards.

"I was captain of the Romance in 1914," Mr. Harnish said, continuing: "That's the year war broke out. We had 19 men, purse-seining mackerel. I come home with 180 barrels of salt mackerel at \$20 a barrel. Why now you can't even hear tell of salt mackerel. People don't eat them any more."

FOREIGN ADVANTAGES

Mr. Harnish turned his attention to the foreign fleet.

"They're tearing up the feeding bottom," he said. "It stands to reason they must have cleaned up their own grounds on the other side, now they're over here cleaning up ours. I won't say it has destroyed our fishing yet, but if they keep on they will."

Mr. Harnish said the foreign ships enjoyed two big advantages—cheap labor and use of nets with smaller mesh than that permitted for American fishermen. "They get men on those boats living for months almost like convicts," he said. "You can't get our men to do that."

Down near the wharves, Sam Ciaramentaro was assembling a net at his chandler's shop. He is 54 and gave up fishing for a shore job in 1947. "I've got two boys; I wouldn't send them fishing," he said. "You waste your life out there, that's all."

Mr. Ciaramentaro said his business has dropped 20 per cent in the last few years. He said the foreign fleet was certainly part of the problem. "We don't have the vessels to compete with them, we're getting pushed around," he declared. "I've got nothing against anybody, Russian or American, working for a living, but not when you got to push somebody else around."

"We're all spoiled," he went on. "We wouldn't eat herring like the Russians are catching. Our young housewives want these prepared fish sticks they just have to heat and they're ready to go. You can't compete with that."

While most of the fish caught by foreign ships is for their own country's consumption, an increasing amount is finding its way back to the United States as imports. This is particularly true of blocks—frozen, compressed slabs of filleted fish that are used in making fish sticks and other prepared products.

Gorton's of Gloucester, which was founded in 1755, imports blocks from Poland. The blocks are made on the Polish ships from fish caught perhaps 50 miles from the factory, taken to the French territory of St. Pierre and Miquelon off Newfoundland for transfer to American freighters, then moved to Gorton's. Gloucester fishermen concede they cannot compete with the Polish prices.

The trend has had its effect on Gloucester, which was founded in 1623. The port's annual fish landings used to total about 350 million pounds; last year they totaled 97.6 million pounds.

The fleet, mostly vessels individually owned by Portuguese-American and Italian-American entrepreneurs, has shrunk from more than 200 ships 10 years ago to 110 now.

Last year, one new vessel was added to the fleet while two older ones sank.

DROP IN FISHERMEN

There are about 1,000 fishermen in the town, compared with the total 10 years ago of 1,800. Crews of the ships share 60 per cent of the ships' catch as their wages; the owners get 40 per cent.

Although the Government has a grant and loan program that can pay up to half of the cost of new fishing vessels, the fishermen complain that it takes too long and is too complicated to get the Federal money, and very difficult to get the capital they need for their own share.

"We are the farmers of the sea," said Mayor Grace. "The Government pays our farmers money not to grow crops, and here we are trying to make a living and bring money into this country and we get very little help at all."

Gloucester still has hopes of reversing the decline of its fishing, and particularly of stemming fish imports. In the United States last year, 58 per cent of food fish and 76.2 per cent of all fish products were imported. The figure for food fish imported in 1960 was 41.4 per cent.

Mayor Grace, however, is something less than optimistic. "In the face of all the subsidies for fishing being handed out in all these other countries," he said at the fisheries commission meeting, "we should give an accolade to the American fisherman just for surviving."

THE ZIGS AND ZAGS OF SCHOOL DESEGREGATION

Mr. MONDALE. Mr. President, by now it should be no secret to Senators or any other interested observers that there is a great deal of confusion surrounding the intentions of the Nixon administration in the area of school desegregation, but instead of clarifying the situation, the endless statements merely add to the confusion.

In surveying the zigs and zags of the Nixon administration on school desegregation since January 20 of this year, one cannot be blamed for questioning whether such equivocation and contradictory statements could possibly have occurred accidentally. One knowledgeable civil rights spokesman declared recently that the actions of the Department of Justice, and the Department of Health, Education, and Welfare, "amount to what only can be called a policy of deliberate confusion."

The spokesman to whom I refer is Jack Greenberg, whose credentials in the area of civil rights generally and school desegregation in particular are well established and known to us all. He is the director-counsel of the NAACP Legal Defense and Educational Fund, Inc.—LDF. Last week Mr. Greenberg issued a press release documenting the confusion of the last 8 months.

Yesterday a New York Times editorial entitled "Deliberate Speed—In Reverse" commented on the confusion and vacillation in the administration's school desegregation policy and the recent actions of the NAACP legal defense and educational fund.

Mr. President, I ask unanimous consent that the release and the editorial be printed in the RECORD. I urge all Members of Congress to take a few minutes to read them.

There being no objection, the items

were ordered to be printed in the RECORD, as follows:

STATEMENT BY JACK GREENBERG, DIRECTOR-COUNSEL, NAACP LEGAL DEFENSE AND EDUCATIONAL FUND, INC. (LDF)

Recent actions of the Department of Justice and the Department of Health, Education and Welfare with respect to school segregation amount to what only can be called a policy of deliberate confusion which has caused a slowdown from anticipated levels of desegregation this year and promises serious retreat in the future. These zigzags reflect the intense southern political pressure which stimulated protests in the Department of Justice's own Civil Rights Division.

EXAMPLE OF FAILURE TO MEET STANDARDS

Here are some concrete examples of what has resulted:

In the month prior to the opening of school at least ten districts notified HEW that they were not implementing their previously approved plans. We have preliminary information that many more are fulfilling their commitments only partially.

The Administration is accepting weaker desegregation plans. HEW has approved plans: *Where no substantial steps are required this year beyond free choice.*

Orangeburg No. 4 (Edisto) S.C.'s plan, accepted in August, has free choice for all grades in 1969 and calls only for the desegregation of faculty meetings.

Where all-black segregated schools remain which could have been phased out this year to achieve a totally integrated system.

Chester, Tenn. has been given an extra year to close an all-black school for no justifiable reason.

Where black schools which could have been integrated were either closed or remain segregated.

Florence, S.C. rejected HEW's proposal to zone elementary schools and to assign white children to formerly black schools. In August HEW accepted the district's plan under which 2 black schools were closed and others remain segregated. Black parents are boycotting because they want the two-way integration plan which HEW had earlier sought.

Terminal plans where segregated schools remain even though other options are available.

In Salisbury, N.C. the HEW accepted plan leaves two all-black schools. Black parents report that gerrymandered zone lines are responsible for keeping one of these schools segregated and that white students are being allowed to transfer out of schools with large black enrollments.

Where delays are permitted on the basis of vague future construction plans.

Bleckley, Ga. HEW has accepted a delay pending a bond issue for new construction even though HEW officials admit that there is no need for new buildings and that the district should have been required to pair schools.

York #2 (Clover), S.C. HEW has accepted a 1970 terminal plan on the justification that a new high school will be built. When the plan was accepted, the district had neither funds nor plans for construction. HEW officials admit the district could have integrated using existing facilities.

The Administration is not taking steps to accelerate staff integration.

HEW has accepted plans with very weak commitments for staff integration and without clear guarantees for job security for black teachers. No sanctions have been exercised against a district either because staff desegregation has been minimal or because black principals and staff have been fired or demoted. Example:

Johnston County, N.C., demoted its black high school principal and hired a white principal from outside the district. Although HEW's regional officials recommended sanctions because they believe this is a clear case

of discrimination, HEW's General Counsel has refused to take action.

Forthcoming plans will be less effective as instruments to abolish dual school systems. We predict decreased use of plans which could end the dual school system in cities and towns, e.g., school pairing and affirmative zoning, and an increase in plans with assignment procedures based on intelligence tests and track systems—a process clearly intended to segregate black children.

One Administration policy has indeed been implemented. Decreased use is being made of sanctions available to HEW under the Civil Rights Act of 1964. A substantial number of districts have not been cited even though desegregation has been minimal. HEW has not moved against majority black districts which have not submitted terminal plans. These districts have been permitted to remain in a state of noncompliance; no enforcement proceedings have been initiated against them. There are at least 80 such districts; Arkansas alone has 25. HEW occasionally announces that it has cited additional school districts or has terminated funds. The question is: how many fully documented cases have accumulated without action on the desks of the Secretary or of HEW's General Counsel?

The decreased reliance on sanctions as a device to compel compliance is evident in the appointment to HEW's Reviewing Authority of two conservatives, one of whom is William R. Able, the chairman of the Republican Party in Columbia, South Carolina.

The Administration has announced that it will put more emphasis on the use of professional educators as provided for under Title IV of the Civil Rights Act of 1964. Technical assistance is no substitute for enforcement. Furthermore, the events of this summer have unfortunately revealed that the role of the Title IV program, which is supposed to provide the expert, impartial, professional service of educators in the development of effective desegregation plans, has been compromised by political pressure. Black parents now realize that they cannot trust a program which clearly does not regard their children as its clients whose constitutional rights are paramount.

Title IV staff submitted to Federal judges desegregation plans for South Carolina school districts where the target deadlines "1969-1970" had been crossed out and "1970-71" substituted and where only minimal steps were required for this term. In many of the 21 district plans, no requirements for additional pupil desegregation in 1969 were made. Emphasis was on exchange visits, bi-racial advisory and human relations committees, workshops, etc. Instead of steps to ensure the end of the dual school systems, these experts seemed able to produce only educational jargon. "All students will experience a series of interaction experiences with students of the opposite race."

We know that many Title IV staff members are deeply unhappy about the position into which they have been forced. We have been advised that when the Administration requested the delay in implementing desegregation plans in Mississippi, the Title IV staff members who had worked on them were called into Secretary Finch's office and asked to testify that the plans had been too hastily drawn. Many of them refused to do so.

THE USE OF THE DEPARTMENT OF JUSTICE INSTEAD OF HEW

The Administration has said it is shifting to litigation instead of administrative action which cuts off federal funds from districts which do not integrate.

We had urged Justice to file suit where districts have refused federal money and insisted upon segregating. But a general shift from enforcement by federal fund cut-off under Title VI of the Civil Rights Act of 1964 to judicial enforcement would be disastrous.

First, experience shows that districts under court order have integrated substantially less than those under HEW supervision.

(2) Districts under court order can continue to receive federal funds even though they have not complied or the order may fall far short of constitutional requirements and HEW standards.

(3) For Justice to take on new cases means it will give less attention to cases it now has. Overall progress will be less. The Civil Rights Division has not increased in size. Lawyers there must work also on employment discrimination and campus unrest. Fewer lawyers will have more work.

(4) The position Justice took in Mississippi, urging delay in desegregating 33 districts, raises questions about its position in new cases it seeks to file.

The Legal Defense Fund has more than 200 school cases in the courts. In these cases and with regard to schools generally, we are concerned that the position of Justice and HEW will undermine judicially declared standards for effective and speedy desegregation. In the past HEW has looked to the courts for guidance. And the courts in turn have looked to HEW. Where courts grant delays, as at the request of the Federal Government in Mississippi, there is every prospect that HEW will follow that example. Where HEW dilutes its requirements, as in the many examples that appear in this statement, the courts may be expected to take a cue from government policy. Therefore, instead of mutual reinforcing higher standards, we are entering a period of mutually reinforced downgrading of standards.

THE LDF IS NOT PARTISAN—WE CRITICIZED JOHNSON ADMINISTRATION

Our analysis and description is not partisan. We were highly critical of the Johnson Administration when it did not measure up on its constitutional obligation to integrate schools. But there was an important difference. There was dialogue between civil rights groups and administration officials. Here, except rarely, and in the most general terms and almost never with regard to specifics, there has been a failure of dialogue. The highest administration officials promised that before there would be changes in HEW policies those changes would be discussed with civil rights groups. That has not happened. The low point of non-cooperation occurred when the Department of Justice for the first time took an initiative to delay desegregation in 33 Mississippi school districts which had been scheduled in accordance with plans developed by HEW and then disavowed by it.

EXAMPLES OF SHIFTS IN POLICY

One thing is known about desegregation. To be effective, it must be firm, consistent, and clear. But apart from softness in enforcement, the Administration has been highly confusing. Some of the contradictory positions are set forth here:

January 29—Five Southern Districts about to be terminated are given a 60-day period of delay by Secretary Finch. If the districts come up with acceptable plans, they will receive lost funds retroactively.

March 10—Secretary Finch's interview in *U.S. News & World Report* alluded to some impending change in the guidelines. In addition the Secretary was quoted as saying that HEW must retain its enforcement powers: "We cannot turn (the whole enforcement-compliance field) over to the Justice Department now because we have built up a certain momentum in education, in terms of getting school districts to recognize that a . . . national goal has been set. If you were to chop off everything now in my department, just let Justice handle compliance . . . I think a lot of this momentum that has been built up would be lost."

March 14—General Counsel designate

Robert Mardian sends Secretary Finch a memorandum advocating, among other things, that HEW might permit an extension beyond the previously established 1969 target date and that this policy could be implemented without any particular public announcement.

March 18—Civil Rights Leadership Conference received assurance from Finch that there will be no change in the guidelines.

March 24—Secretary Finch disavows Mardian memorandum.

April 15—The *Washington Post* reports that Administration sources claim that the guidelines are being "revamped" because they are "vague and ambiguous." Secretary Finch and Attorney General Mitchell reportedly attending meetings at the White House on the guidelines.

April 22—Leon Panetta's letter in response to Jack Greenberg's letter to Secretary Finch: "The Department is not contemplating any changes in the guidelines at this time."

May 16—Leon Panetta, in a speech in Atlanta, said: "Why can't we continue to use free choice? . . . The answer is that the Supreme Court ruled against it . . . HEW policies are controlled by that decision."

May 31—HEW submits two year plans to South Carolina Federal Court giving 21 districts another year of freedom of choice.

June 20—Jerris Leonard commented that the Administration's position is going to be that districts would be required to desegregate by the target deadline "where that was possible." He was also quoted as saying "It's wrong to set arbitrary deadlines." (*Washington Post*, June 20.)

June 28—Secretary Finch quoted as saying there would be no relaxation of the guidelines. (*New York Times*, July 1.)

July 1—Secretary Finch proposed to the White House that a new policy statement on the school desegregation guidelines contain no provisions for more time to comply with the law. (*New York Times*, July 1.)

July 3—Finch-Mitchell statement. Districts that have "bona fide educational and administrative problems" will be given extra time to desegregate.

It is not our purpose here to lay down a single arbitrary date by which the desegregation process should be completed in all districts or to lay down a single arbitrary system by which it should be achieved. On the federal level the law enforcement aspects will be handled by the Department of Justice in judicial proceedings. . . . and the educational aspects will be administered by HEW."

July 3—Leon Panetta announces that he plans to send all southern school superintendents a letter explaining the new policy. (*Washington Post*, July 4.) A few days later Secretary Finch was quoted as saying that no letter of explanation would be sent. He said it was "unnecessary."

July 5—White House Press Secretary says that the Administration is "unequivocally committed to the goal of finally ending racial discrimination in schools."

July 7—The Department of Justice files five school desegregation suits.

August 1—The Department of Justice files a state-wide suit against Georgia.

August 3—The Whitten Amendment to the HEW Appropriations Bill is passed by the House. This Amendment would, in effect, prohibit HEW from requiring anything other than freedom of choice plans. The Administration takes no position on the Amendment.

August 13—In Attorney General Mitchell's speech to the American Bar Association, he said: "The extravagant rhetoric of the last few years have offered promises which cannot be delivered, and have set as immediate goals programs which will take a decade to complete."

August 25—The Administration asks the Federal Courts to delay desegregation in 33

Mississippi districts from this September until September 1970.

CONCLUSIONS OF OTHERS RE POLITICAL INFLUENCE

We are not alone in ascribing the Administration shifts—which are undermining desegregation—to political influence. Following are the views of other observers:

James Batten, Charlotte Observer, June 13, 1969

Tough recommendations of a 19-member team from the Office of Education for plans requiring desegregation in South Carolina school districts "were overruled" by Secretary Finch and Attorney General Mitchell. "Sources at HEW insisted that Finch and Mitchell made their move after Sen. Strom Thurmond, the conservative Republican from South Carolina, complained about the original plans."

Rowland Evans and Robert Novak, Washington Post, June 27, 1969

"A dramatic case is a telephone call to the HEW's civil rights division on June 24 from the School Board in Austin, Texas. Austin has dragged its heels on desegregation for years. But last month, under pressure from HEW, the entire school board sat in all-day session with HEW officials here to devise a desegregation plan. Also present were staff aides of Republican Sen. John Tower of Texas and Rep. Jake Pickle, Austin's Democratic Congressman.

"On returning to Austin, the School Board wrestled for three weeks with a new plan and finally adopted one that even included some pupil bussing to assure racial balance in primary and secondary schools.

"That June 24 call, however, notified HEW that the School Board had heard from Tower that a "major change" in the guidelines was impending. Therefore the Board would stand pat until the change was announced and then "reappraise" its plans. That shattered the Austin model which HEW officials had hoped would pave the way for a desegregation breakthrough in Texas starting with San Antonio and Lubbock.

"At this writing, however, there is little chance of stopping the new guidelines. The pressures are too strong from Southern Republicans, from Attorney General John Mitchell's Justice Department (which strongly favors the relaxation), and from the Republican National Committee (where they have the blessing of the chairman, Rep. Rogers Morton of Maryland).

"The pressures have been intense. One Republican, Rep. Fletcher Thompson of Atlanta, Ga., flatly warned the White House that some Southern Republicans could not support President's Nixon's tax bill unless HEW slowed down desegregation. In Thompson's own district, a new school was recently ordered closed on grounds that it was specifically located in a Negro neighborhood to avoid sending Negro students to white schools.

"Perhaps more important, the Finch retreat fits the basic Southern political strategy that elected Mr. Nixon. Ever since he took office, the South has been demanding fulfillment of campaign pledges to ease desegregation. Only Finch and a HEW civil rights decision stood in the way. Now Finch, too, has yielded."

Editorial, Washington Post, August 28, 1969

"... The precariously balanced official statements put out by the administration... with all their mutually cancelling clauses and paragraphs, have taken form in real life as a series of zigs and zags, swerves and screeches, threats and retreats—a kind of stock car race to nowhere that is far too arbitrary and ad hoc and politically accident-prone to be characterized as policy at all."

Editorial, New York Times, August 25, 1969

"... In disavowing its own desegregation plans at least for the coming school year, Washington has clearly put Southern political pressures ahead of forward movement on the integration front."

Fred P. Graham, New York Times, August 28, 1969

"Civil Rights lawyers in the Justice Department decided to protest the Nixon Administration's desegregation policies after they were told by their superiors that political pressures had prompted the Government to call for a delay in Mississippi school integration."

Peter Milius, Washington Post, July 27, 1969

Judge Ben C. Dawkins in commenting on the role played by Rep. Joe D. Waggoner, Jr. (D.La.), stated that "At Waggoner's request I tried to get him (Harry S. Dent) at his office. He wasn't there so I left my home phone. He called me that night at home. He indicated there would be a general relaxation of the school desegregation guidelines, that they would not put so much emphasis on completing it this fall." Five days later Dawkins ordered HEW to renegotiate the cases with later timetables, after expressing "great gratitude" to the President, Mitchell and Finch, Louisiana's Senators and Congressmen, and especially Waggoner with whom "we have talked and conferred many, many times since May 28." Another U.S. District Judge in the state reportedly got three telephone calls in one day from Capitol Hill. All three were about desegregation cases and he had to interrupt hearings on the case to accept them.

Jimmie Allen, research and information director of Republican Party of South Carolina in an interview with Gary Orfield. Acknowledging pressure on the party from all over the state to fulfill the promises made in the fall campaign to weaken civil rights enforcement, he stated that the state organization had repeatedly obtained concessions for school districts from HEW but couldn't claim public credit because "all the damn liberals say Strom Thurmond is the President of the United States." One school district received a year's extension "inside of ten minutes" after the party's executive director called Washington. "If the guidelines are relaxed," Allen said, "the Republican Party owns South Carolina."

(NOTE.—The LDF is a completely separate and distinct organization even though we were established by the NAACP and those initials are retained in our name. Our correct designation is *NAACP Legal Defense and Educational Fund, Inc.*, frequently shortened to *LDF.*)

DELIBERATE SPEED—IN REVERSE

The Administration's school desegregation policy—if indeed such a policy exists—has been swallowed up in a fog of confusion born of high-level contradictions. It is no longer clear whether the rapid succession of conflicting actions and statements derives from an ideological vacuum, or merely Southern political pressure. In either case, the outcome can only be a stiffening of the segregationist position.

A partial list of the Administration's actions and pronouncements includes: delay of desegregation in Mississippi, as the Federal Government itself discredits the plans of its own desegregation experts; de-emphasis of the guidelines set down by the Department of Health, Education and Welfare under the Civil Rights Act of 1964; a gratuitous attack on bussing as an aid to integration by Vice President Agnew, at first supported by a White House spokesman and subsequently contradicted by H.E.W. Secretary Robert Finch.

The zigs and zags of the Administration's approach have been accompanied by a barrage of statistics and predictions of progress in desegregation and by protestations that, although fiscal sanctions against recalcitrant districts are to be relaxed, the power of friendly persuasion and court action will accomplish more than administrative enforcement. In view of the 15-year history of evasion and postponement by exactly those districts which are now to be given the new, persuasive treatment, the emerging policy can hardly encourage Negro parents whose children are still victims of dual school systems. Indeed, it was roundly condemned by the Justice Department's dissident civil rights lawyers, to their great credit, and was courageously attacked as "a major retreat" by the United States Government's Commission on Civil Rights.

It is against such a dismal background that the N.A.A.C.P. Legal Defense and Educational Fund has launched its appeal to the Supreme Court to end all further delays in school desegregation. Although sparked by the Administration's desegregation slowdown in Mississippi, the real issue is whether such a local triumph of the segregationists will not in fact set off a chain reaction of delay and sabotage.

What the L.D.F. fund has challenged is the misinterpretation of the Supreme Court's own 1954 ruling that desegregation must proceed "with all deliberate speed," a phrase clearly intended not to impede progress but to bring about speedy, though orderly, change.

The administration's vacillation is interpreted by the anti-desegregation forces as an invitation to further political pressure. Only a clear statement of principle can reverse so dismal a course. It is up to the President himself to affirm that his lieutenants are in fact bound by such principle.

A \$50 MILLION WINDFALL?

Mr. RIBICOFF, Mr. President, the Subcommittee on Executive Reorganization, which has been reviewing the Federal role in health care, has uncovered an abuse that must not be permitted to continue.

We have found that many veterans of our Armed Forces who receive health care in Veterans' Administration facilities have purchased private health insurance. However, the companies that insure them, and to whom the veterans make their payments, often do not reimburse the VA.

We believe this abuse is resulting in a \$50 million yearly windfall to insurance companies.

There is no good reason why insurance companies should not reimburse the VA for the care received by the individuals born they insure.

On July 30, 1969, we asked the Comptroller General of the United States to review the number of patients in the VA who have private insurance.

We asked the General Accounting Office to determine the extent to which private insurance companies could reimburse the VA for all or part of the care the VA provides to patients who have health insurance.

We also asked GAO to report on possible alternatives to this present practice.

The Subcommittee on Executive Reorganization estimates that the \$50 million is a minimum amount that private insurance companies should be paying for their VA patients.

We expect soon to have the General Accounting Office report on this matter.

UNITED NATIONS ACTION CALLED FOR ON PRISONER-OF-WAR ISSUE

Mr. MONTROYA. Mr. President, I invite attention to remarks which I made on the floor of the Senate on August 13, 1969, when I introduced Senate Resolution 245 in behalf of American and other prisoners of war. At that time, I suggested that the United Nations might appeal to world opinion in behalf of war captives, and that ample precedent already exists for such an appeal in resolutions passed relative to treatment of POW's by the North Koreans and the Chinese Communists during the Korean conflict, as well as treatment of prisoners by both Arabs and Israelis in the wake of the six-day war.

In light of my concern over American prisoners and the need for the implementing of international conventions, I have directed a letter to U.S. Ambassador to the United Nations Charles Yost, asking that an attempt be made by the U.S. Mission to the United Nations to invoke the moral authority and prestige of the United Nations in securing more humane treatment, and the prompt release of prisoners of war.

I also furnished copies of my letter to Ambassador Yost to Secretary Rogers and to Assistant Secretary of Defense for International Security Affairs Warren Nutter.

On behalf of the wives and families of American and other prisoners of war, I am most anxious to learn about the plans of the State Department's U.N. delegation regarding this urgent humanitarian problem. I ask unanimous consent that my letter to Ambassador Yost be printed in the RECORD.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

SEPTEMBER 24, 1969.

HON. CHARLES W. YOST,
U.S. Representative to the United Nations,
U.S. Mission to the United Nations, New
York, N.Y.

MY DEAR MR. AMBASSADOR: On behalf of the wives and families of American and other prisoners of war, it is my sincere hope that an attempt will be made by the U.S. Mission to the United Nations to invoke the moral authority and prestige of the United Nations to obtain more humane treatment and the prompt release of prisoners of war.

In this connection and by way of background, I am pleased to enclose reprints of statements I have made on the Floor of the United States Senate on this serious problem, together with a copy of Senate Resolution 245, which I introduced on August 13, 1969, calling for the use of all means of peaceful persuasion in accomplishing these ends.

I wish to call to your attention remarks which I made at the time S. Res. 245 was introduced, wherein I suggested that the United Nations might appeal to world opinion in behalf of prisoners of war. Certainly ample precedent already exists for such an appeal in resolutions passed relative to treatment of prisoners by the North Koreans and the Chinese Communists during the Korean conflict, and concerning the treatment of prisoners by both Arabs and Israelis in the wake of the six-day war.

I believe it would be most helpful for the United States to introduce a resolution in

the General Assembly calling upon the Government of North Vietnam, the National Liberation Front, and the Pathet Lao to abide by the Geneva Convention and permit the inspection of their POW camps by a duly constituted international body, such as the International Committee of the Red Cross. That Committee, which is entirely Swiss, is well known for its activities relative to prisoners of war and may be an effective way for our Nation to pursue this issue. (As you are aware, the ICRC on September 13th adopted without dissent a Resolution at its Istanbul Conference calling for the protection of prisoners of war.)

Additionally, the U.S. Delegate to the Economic and Social Council (ECOSOC) might request the Human Rights Commission to attempt to pursue an investigation of conditions in the Communist prisoner of war camps.

As one who is greatly concerned over the need for implementation of international conventions, it is my fervent hope that you will use your good offices to bring about compliance with the 1949 Geneva Convention on treatment of prisoners of war, to which North Vietnam is a signatory, as well as reaffirm the Resolution passed in Istanbul on September 13th.

I look forward to hearing about your plans relative to this urgent humanitarian matter. With my very best wishes,

Cordially,

JOSEPH M. MONTROYA,
U.S. Senator.

HISTORIC PRESERVATION

Mr. KENNEDY. Mr. President, the Wall Street Journal for today contains an article describing in some detail the efforts of many Americans to prevent the wholesale demolition of buildings of unique historic significance.

The article presents with great clarity the clash of forces which makes historic preservation work such an uphill battle. Our technological progress is so swift, and its demands such that the pressures on local officials to bulldoze nonrevenue producing structures is almost overwhelming. Yet where we have made the effort to preserve the old, it enhances the new. Faneuil Hall, for example, adds an unmatched flavor to the area around it, facing as it does the modernistic Boston City Hall.

It is my understanding that the Department of Housing and Urban Development and the Department of Interior are making renewed efforts to inform Federal and local officials that we, the Congress, adopted far-ranging historic preservation statutes in 1966. As the article points out, as recently as last spring "many regional HUD offices" remained unaware of the scope of the historic preservation legislation.

I had the opportunity on Tuesday, through the kind efforts of the Senator from New Mexico (Mr. MONTROYA), to testify on a historic preservation matter which lies literally at the doorstep of this Chamber—the proposed extension of the west front of the Capitol. I am opposed to that proposed extension, and I hope that we in the Senate can prevent it.

I ask unanimous consent that the article be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

AT HUD, A NEW RESPECT FOR HISTORY

(By Joann Lublin)

For Sale: A decaying six-story building in New Haven, Conn., doomed to be demolished and replaced by a parking garage in a \$29 million Federally funded urban renewal project.

For three months in 1878 a lady telephone operator sat on a soapbox in a ground-floor room in this building and ran the nation's first commercial switchboard. Southern New England Telephone Co. long ago lost track of the original equipment; it has a replica exhibit downtown. The room is empty now, and a passerby sniffs: "The air in there must be historic."

Chances are the old building will come down, its significance memorialized with a plaque on the front of the parking garage. But the effort to preserve it, even for a little while, has a significance of its own: A departure from custom at the Department of Housing and Urban Development, popularly recognized as Washington's prime advocate of the wrecking ball.

It was HUD that postponed the New Haven building's demolition while historians from the Interior Department hunted for local preservationists who might buy the structure from the city and either relocate or restore it. In contrast, the usual HUD approach has been to tear down everything in a deteriorated urban area and rebuild in modern style—the bulldozer technique of renewal-through-removal that often gave HUD a black eye among architects and preservationists fighting to keep a city's distinctive character.

By no means does the New Haven reprieve signal a complete change of heart at HUD. Historic restoration still ranks comparatively low next to low-cost housing and downtown economic rejuvenation. And, despite the New Haven instance of cooperation with the Interior Department, a rivalry persists—HUD having renewal money (a \$750 million Congressional authorization) and few historical experts, while Interior has trained historians and relatively little preservation money (a \$32 million authorization, of which Congress has appropriated a scant \$400,000).

HUD people shrug off Interior's fiscal frustrations. "They talk," says a HUD man, "and we put in the money."

Out of HUD's money, the 2,000-plus cities with urban renewal projects may seek up to \$90,000 per building for historic restoration. The rest of the restoration cost is up to the city, but often it can write off this outlay as part of its required one-third share of the total bill for the renewal project.

HUD, in judging the authenticity of a prospective restoration, relies on the standards the Interior Department employs in compiling its National Register of Federally protected sites and buildings. The states nominate candidates for this list; currently it numbers more than 1,000. Paradoxically, preservationists rely on this very list in defending their treasures from HUD-financed bulldozers. When a listed building is threatened by the urban renewers or other Federal perils (superhighways, for instance), a 17-member Advisory Council on Historic Preservation steps in to help find ways of saving it.

Inclusion of the New Haven telephone building on the National Register has red-dened some faces at Interior. But other choices need no apology: Henry Thoreau's Walden Pond in Concord, Mass., the Brooklyn Bridge, and Robert Goddard's first rocket-launching site (on the ninth fairway of the Pakachoag golf course in Worcester County, Mass.).

HUD now refuses to okay urban renewal funds until the local government justifies its intended handling of sites and buildings on the National Register. But as recently as last spring—two years after historic-preservation

legislation took effect—many regional HUD officers remained unaware they could turn down renewal plans which did not take these structures into account. And some local historical groups have lodged their aged schoolhouse or armory on the Register—then defied oncoming bulldozers from behind the Register's protection.

Thus in Grand Rapids, Mich., where \$3,267,141 in HUD money has poured into a downtown renewal project begun in 1961, the only non-new building left in Vandenberg Center is the 81-year-old city hall, which boasts a six-story clock tower and the first concrete roof poured in the U.S. The city fathers want their old hall torn down, but the Kent County council on historic preservation secured National Register recognition for it from the Interior Department last June.

Too late, say HUD's officials. Explains George Karas, an urban renewal expert, referring to the Government's loans: "To suddenly change signals on the developers, telling them we are going to save an old building, means you've sold money to them on false premises—and sabotaged the whole urban renewal plan."

So HUD begged off blocking the Grand Rapids city hall demolition, arguing that the 1966 preservation law can't retroactively affect renewal plans approved five years earlier. (The local preservationists, who filed suit Tuesday against HUD and the city, will be in court next week arguing for a delay in the demolition while the Advisory Council on Historic Preservation hears their case.)

The Nixon-tuned HUD administrators, mindful of hometown cries of "Federal interference," also remarks that if Grand Rapids residents cannot persuade their own city government to cancel destruction of the old city hall, "It raises the question of whether it should be saved."

A counter-argument, often expressed by Interior Department architects and historians, is that HUD should consider not the local but the national significance of a historic building—especially since renewal dollars are Federal tax money.

The new HUD policy of cooperating with the Interior Department's National Register has aggravated renewal-preservation woes in another way. While HUD maintains tenuous alliances with city planners, National Register people avoid them, relying instead on historian-architect teams or state liaison officers.

This infuriated local renewal planners in Derby, Conn., because they were not consulted when the city-owned Sterling Opera House, scheduled for demolition on a renewal site, was placed on the Register last March by the state. ("That's one of the strengths," says William Murtagh, keeper of the National Register. "The owner does not have to give his consent for a building to be put on the Register.")

HUD approved Derby's urban renewal contract in June, on the condition that planners justify demolition of the 80-year-old opera house before the Advisory Council in Washington in November. Now the city threatens to redraw its renewal plans and leave out the building, then tear it down and sell the land to an eager local bank. If no Federal assistance is involved, neither HUD nor the National Register could prevent the demolition of the opera house, where Lionel Barrymore performed and John L. Sullivan boxed—and the air is historic.

ATTORNEY GENERAL'S OPINION SUSTAINING LEGALITY OF RE- VISED PHILADELPHIA PLAN

Mr. JAVITS. Mr. President, on September 22, 1969, the Attorney General issued a formal opinion sustaining the legality of the revised Philadelphia plan. In my opinion, the Attorney General's

opinion convincingly demonstrates that the revised Philadelphia plan does not violate title VII of the Civil Rights Act of 1964 and that the Comptroller General's recent ruling to that effect, on which I have previously commented, is clearly erroneous. Certain salient points of the Attorney General's opinion deserve special emphasis.

In the first place, the opinion points out that the "affirmative action" required of Federal contractors under Executive Order 11246 "imports something more than the merely negative obligation not to discriminate." Thus, regardless of whether a Federal contractor has actually violated the prohibition against overt discrimination contained in title VII of the Civil Rights Act of 1964, he may be required, as a condition for doing business with the Government under Executive Order 11246, to implement affirmative action policies to guarantee equal employment opportunity. As the opinion notes:

It is important to distinguish between those things prohibited by Title VII as to all employers covered by that Act, and those things which are merely not required of employers by that Act. The United States as a contracting party may not require an employer to engage in practices which Congress has prohibited. It does not follow, however, that the United States may not require of those who contract with it certain employment practices which Congress has not seen fit to require of employers generally.

One of the faulty premises underlying the Comptroller General's erroneous opinion is the failure to recognize this distinction.

Second, the opinion, noting that the revised Philadelphia plan itself expressly provides that contractors need only make good faith efforts to meet the "goals" established under the plan, and that good faith efforts does not include any action which would violate title VII of the Civil Rights Act of 1964, concludes that the plan does not require federal contractors to violate title VII of the Civil Rights Act of 1964. In this connection, the Attorney General's opinion takes specific issue with the assumption running throughout the Comptroller General's ruling that title VII prohibits employers from making race or national origin a factor for consideration in any stage of the process of obtaining employees. The opinion points out what should be obvious to anyone who has a familiarity with the relevant judicial decisions in the field of discrimination, namely that the obligation of discrimination "does not require and, in some circumstances, may not permit obliviousness or indifference to the racial consequences of alternative courses of action which involve the application of outwardly neutral criteria."

Third, the opinion also refutes the contention that title VII is the exclusive remedy for discrimination and that Executive Order 11246 can neither require nor forbid actions or practices which title VII does not cover. For this reason, as the opinion also correctly points out, the references in the Comptroller General's ruling to some of the legislative history of title VII are simply irrelevant insofar as the proper interpre-

tation of Executive Order 11246 is concerned.

Finally, the Attorney General's opinion specifically authorizes the Department of Labor to proceed on the basis that the revised Philadelphia plan is legal and to require Federal contracting and administering agencies to implement the plan in accordance with its terms. Implicit in this part of the opinion is the conclusion that the Comptroller General, in issuing his ruling concerning the revised Philadelphia plan, has greatly exceeded his authority. As I have stated previously, title VIII of the Civil Rights Act of 1964 does not give the Comptroller General authority to enforce or interpret its provisions; the agency of the Government primarily charged with this responsibility is the Justice Department, which has now spoken. In view of this situation it would be most unfortunate indeed if the Comptroller General, on the basis of his ruling, attempts to interfere with the implementation of the revised Philadelphia plan by the Labor Department. Under the circumstances, any dispute concerning the legality of the plan should be settled in the courts, which have the final authority to interpret and enforce title VII of the Civil Rights Act of 1964.

Mr. President, I ask unanimous consent that the opinion of the Attorney General concerning the revised Philadelphia plan and a news report of Assistant Secretary Fletcher's remarks concerning implementation of the plan, and its possible extension to other cities, be printed in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

OFFICE OF THE ATTORNEY GENERAL,
Washington, D.C. September 22, 1969.

The Honorable Secretary of Labor.

MY DEAR MR. SECRETARY: You have requested my opinion as to the legality of the Department of Labor's order of June 27, 1969, the Revised Philadelphia Plan for Compliance with Equal Employment Opportunity Requirements of Executive Order 11246 for Federally-Involved Construction.

The Philadelphia Plan has been issued to implement Executive Order 11246 of September 24, 1965, as amended (30 F.R. 12319, 32 F.R. 14303, 34 F.R. 12986), in which the President has directed that Federal Government contracts and federally-assisted construction contracts contain specified language obligating the contractor and his subcontractors not to discriminate in employment because of race, color, religion, sex, or national origin.¹

¹The essential part of the contractor's obligation under this order is: "The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. * * *. E.O. 11246, § 202(1)."

In addition the contractor agrees to furnish required information and reports, to comply with orders and regulations implementing the Executive order, and to include these contractual provisions in subcontracts.

The Secretary of Labor is responsible for the administration of Executive Order 11246 and is authorized to "adopt such rules and regulations and issue such orders as he deems necessary and appropriate to achieve the purposes thereof." E.O. 11246, § 201.

Among the undertakings required of contractors by Executive Order 11246 is to "take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin." E.O. 11246, § 202(1). The obligation to take "affirmative action" imports something more than the merely negative obligation not to discriminate contained in the preceding sentence of the standard contract clause. It is given added definition by the Secretary's regulations, which require that contractors develop written affirmative action plans which shall "provide in detail for specific steps to guarantee equal employment opportunity keyed to the problems and needs of members of minority groups, including, when there are deficiencies, the development of specific goals and time tables for the prompt achievement of full and equal employment opportunity." 41 C.F.R. 60-1.40.

The Department of Labor order of June 27th is based upon stated findings relating to the enforcement of the nondiscrimination and affirmative action requirements of Executive Order 11246 with respect to the construction trades in the Philadelphia area. The Department of Labor has found that contractors must ordinarily hire a new employee complement for each construction job and that whether by contract, custom, or convenience this hiring usually takes place on the basis of referral by the construction craft unions. The Department of Labor has found further that exclusionary practices on the part of certain of these unions, including a refusal to admit Negroes to membership in unions or in apprenticeship programs, and a preference in work referrals to union members and to those who have worked under union contracts, have resulted in the employment of only a small number of Negroes in the six construction trades in the area affected by the Philadelphia Plan. Accordingly, the Department of Labor has found that special measures were required in the Philadelphia area to provide equal employment opportunity in these six specified construction trades.²

The Revised Philadelphia Plan requires that with respect to construction contracts in the Philadelphia area which are subject to Executive Order 11246 and where the estimated total cost of the construction project exceeds \$500,000, each bidder must, in the affirmative action program submitted with his bid, "set specific goals of minority manpower utilization which meet the definite standard" included in the invitation for bids. This standard will be a range of minority manpower utilization for the trades covered by the Plan and will be determined prior to the invitation for bids by the Department's area coordinator on the basis of the extent of minority group participation in the trade, the availability of minority group persons for employment in such trade, and other stated factors. As an alternative to setting such specific goals, the bidder may agree to participate in a multiemployer affirmative action program which has been approved by the Department of Labor's Office of Federal Contract Compliance.

The Plan provides that the contractor's

² The order of June 27, issued by the Assistant Secretary for Wage and Labor Standards, is reprinted in the Cong. Rec. pp 21398-21400. All of the findings summarized above appear in section 4 of the order, in the Cong. Rec. p. 21399. The order originally extended to seven construction trades, but one trade has been removed from coverage.

commitment to specific goals "is not intended and shall not be used to discriminate against any qualified applicant or employee," (§ 6(b)(2)). Furthermore, the obligation to meet the goals is not absolute. "In the event of failure to meet the goals, the contractor shall be given an opportunity to demonstrate that he made every good faith effort to meet his commitment. In any proceeding in which such good faith performance is in issue, the contractor's entire compliance posture shall be reviewed and evaluated in the process of considering the imposition of sanctions," (§ 8(a)).

In response to Congressional inquiries the Comptroller General has, in his letter to you of August 5, 1969, expressed the opinion that the provision of the Philadelphia Plan for commitment to specific goals for minority group participation is in conflict with Title VII of the Civil Rights Act of 1964, 42 U.S.C. 2000e *et seq.*, and consequently unlawful, and he has indicated further that such illegality may affect the lawfulness of expenditures of appropriated funds under contracts entered into under the terms and procedures of the Philadelphia Plan. *Cf.* 42 Comp. Gen. 1 (1962).

I have reached a contrary result, and conclude that the Revised Philadelphia Plan is not in conflict with any provision of the Civil Rights Act, that it is a lawful implementation of the provisions of Executive Order 11246, and that it may be enforced in accordance with its terms in the award of Government contracts.

Before undertaking detailed analysis of the contentions involved, it is important to consider the functions of the Executive order and the Philadelphia Plan, as well as the provisions of the Plan itself. Executive Order 11246 is a lawful exercise of the Federal Government's authority to determine the terms and conditions on which it is willing to enter into contracts.³ That order lays down a rule which governs only those employers who enter into contracts with the United States, construction contracts financed with Federal assistance, or subcontracts arising under such Federal or federally-assisted contracts. Neither the order nor the Philadelphia Plan, which implements the order with respect to certain construction contracts, regulates the practices of employers generally. While the power of the Government to determine the terms which shall be included in its contracts is subject to limitations imposed by the Constitution or by acts of Congress, the existence of such power does not depend on an affirmative legislative enactment. In evaluating the Comptroller General's challenge to the Philadelphia Plan on the basis of conflict with Title VII of the Civil Rights Act, it is important to distinguish between those things prohibited by Title VII as to all employers covered by that act, and those things which are merely not required of employers by that act. The United States as a contracting party may not require an employer to engage in practices which Congress has prohibited. It does not follow, however, that the United States may not require of those

³ The order is generally similar to its predecessor, Executive Order 10925 of March 6, 1961, which, in 42 Ops. A.G. No. 21 (1961), was held to be a valid exercise of presidential authority. See also 40 Comp. Gen. 592 (1961); *Farkas v. Texas Instrument, Inc.*, 375 F. 2d 629, 632 (C.A. 5, 1967). The contract compliance program under these Executive orders has received legislative recognition in the Civil Rights Act of 1964, § 709(d), 42 U.S.C. 2000e-8(d), and in subsequent appropriations legislation. The Comptroller General does not challenge the validity of Executive Order 11246, as such, but concludes that the Revised Philadelphia Plan is not a permissible implementation of the order because of an asserted conflict with Title VII of the Civil Rights Act.

who contract with it certain employment practices which Congress has not seen fit to require of employers generally.

The requirements which the Plan would impose on contractors may be briefly summarized.⁴ The contractor must—

(a) In his proposal set specific goals for minority group hiring within certain skilled trades, which goals must be within the range previously determined to be appropriate by the Secretary;

(b) He must make "every good faith effort" to meet these goals;

(c) But he may not, in so doing, discriminate against any qualified applicant or employee on grounds of race, color, religion, sex or national origin.

If a plan such as this conflicts with Title VII of the Civil Rights Act, its validity concededly cannot be sustained. But in my view no such conflict exists. Section 703(a) of the Civil Rights Act makes it an unlawful employment practice for an employer—

"(1) To fail or refuse to hire or to discharge any individual, or otherwise to discriminate against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, or national origin; or

"(2) To limit, segregate, or classify his employees in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, sex, or national origin."

Nothing in the Philadelphia Plan requires an employer to violate section 703(a). The employer's obligation is to make every good faith effort to meet his goals. A good faith effort does not include any action which would violate section 703(a) or any other provision of Title VII. If the provisions of the Plan were ambiguous on this point, its interpretation would be governed by the principle that "where two constructions of a written contract are possible, preference will be given to that which does not result in violation of law," *Great Northern Ry. Co. v. Delmar Co.*, 283 U.S. 686, 691 (1931). However, to remove any doubt the Plan specifies that the contractor's commitment shall not be used to discriminate against any qualified applicant or employee.

Nevertheless, it might be argued—and the Comptroller General appears to take this position—that the obligation to make good faith efforts to achieve particular goals is meaningless if it does not contemplate deliberate efforts on the part of the contractor to affect the racial composition of his work force, that this necessarily involves a commitment "to making race or national origin a factor for consideration in obtaining [his] employees," and that any such action would violate Title VII.

It is not correct to say that Title VII prohibits employers from making race or national origin a factor for consideration at any stage in the process of obtaining employees. The legal definition of discrimination is an evolving one, but it is now well recognized in judicial opinions that the obligation of non-discrimination, whether imposed by statute or by the Constitution, does not require and, in some circumstances, may not permit obliviousness or indifference to the racial consequences of alternative courses of action which involve the application of outwardly neutral criteria. *Gaston County v. United States*, 395 U.S. 285 (1969) (voting); *Offermann v. Nitkowski*, 378 F. 2d 22 (C.A. 2, 1967) (schools); *Local 189, United Papermakers*,

⁴ I put to one side the bidder's option of participating in an OFCC-approved multi-employer program, since the details of such programs have yet to be worked out and the legality of such programs has not been called into question.

etc. v. United States, F. 2d 60 ¶ 9289 (C.A. 5, 1969) (employment).

There is no inherent inconsistency between a requirement that each qualified employee and applicant be individually treated without regard to race, and a requirement that an employer make every good faith effort to achieve a certain range of minority employment. The hiring process, viewed realistically, does not begin and end with the employer's choice among competing applicants. The standards he sets for consideration of applicants, the methods he uses to evaluate qualifications, his techniques for communicating information as to vacancies, the audience to which he communicates such information, are all factors likely to have a real and a predictable effect on the racial composition of his work force. Title VII does not prohibit some structuring of the hiring process, such as the broadening of the recruitment base, to encourage the employment of members of minority groups. *Local 189, etc. v. United States*, *supra* at ; see *Offermann v. Nitkowski*, *supra* at 24. The obligation of "affirmative action" imposed pursuant to Executive Order 11246 may require it. 41 C.F.R. 5-12.805-51(b), (c); Matter of Allen-Bradley Co., CCH Empl. Prac. Svce. ¶ 8065 (1968).

Viewed in this light, the example cited in the Comptroller General's opinion is not an argument against the legality of the Plan. The Comptroller General poses the examples of a contractor requiring twenty plumbers, with a specified "goal" that five of these plumbers be from minority groups. If the contractor has filled fifteen of these posts with nonminority plumbers, says the Comptroller General, the next white applicant for one of the five vacancies will inevitably be discriminated against by reason of the fact that he is not a member of a minority group. Doubtless a part of the good faith effort required of the contractor to achieve the stated goals would have been to avail himself of manpower sources which might be expected to produce a representative number of minority applicants, so that the situation posed in the Comptroller General's example would arise but infrequently. Yet, quite clearly, if notwithstanding the good faith efforts of the employer such a situation does arise, the qualified nonminority employee may be hired. The fact that the minority employment goal was to this extent not reached would not in itself be sufficient ground for concluding that the contractor had not exerted good faith efforts to reach it.

The Philadelphia Plan addresses itself to a situation in which, according to the Department of Labor's findings, the contractors have in the past delegated an important part of the hiring function to labor organizations by selecting their work force on the basis of union referrals. The referral practices of certain unions, whether or not amounting to violations of Title VII, have in fact contributed to the virtual exclusion of Negroes from employment in certain trades in the Philadelphia area. Continued reliance by contractors on established hiring practices may reasonably be expected to result in continued exclusion of Negroes. The purpose of the Philadelphia Plan is to place squarely upon the contractor the burden of broadening his recruitment base whether within or without the existing union referral system, as he shall determine. The contractor's obligation is phrased primarily in terms of goals; the choice of methods is his, provided only that he does not discriminate against qualified employees or applicants. Unless it can be demonstrated that the hiring goals cannot be achieved without unlawful discrimination,⁵

⁵ The Plan provides that the goals will be determined with particular attention to the factual situation in each affected trade. Accordingly, there is every reason to assume that the goals will represent an informed

I fail to see why the Government is not permitted to require a pledge of good faith efforts to meet them as a condition for the award of contracts.

The Comptroller General argues that inasmuch as Title VII does not require labor organizations to achieve a racial balance in their membership or in referrals (§ 703(j)), Executive Order 11246 cannot be used to require an employer "to abandon his customary practice of hiring through a local union" even though experience has demonstrated that the union refers very few members of minority groups. I confess I find this argument difficult to follow. Since, as stated above, the obligation of affirmative action comprehends more than bare compliance with Title VII and may under proper circumstances include an obligation on the part of the employer to broaden his recruitment base, the order would be an exercise in futility if the employer may evade this obligation by contracting away his power to perform it. Whether or not the law permits him to accept referrals only from unions which are or may be discriminating,⁶ the law does not require him to do so. To comply with his affirmative action obligation an employer may be forced to depart from his customary reliance on union referrals (though this will depend to a great extent on the unions' own response to the Plan), but since the law permits an employer to obtain employees from additional sources, I see no reason why the Government is not free to bargain for his assurance to do so. In other words, the employer may have a right to refuse to abandon his customary hiring practices, but he has no right to contract with the Government on his own terms. *Perkins v. Lukens Steel Co.*, 310 U.S. 113 (1940); *Copper Plumbing & Heating Co. v. Campbell*, 290 F. 2d 368, 370-71 (C.A. D.C. 1961). Accordingly, I conclude that the Philadelphia Plan is not inconsistent with any provision of Title VII of the Civil Rights Act.

Another argument might be urged against the legality of the Philadelphia Plan. Let it be conceded, this argument runs, that the Government may lawfully require a contractor to take certain forms of affirmative action to increase employment of members of minority groups, and conceded further that on its face the Philadelphia Plan requires no more than legally permissible forms of affirmative action to achieve the goals set by the contractor in response to the bidding invitation. Nevertheless, by stating the contractor's primary obligation in terms of a numerical result, by failing to specify what "good faith efforts" will be acceptable in lieu of the achievement of such result, and by placing upon the contractor who has failed to achieve his "goal" the burden of proving that, in effect, he did all that was legally permissible to meet it, the Government so weights the procedural scales against the nonachieving contractor as to coerce him in fact, if not in law, into discriminating. In other words, although the substance of the contractor's obligation under the Philadelphia Plan may be permissible, the Plan does not provide a fair method for resolving questions regarding compliance. *Cf. Speiser v. Randall*, 357 U.S. 513, 520-26 (1958).

This argument appears to me to be premature and speculative at this time. It is true that the Philadelphia Plan might be

administrative judgment of what an effective affirmative action plan may be expected to achieve.

⁶ On the facts before me it is impossible to determine whether the present practices of the unions affected by the Philadelphia Plan are in violation of Title VII and such a determination is not necessary to the resolution of the question of the legality of the Plan.

clearer if it were to state what good faith efforts are expected of contractors. But the general requirements of affirmative action, particularly in the area of recruitment, have been stated elsewhere in regulations, 41 C.F.R. 5-12.805-51(b), (c), and other publications, and there is no reason to believe that the Department of Labor officials administering the Plan would be unwilling to describe to any interested contractor the kind of actions expected of him. In short, I cannot assume that any contractor who desires to participate in good faith in the Philadelphia Plan will be forced, as a practical matter, to choose between noncompliance with his affirmative action obligation and violation of Title VII. If unfairness in the administration of the Plan should develop, it cannot be doubted that judicial remedies are available. *Cf. Copper Plumbing & Heating Co. v. Campbell*, *supra*.

Finally, the Comptroller General appears to suggest that although Title VII contemplated the continued operation of the contract compliance program under Executive orders, nevertheless the substantive provisions of Title VII somehow limit and preempt those of the order. The basis for this conclusion is nowhere explained. There is no question that the Executive order cannot require what Title VII forbids, but as has been pointed out above, the Philadelphia Plan does not seek to do so. The Comptroller General argues further, in effect, that the Executive order can neither require nor forbid actions or practices which Title VII declines to interfere with. This is the inference which must be drawn from the Comptroller General's references to expressions in the legislative history of the Civil Rights Act regarding what Title VII would not do.⁷ But Title VII is not and was not understood by Congress to be the exclusive remedy for racially discriminatory practices in employment. *Local Union No. 12 v. NLRB*, 368 F. 2d 12, 24 (C.A. 5, 1966), *cert. denied*, 389 U.S. 837 (1967), *rehearing denied*, 389 U.S. 1060 (1968). Nothing in the language or legislative history of that statute suggests that "affirmative action may not be required of Government contractors under the Executive order above and beyond what the statute requires of employers generally."⁸

It is, therefore, my view that the Revised Philadelphia Plan is legal and that your Department is authorized to require Federal contracting and administering agencies to implement the Plan in accordance with its terms in the award of contracts in the Philadelphia area. E.O. 11246, §§ 201, 205. Where a contractor submits a bid which does not comply with the invitation for bids issued pursuant to the Plan, such a bid may be rejected as not responsive. 38 Ops. A.G. 555 (1937); *Graybar Electric Co. v. United States*, 90 C. Cls. 232, 244 (1940). I hardly need add that the conclusions expressed herein may be relied on by your Department and other contracting agencies and their accountable officers in the administration of Executive Order 11246. 28 U.S.C. 512, 516; 37 Ops. A.G. 562, 563 (1934); 38 Ops. AG 176, 178-81 (1935); *Smith v. Jackson*, 241 Fed. 747, 773 (C.A. 5, 1917), *aff'd*, 246 U.S. 388 (1918).

Sincerely,

JOHN N. MITCHELL,
Attorney General.

⁷ On the view I take of the question before me, it is not necessary to consider the correctness of all the Comptroller General's conclusions regarding the scope of Title VII, and my failure to do so implies neither agreement nor disagreement with such conclusions.

⁸ In the one instance where the statute deals with the overlap of Title VII and the Executive order, reporting requirements, it is the order and not the statute which is accorded priority. § 709(d).

[From the New York Times, Sept. 24, 1969]
UNITED STATES TO START PLAN GIVING MINORITIES JOBS IN BUILDING—PHILADELPHIA PILOT PROGRAM WILL BE EXTENDED LATER—MITCHELL TERMS IT LEGAL

(By James M. Naughton)

WASHINGTON, September 23.—The "Philadelphia plan" setting minority hiring guidelines for six skilled construction crafts working on federally assisted projects in Philadelphia was ordered into effect today by Secretary of Labor George P. Shultz.

At the same time, Attorney General John N. Mitchell issued an opinion declaring, contrary to an earlier ruling of the Controlling General, that the plan was legal and did not violate terms of the Civil Rights Act of 1964.

Both announcements underscored the apparent decision by the Nixon Administration to concentrate its civil rights activity in the field of equal job opportunities—a decision that could have important political overtones.

Arthur A. Fletcher, an Assistant Secretary of Labor, said that it was time to "quit looking at the civil rights movement without looking at the unemployment rate."

PROBLEM TERMED ECONOMIC

"This is an economic problem and we can use the economic genius of this country to solve it," he said.

One White House source said that President Nixon believed such traditional civil rights activities as open housing and voting rights were less significant in the long run than effort to open up the job market to minorities.

Mr. Shultz said that the Philadelphia plan was a pilot program that would be extended later to other cities.

Chicago, one of several cities that have been scenes in recent weeks of demonstrations by Negroes for more construction jobs, could be next to receive a Labor Department mandate for more affirmative action on equal employment.

Under the plan set in motion today for Philadelphia, contractors working on federally assisted projects would be required to set specific goals within the Federal guidelines for hiring members of minority groups.

Affected by the order are six skilled crafts—ironworkers, steamfitters, sheetmetal workers, electrical workers, elevator construction workers and plumbers and pipefitters. Employers would be expected to demonstrate "good faith efforts" at meeting minority hiring levels ranging from 4 per cent this year to 26 per cent in 1973.

The plan was first devised a year ago, but it has been blocked by rulings of the Controlling General, Elmer B. Staats, who said that it would violate the Civil Rights Act of 1964 by setting racial hiring quotas.

Attorney General Mitchell's 20-page ruling today argued, however, that the plan was legal because it required affirmative action to meet goals rather than establishment of firm quotas.

Asked to explain the difference between goals and quotas, Mr. Shultz said that a "quota is a system which keeps people out." "What we are seeking," he said, "are objectives to get people in."

DEMONSTRATIONS RECALLED

Implementation of the plan in Philadelphia has national significance because of efforts by Negroes and other minority groups across the United States to secure construction jobs.

Pittsburgh and Chicago have been scenes of demonstrations by Negroes, and in Pittsburgh white craft union members have conducted counter-demonstrations.

The American Federation of Labor and Congress of Industrial Organizations building trade unions went on record yesterday

in Atlantic City in opposition to the Philadelphia plan or any other quota system.

C. J. Haggerty, president of the construction and building trades department of the federation, told its convention, "We are 100 per cent opposed to a quota system, whether it be called the Philadelphia plan or whatever."

Mr. Fletcher estimated that between 30 and 50 per cent of the work force in the United States was employed by companies with Government contracts.

One high Administration official said in an interview that there might be "justifiable criticism of the Nixon Administration on school desegregation, but I'm confident we're going to go farther in this Administration than did any other on job equality."

He said that the decision to focus on job equality "to a great extent reflects the priority of black people."

"Look at what's happening now in Chicago, Pittsburgh, Boston and Philadelphia," he said. "The big thrust now is not schools, but jobs."

By adding Government impetus to this thrust, the Nixon Administration could well be risking political reaction.

During the demonstrations in Pittsburgh last month, white construction workers stood before City Hall and chanted, "Wallace, Wallace, Wallace"—a sign that they linked the issue to the political philosophy of George C. Wallace and his renewed quest of the Presidency.

A NEED TO ANALYZE

Mr. Fletcher said in an interview that the Nixon Administration had come on the national scene at a time when there was "a need to analyze what has been happening in the last two decades."

Courtroom battles and social legislation have opened up opportunities for minorities to overcome previous discrimination, but the Nixon Administration has become aware that it must concentrate on developing economic opportunities, Mr. Fletcher said.

He said that the unemployment rate among nonwhites nationally "still lingers at the depression era levels." Faced with joblessness in the depression, the Federal Government acted to solve what was an economic problem, Mr. Fletcher said, and the same approach must now be made toward the economic problem of nonwhites.

"The dilemma has been that the rebuilding of the American cities is happening right under the black man's nose," he said. "Here he is saying, 'I won the right to go to the hotel, and I won the right to go to school, and I won the right to buy a house; now I need the money.'"

Asked if he believed that his views represented a policy decision by the Administration, Mr. Fletcher replied that Mr. Nixon stated on Aug. 13 that "there may be argument in this country on this whole problem of equality of opportunity, but there can be absolutely no compromise and no argument on that score."

The President's remark, made as he swore in John Wilks as Deputy Assistant Secretary of Labor for contract compliance, is "my license to do the job," Mr. Fletcher said.

PUBLIC HEARINGS, TAX REFORM ACT OF 1969—SUMMARY OF TESTIMONY

Mr. LONG. Mr. President, today the Committee on Finance continued hearing witnesses present testimony on the proposed tax treatment of State and local bond interest. The committee also heard testimony concerning the question of the limitation on tax preferences and the allocation-of-deductions rules. Combined,

these two features constitute the so-called minimum income tax. An additional statement was received relating to the proposed maximum tax on earned income—income averaging.

So that Senators might follow the progress of these tax reform hearings, I ask unanimous consent that a summary of the testimony be printed in the RECORD.

There being no objection, the summary was ordered to be printed in the RECORD, as follows:

LIMIT ON TAX PREFERENCES; ALLOCATION OF DEDUCTIONS

HON. C. DOUGLAS DILLON, FORMER SECRETARY OF THE TREASURY

Allocation of charitable deductions

Opposes the provision in the House bill requiring the allocation of charitable deductions. States that the allocation of deductions provision in the House bill, as it applies to charitable gifts, removes a substantial part of the tax benefit from all gifts to nonprofit institutions. Indicates that its effect on large-scale giving will be devastating.

Points out that charitable contributions are a voluntary matter and, when made, reduce the donor's net assets even when taken as a deduction in determining taxable income. Indicates that since donors have full control of their own giving, by reducing their gifts they can avoid the impact of the allocation of deductions provision.

Points out that a tax computation for a model taxpayer, which has been prepared by Price-Waterhouse & Co., shows that 40.1 per cent of the taxpayers' gifts to charity would no longer be deductible under the House bill and that the overall tax to be paid by the model taxpayer would increase by 24.2 per cent. States that of this increase 88.8 per cent would be due to the treatment of charitable gifts under the allocation of deductions provisions.

Points out that the model shows that a reduction in giving of 87 percent would be required to eliminate the impact of the allocation of charitable deductions, and to leave the donor in the same economic position after gifts and taxes as would be the case under present law.

States that the modification suggested by the Treasury eliminating the classification of the appreciation on securities given to charity as tax preference income is a step in the right direction. Indicates, though, that it only removes a part of the problem. Urges the elimination of the allocation of deductions provision as it applies to charitable deductions.

Favors the provisions in the House bill eliminating the unlimited charitable deduction and providing for a limit on tax preferences in the belief that all citizens should make a fair contribution to the cost of government. Supports the Treasury proposals to reduce the tax on foundation income from 7½ to 2 percent and to allow credit to the appreciation in value of works of art given to museums.

HON. STANLEY S. SURREY, FORMER ASSISTANT SECRETARY OF THE TREASURY FOR TAX POLICY

General

Regards the Tax Reform Act of 1969 as a very significant step forward in accomplishing reform of the Federal tax structure.

Criticizes those who regard the tax system as a device "to pour out financial assistance to industries and activities that do not want to trust to the marketplace." Believes this approach can only be destructive of an equitable tax system and an efficient use of Government resources. States that it is the proper course now to cut back tax incentives, and that the House bill is a good start which should be pushed forward, not stripped back.

Individual income tax provisions in House bill

States the House bill fully meets the problem of low-income taxpayers by dealing with the taxation of those below the poverty level and the unfair burdens on low-income families above that level. With respect to middle-income taxpayers, believes the bill meets the major goal of restoring tax simplicity and tax equity in the case of personal deductions by increasing the standard deduction. (Adds, however, that the bill could be improved by revising the tax treatment of the elderly and disallowing the gasoline tax deduction.)

Believes the bill commences in a significant way to restore tax fairness by dealing with high-income taxpayers by elimination of the unlimited charitable contributions deduction, removal of the alternative capital gains rate, extension of the holding period for capital gains from 6 to 12 months, by treating tax-exempt interest on State and local bonds, and by the partial cutback on tax preferences accorded real estate—a cutback which should be pushed further.

Also approves of the adoption of the minimum tax or limit on tax preferences and allocation of deductions provisions. Suggests, however, that these two provisions as presently structured have serious omissions which should be corrected.

States that the bill falters seriously in its treatment of farm tax losses, and begins an unwise approach in placing a 50-percent limit on the top marginal rate applicable to earned income.

Corporate income tax provisions in House bill

Points out that there is an unevenness in the effective rate of tax paid by various industries, and attributes this result primarily to tax preferences applicable to two industries—natural resources and financial institutions. States that with respect to financial institutions, the House bill brings the effective tax rates of the commercial banks, mutual savings banks, and savings and loan associations closer to those paid by business generally, and also reduces the range of differences within these institutions themselves. With respect to natural resources, notes that the House bill reduces the percentage depletion rates by about 25 percent and states that it ends the abuse associated with mineral production payments. Indicates the bill fails to deal with the effect of intangible drilling expenses in the oil industries and the tax preferences accorded timber.

Approves of the bill's treatment of multiple corporations, tax preferences associated with real estate operations, and the rules governing foundations and other tax-exempt organizations. States that the bill has serious weaknesses in that it would open up three new tax incentives—and notes that the Treasury seeks to adopt others. These three incentives are the 5-year amortization for pollution control facilities and for rehabilitation expenditures on housing, and the 7-year amortization for railroad cars. States that it appears that "amortization" is now the magic word and we may be witnessing the beginning of a wide schedule of amortization periods by business and activities akin to the schedule of percentage depletion rates.

States that the House bill in its amortization incentives has a revenue cost of \$830 million and if retained excessive depreciation for housing (especially luxury and high cost housing) is added, the bill involves over \$1 billion of tax incentive expenditures. Believes that if a reduction in the net revenue cost of the bill is sought, these are areas where a start could properly be made. Expresses the opinion that if funds of this magnitude are to be spent for social and other programs, they ought to be spent directly as government expenditures and in accordance with carefully selected priorities in the various programs.

Tax rates and revenue costs in House bill

Believes the rate reductions of the House bill are aimed at those who should be first in

line for tax relief—first, the low-income taxpayers, and then the middle-income taxpayers. States that the revenue loss with respect to these reductions is hardly significant over a period of several years. Disapproves of the Treasury approach to make across-the-board individual rate reductions paramount, and to strip back the relief for low- and middle-income families. Believes this is an upside-down view of the priorities for tax relief.

DAVID N. MILLS, DETROIT, MICH.

Allocation of deductions

States that since most of the "tax preference" items to which the allocation of deductions rules would apply do not represent cash or property received by the taxpayer during the year, they cannot be regarded as a source from which any personal deduction could have been paid. Believes that personal deductions should not be disallowed except to the extent actually attributable to tax-exempt income or preferences.

Suggests that if tax preferences are to be eliminated or reduced, that this should be done by taxing them directly, rather than using them as the basis for disallowing wholly unrelated and legitimate deductions.

Believes the allocation of deductions rules would have a serious effect on charitable and educational institutions dependent primarily on medium- and large-size gifts from individuals who determine the amount of their gifts by the "after-tax" cost of the contribution.

ROBERT M. JOHNSON, ATTORNEY, DENVER, COLO.

Tax treatment of State and local bonds

States serious questions exist as to the validity under the Federal Constitution of certain provisions of the House bill including (a) the limit on tax preferences imposing a direct Federal income tax on municipal bond interest, (b) the allocation of deductions imposing an indirect Federal income tax on such income by the reduction of other deductions mainly because of the receipt of such income by a taxpayer, and (c) the Federal subsidy and waiver of tax exemption. Believes that the serious constitutional questions resulting from these proposals will be the subject of protracted litigation resulting in a serious disturbance in the condition of the municipal bond market for a period of up to 10 years.

Maintains that the limit on tax preferences and allocation of deductions collectively impose a natural impediment upon the borrowing power of local governments, particularly in view of recent deterioration of the municipal bond market resulting from the consideration by Congress of the House proposals affecting these securities.

Points out that the doubts raised by tax reform proposals have been a major cause of the problems prevalent in the municipal bond market today. Indicates that the continued existence of such doubts can only result in the continued disruption of this important market thereby making it increasingly difficult or impossible for necessary public projects to be financed.

RICHARD H. WANGERIN, PRESIDENT, AMERICAN SYMPHONY ORCHESTRA LEAGUE, ON BEHALF OF THE SYMPHONY ORCHESTRAS OF THE UNITED STATES

Tax reform legislation

States that symphony orchestras are vital to the total cultural and educational life of the American people and the basic economic structure of U.S. symphony orchestras requires the subsidy of charitable giving for the orchestra's very existence. Indicates that current costs of 1,400 U.S. symphony orchestras total \$85 million a year. States that \$44 million of this amount must be obtained through contributed income and that if private support of U.S. orchestras is reduced, the orchestras would have to seek massive aid direct from government sources or abandon operations.

Believes that the repeal of the unlimited deduction, the changed tax treatment of gifts

of appreciated property, and the gifts of use of property, and proposed changes in many aspects of more sophisticated types of giving would serve to reduce affluent individuals' ability to contribute to orchestras.

Supports the administration's recommendation to delete the appreciation element of charitable gifts from the "limit on tax preferences" and "the allocation of deductions." Approves Treasury's position that gifts of tangible personal property should continue to be allowed the same preferential treatment as gifts of securities and real property. States that the effect of the allocation of deductions provision would be to postpone many substantial gifts until the end of the year when the effects of the complex allocation could be finally determined with the result that many such gifts would not be made. Sees no reason why gifts of appreciated property to public charities should remain subject to the present 30-percent limit.

Standard deduction

Maintains that the proposal to increase the standard deduction would serve to reduce contributions the orchestras would receive from persons of more modest income. Points out that 88 percent of the total number of gifts made to symphony orchestras are in amounts of less than \$100, averaging \$37 and that these gifts account for approximately 40 percent of the total annual contribution dollars received by symphony orchestras. Urges that charitable deductions be isolated from other personal deductions for separate treatment, and that they be subject to continued itemization with deduction permitted even though the proposed increased standard deduction is used thereby preserving this crucial incentive for continued support of philanthropic endeavors.

Foundations

States that orchestras received 20 percent of their contributed support from foundations. Endorses the Treasury proposal to substitute for the proposed 7½ percent tax on foundations, a 2 percent filing fee and to use this income from the fee to pay for increased policing of the private foundation area by the Internal Revenue Service. Opposes forced distribution of foundation capital because such a policy would result in a shrinkage of capital funds for future support of charitable organizations.

Believes that the proposed definition of "private foundations" for purposes of the new tax provisions may inadvertently cover many organizations that should not be treated as "private foundations". Supports the provision requiring all tax-exempt organizations to file an annual return but challenges the proposed additional requirement that all 501(c)(3) organizations be required to file listings of major contributors and amounts given and the names and salaries of highly compensated employees. Argues that contributors who make their gifts upon the contingency that the gifts be accorded complete anonymity should continue to enjoy this right.

Believes that the enactment of these complicated strictures on future tax treatment of contributions coupled with actual cancellation of long established tax incentives for giving would prove to be the final push toward a breakdown in the willingness of voluntary givers even to attempt to continue to shoulder these charitable burdens.

TAX TREATMENT OF STATE AND LOCAL BOND INTEREST

OSMOND R. SPRINGSTED, PRESIDENT, SPRINGSTED, INC.

Tax treatment of State and local bonds

States that the provisions of the House bill affecting State and local bonds will add to the cost of local governments. Indicates that in the 5-State area of Iowa, Minnesota, North Dakota, South Dakota, and Wisconsin the additional cost of the 1969 financing

through August could have been at least \$271 million more without tax exemption.

Maintains that the exemption of municipal bond interest from Federal taxation is an economical and efficient subsidy. Believes that the provisions of the House bill will impair the marketing of municipal bonds to the detriment of the poor communities.

Believes that this is an inopportune time to consider innovations to the system of municipal financing and the proposed legislation could mean at least a temporary suspension of this type of financing.

Urges that the committee conclusively reject the proposals of the House bill which will affect the present tax treatment of municipal bonds.

DR. EGGAR F. SHANNON, JR., PRESIDENT,
UNIVERSITY OF VIRGINIA

Arbitrage bonds

Indicates that the University of Virginia desires to issue bonds secured by and payable out of mortgages taken as security for loans made by the University for faculty housing. It is believed the interest on these bonds would be exempt from Federal taxation under present laws.

Is of the opinion that the arbitrage bonds provisions of the House bill would prevent these bonds from being issued by the university as tax exempt bonds.

Urges amendment of the bill to make clear that the definition of arbitrage will not apply to the university's bonds secured by mortgages on faculty housing.

HON. SAM YORTY, MAYOR, LOS ANGELES, CALIF.

Taxation of municipal bond interest

Urges the committee to reject the proposals which affect the tax-exempt status of municipal bonds. Indicates that these proposals constitute an unwarranted interference with the functioning of local government and comes at a time when the larger urban centers are confronted with increasing demands for financing essential capital projects. States that these provisions have caused a disruption in the municipal bond market and that interest rates have now risen beyond statutory interest rate limits for several classes of the city's bonds.

States that the subsidy proposal is not workable when consideration is given to the staggering volume of municipal projects which are needed now. Indicates, further, that this proposal runs counter to a growing awareness throughout the Nation that Government must decentralize in order to become responsive to the needs of its citizens.

HON. PAUL J. MANAFORT, MAYOR, NEW BRITAIN, CONN., AND PRESIDENT, CONNECTICUT CONFERENCE OF MAYORS

Taxation of interest on municipal bonds

Opposes Federal taxation of interest on municipal bonds. States that this exemption is essential if municipalities are to provide badly needed public facilities and to prevent further deterioration of their serious financial condition. Indicates that taxation of municipal bonds will result in higher interest rates. Believes that these higher interest rates will mean higher local taxes, adding to overburdened local property taxes, bearing most heavily on those who can afford it the least.

INCOME AVERAGING; MAXIMUM TAX ON EARNED INCOME

IRWIN KARP, COUNSEL, AUTHORS LEAGUE OF AMERICA

The 50-percent maximum tax on earned income

Asserts that the 50-percent tax limit would not apply to self-employed authors, dramatists, and composers under the present definition of "earned income" in section 802 of the bill, which is restricted to income from "personal services." Contends that the 50-

percent limit should also apply to earned income from a taxpayer's personal efforts (e.g., an author's income)—as distinguished from income produced by the use of capital. Argues that the 50-percent limit would eliminate a deterrent to independent creative work.

Recommends that "earned income" be defined to include income derived by an author from the disposition of rights to use his works (as in sec. 401(c)(2)(C) of the code).

Income averaging

States that section 1301 of the code does not provide equitable taxation of an author when his income from one or two works, resulting from efforts of several years, is concentrated in the upper brackets of 1 or 2 tax years, especially if the second work occurs within 4 years of the first so that he cannot apply averaging to the income from the second work.

Suggests that section 1301 be revised to allow an individual to elect one of three alternative "base periods": (1) If current year income exceeds average annual income for the 3 previous years by at least 20 percent; (2) if current year income exceeds average annual income for the 4 previous years by at least 33½ percent; or (3) if current year income exceeds average annual income for the 6 previous years by at least 40 percent.

Notes that the code allows taxpayers to choose alternative methods of tax treatment under other sections, for example, depreciation, completed contract or percentage of completion reporting, and installment reporting alternative.

Minimum tax on deferred compensation

Hopes that section 331 of the bill will continue to not be applicable to periodic payments to authors under the "spread forward" provisions of publishing contracts.

A SALUTE TO THE FIATA 1969 WORLD CONGRESS

Mr. GOODELL. Mr. President, for the first time since its founding in 1926 the International Federation of Forwarding Agents Associations—FIATA—is holding its biennial world congress in the United States. This organization, with members in 32 countries and associate members in 45, will be meeting in New York City from September 28 through October 3 to review significant freight forwarding matters. This review will benefit the cause of world trade through more effective and economical methods utilized by competent and responsible members of the international freight forwarding industry.

It is with considerable interest and pleasure that I call this important gathering to the attention of my Senate colleagues. I should like to salute, in particular, the outstanding work undertaken by the New York Committee for FIATA 1969. The chairman of this group is Mr. Walter J. Mercer, former chairman of the National Customs Brokers & Forwarders Association of America, Inc. The vice chairman is Mr. Ted Przedpelski of the New York Foreign Freight Forwarders & Brokers Association, Inc. Mr. Clifford B. O'Hara, of the Port of New York Authority is the secretary of the committee. The other members of this group are: Mr. Leonard M. Shayne, president of the National Customs Brokers & Forwarders Association of America, Inc.; Mr. Lloyd Spedeker of the New York Foreign Freight Forwarders & Brokers

Association, Inc.; and Mr. Gerard G. Gorman of the Port of New York Authority.

A significant aspect of this meeting has been set forth by Mr. O'Hara in his informative article entitled "Open Arms for FIATA," which appeared in the special edition of publisher John F. Budd's American Import & Export Bulletin honoring the 11th world congress of FIATA:

Because of the tremendous interest of forwarders on both sides of the Atlantic in the growth of containerization, the 1969 Congress will include an in-depth panel discussion on the subject and on the effects of this revolution in international shipping on the industry. The program will also include an exploration of the relationship of the forwarding industry to the rapid development and growth in air cargo as well as other transportation topics of current interest.

Mr. President, I wish the FIATA World Congress every success in its forthcoming deliberations. I ask unanimous consent to have printed in the RECORD a message to the conference participants by Mr. D. I. Heys, of Liverpool, England, president of FIATA, and an article about the history and objectives of the National Customs Brokers & Forwarders Association of America by its president, Mr. Leonard M. Shayne. Mr. Heys' foreword and Mr. Shayne's article appeared in the special issue of American Import & Export Bulletin.

There being no objection, the articles were ordered to be printed in the RECORD, as follows:

FOREWORD

(By D. I. Heys, President, International Federation of Forwarding Agents Associations—FIATA)

I am really delighted to accept the generous invitation of the editor of The American Import and Export Bulletin, Mr. William Budd, to write this foreword for the special FIATA Congress edition of their publication to be issued in August, as it gives me a unique opportunity to chat in an almost personal way with the great army of freight forwarders in your dynamic country, who contribute so much to the exchange of international commerce throughout the continents of the world.

FIATA is fortunate in having a select coterie of good friends amongst American freight forwarders, but we believe that it is in the vital interests of world forwarding that we take urgent steps to increase the number of U.S.A. forwarders, who adhere to our cause and are prepared to unite under our banner.

It would be trite of me to say that forwarding is a harsh and demanding profession which frequently suffers from the storms and tempests of commercial change which it is not always equipped to resist, and I think that most of us will agree that we are now facing a period of change which is not necessarily in our best interests.

This then, is one of the many reasons why FIATA, for the first time in its forty-five year history, with its membership of thirty-two countries and associate members in forty-five, including many U.S. enterprises, has decided to cross the ocean and accept the invitation of our American colleagues to hold the Congress in New York, where it is my sincere wish that a large and representative gathering of American forwarders will join in our various sessions and decide to take a big interest, and indeed, an active part in the leadership of our affairs.

An extensive and interesting programme has been devised by our hard working Com-

mittee, who are organizing our Congress and whilst technical subjects of great interest to us all will be discussed, the social programme is one of glittering splendour which must have great appeal, especially to the "ladies".

Outstanding events which I commend to your attention are our Forums on Combined Transport and Air-Freight, where there will be excellent speakers who, I am sure, will promote stimulating discussion.

In conclusion, may I therefore, express the wish that it will be our good fortune to make a large number of new American friends to our mutual advantage, and I therefore, extend a warm invitation to all my readers to participate in our World Congress which, after all, is specially designed for freight forwarders.

THE NCBFAA

(By Leonard M. Shayne, President, National Customs Brokers & Forwarders Association of America, Inc., Leading Forwarders, Inc.)

The National Customs Brokers and Forwarders Association of America, Inc., has been in the forefront of many important matters affecting Forwarders and Customs Brokers during the more than 70 years of its existence. There were so many of these which affected the very survival of the industry that it is difficult to limit citing them in a brief commentary such as this.

Of prime importance was the enactment of an Act in 1961 which provided for the payment of freight brokerage (compensation) by ocean carriers to Foreign Freight Forwarders. Thereafter were the revisions of regulations of the Federal Maritime Commission regarding Foreign Freight Forwarders which resulted, after much uncertainty, in regulations which forwarders find generally acceptable, although in many respects American Forwarders are far more constrained than their foreign counterparts and sometimes find themselves at a competitive disadvantage.

Important Association actions on behalf of Customs Brokers have been almost continuous in recent years due to the reorganization of U.S. Customs which has been taking place. Recent revisions of the Customs Regulations regarding Brokers, for example, were the cause of collective action via a special national meeting of representatives of all the local Associations in New York followed by a meeting the next day in Washington of these representatives with officials of the Bureau of Customs.

The NCBFAA has been active in countless matters related to the promotion of the foreign trade of the United States, and this has demanded much time and effort from its officers. Proposals which would adversely affect trade and the interests of industry members are put forward almost continuously by protectionists and isolationists as well as by well-meaning domestic interests who do not realize fully the effect of what they propose. Personal appearances before government officials or agencies and congressional committees are often required to combat or correct even seemingly minor matters.

One of the milestone pieces of legislation achieved in favor of Foreign Freight Forwarders was the Bland Forwarding Act of 1942. Congressman Bland, an imposing former judge, had carefully investigated the wartime plight of American Foreign Freight Forwarders and had become convinced that they were a necessary and fundamental part of the commercial foreign trade apparatus of the U.S. Finally the Act bearing his name, which directed that the facilities of Forwarders be used and not bypassed by government agencies, reached President Roosevelt's desk for signature. However, the British Ambassador had captured the President's ear to complain about the Act and its effect upon the British Purchasing Mission.

Bill Davies was a leader of the Forwarders' efforts behind the Bill. He had become well-

known to Judge Bland and to the other government figures concerned with shipping matters. He received a hurry call from Jesse Jones, who headed Lend Lease at the time, to come to Washington to see him at once. Jones told Davies that the President was about to veto the bill and he had better come up fast with some good arguments to support the bill, or else it was dead. Davies pointed out that without the Bill all wartime shipping from the United States of what had been peacetime commercial cargoes would be handled by Allied Purchasing Missions. When the war ended, all of the handling and forwarding of exports from the United States would be under foreign management. The argument evidently had some merit. There was no veto. The Bill became law, and it remains the policy of the United States.

The original organization, which ultimately became the National Customs Brokers & Forwarders Association of America, Inc., was incorporated in New York in March 1897. Its motto was "An injury to one is an injury to all". Although a local organization, even at that time its objective was to become national as it declared in an early publication of the Association from the year 1900 entitled, *The Gateway to the Continent*. At that time 75% of the foreign trade of the nation then passed through New York. Although it is still far and away the country's principal port, this proportion has now fallen to 40%. The founders of the Association had the foresight to realize that the trade of the nation would diffuse to all its coasts and borders and that the industry serving that trade would have mutual interests wherever they would be located.

As the only national organization representing Foreign Freight Forwarders and Customs Brokers in this country, it has 493 regular members in the United States and Puerto Rico, and 161 associate members in countries throughout the world. The National Association, besides its direct memberships, is also an association of associations, composed of 14 local organizations from all over the United States. These associations are all members of the National Advisory Committee: Boston Customs Brokers & International Forwarders Association, Paul K. LaRoque, president (Stone & Downer Co.); Texas Ocean Freight Forwarders Association, Jack Gross, president (H. E. Schurig & Co., Inc.); Customs Brokers & Forwarders Association of Miami, Inc., John Gazitua, president; (Florida International Forwarders); Baltimore Customhouse Brokers & Forwarders Association, M. Sigmund Shapiro, president (Samuel Shapiro & Co., Inc.); Customhouse Brokers & International Freight Forwarders Assn., Washington State, J. W. Hansford, president (Geo. S. Bush & Co., Inc.); Philadelphia Freight Brokers Forwarders & Customs Brokers Association, Martin L. Hoffman, president (Allen Forwarding Co.); Los Angeles Customs & Freight Brokers Association, Inc., L. R. Terrile, president (James Loudon & Co., Inc.); Detroit Customhouse Brokers & Foreign Freight Forwarders Association, Geraldine Schmitt, president (Gerry Schmitt & Co.); Association of Forwarding Agents & Foreign Freight Brokers of Mobile, John L. Godwin, president (Godwin Shipping Co., Inc.); San Francisco Customs Brokers Association, James J. Connors, president (A. J. Fritz & Co., Inc.); Customs Brokers Assn.-Northern U.S. Border, James R. Todd, president (C. J. Tower & Sons of Buffalo, Inc.); Export-Import Association of Virginia, James G. Page, secretary (The Hipage Company, Inc.); New Orleans Association of Customs Brokers, Inc., Irwin M. Brown, president (The Irwin Brown Co.); Customs Brokers Assn. of Chicago, Inc., John Smith, president (Karl Schroff & Associates, Inc.).

The National Advisory Committee composed of the above members meets annually in New York in order to formulate policy

for the coming year and to exchange views on local problems.

The headquarters office of the National Association is in New York at 26 Beaver Street. An office is also maintained in Washington, D.C. at 2000 P Street, N.W.

The governing board of the Association is the Executive Committee, composed of the officers and directors. Chairman is Frank J. Hult, president of J. E. Bernard & Company Inc., of New York. Other important and active members are: Walter J. Mercer, president of Hudson Shipping Co., Inc., who was president of the National Association for 12 years; and Martin J. Kerner, president of Heemsoth-Kerner Corp., who was president of the National Association for 15 years. The other members of the Executive Committee are: F. L. Kunz, M. J. Corbett & Co., Inc., A. J. Pascale, Universal Transcontinental Corp., and Roland R. Hummel, Jr., Taub, Hummel & Schnall, Inc.

The officers of the National Association consist of the president, who is the author of this article. Other vice presidents are: Vice President (Custom House Brokerage), Mortimer Bernstein, S. Stern & Co., Vice President (Foreign Freight Forwarder), Samuel Shapiro, Samuel Shapiro & Co., Inc.; Vice President (Import Air Freight), Joseph Gamburg, Air Clearance Association, Inc.; Vice President (Export Air Freight), Walter Schaaf, Hensel, Bruckmann & Lorbacher, Inc.; Vice President (Great Lakes-Northern U.S. Border), W. R. Casey, Jr., (F. W. Meyers & Co., Inc.) Customhouse Brokers Assn., Northern U.S. Border, Vice President (Gulf Area), R. W. Smith, (R. W. Smith & Co., Inc.) Texas Ocean Freight Forwarders Association; Vice President (Pacific Coast Area), J. W. Hansford, (Geo. S. Bush & Co., Inc.) Customhouse Brokers & Int'l Freight Forwarders Assn., Washington State.

The treasurer of the National Association for the past six years has been Percy S. Royals, president of W. R. Keating & Co. Inc. The Secretary for the past 16 years has been William Freedman, president of Freedman & Slater, Inc. He has also served as chairman of the important Membership and Ethics Committees. The executive secretary for the past 25 years has been John F. Budd, publisher of Budd Publications, Inc. which publishes such important trade publications as the annual Custom House Guide, American Import & Export Bulletin, and Air Transportation, etc. The Washington Representative of NCBFAA is Morris V. Rosenbloom, president of American Surveys, Inc. On occasion, as required, the National Association has employed legal counsel, occasionally on retainer as in the case of the late Benjamin Altschuler, and for special important matters such eminent attorneys as the late Charles Haight of Haight, Gardner, Poor & Havens, Gerald Ullman of New York, and Edward Schmeltzer, former director of the Federal Maritime Commission and now in the Washington office of Morgan, Lewis & Bockius of Philadelphia.

The National Association over the years has always enjoyed close friendly and cooperative relations with government officials, departments and bureaus, resulting in numerous awards and commendations from them.

The National Association has always encouraged and promoted the principle of "doing business in the family", resulting in members choosing other members when services are required in other ports here and abroad.

When Mr. Mercer assumed the Presidency of the Association in 1959 for the second time, he wrote an article for the American Import and Export Bulletin entitled "A Look Into the Roles of the Customs Broker and Foreign Freight Forwarder" which is well worth re-reading. This paragraph is particularly significant.

"When an importer or an exporter decides

that he should engage the services of a Customhouse Broker or a Foreign Freight Forwarder, it would be well for him to exercise the same care as he would in selecting his bank. One certain way would be to consult the various publications listing Customhouse Brokers and Foreign Freight Forwarders, and determine whether or not that firm is a member of the (National) Customs Brokers & Forwarders Association of America, Inc. While this admonition may sound trite, and a plug for its membership, it is well to consider the fact that in order to qualify for membership in the NCBFAA, its standards and requirements, in many respects, are greater than the qualifications for a Customhouse Broker's license or a Federal Maritime Board registration number. This organization is constantly fighting for the industry. In so doing, it is protecting the importer and exporter."

The National Association in 1963 became the regular (ordinary) United States member of the Federation of International Forwarding Agents Associations (FIATA). By this act the National Association recognized the need for an international association to represent the world Foreign Freight Forwarding industry in the way the National Association represents the American industry.

As the members of our industry are meeting in New York at the Eleventh World Congress of FIATA to discuss the problems of today and to prepare for those of tomorrow, we are much aware that we are in an era of revolution. Yet it is worth while to remember the adage that "the more things change, the more they are the same." Perhaps this quotation of instructions from Colonel Francis Lovelace, Governour, on May 24, 1668, to Mr. Cornelius Van Ruyven, Collector of Customs in the City of New York, may serve as a reminder:

"You or y'r clerk are to be deyley at ye Custome House from nine in ye morning until 12 at noone. There to receive ye Customes both in and out as Merchants shall come & enter, ye merchant is to make foure Bills, and signe them with his hand, writing his name to them, & ye some time, when you have signed ye Warrant, or one of ye Bills, you are to demand ye Custome, either in kinde at 10 P Cent inwards or double ye value of its first Cost in Holland, in Beaver. And likewise outwards for Peltry you are to receive 10½ P Cent according to ye value in Beaver, for Tobacco one half penny Pr. pound Ster'g which is noe more than all Englishmen doe pay. * * * You to tell ye Merchant you are not to give credit. * * * If they doe not like your propositions, you are not to pass their Bills. * * *"

"And Lastly pray lett ye Books be kept all in English and all Factoryes and Papers, that when I have occasion to satisfy myself I may better understand them."

CONCLUSION OF MORNING BUSINESS

Mr. BYRD of West Virginia. Mr. President, is there further morning business?

The PRESIDING OFFICER. Is there further morning business? If not, morning business is concluded.

U.S. RECOGNITION OF FOREIGN GOVERNMENTS

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the unfinished business be laid before the Senate.

The PRESIDING OFFICER. The resolution will be stated by title.

The LEGISLATIVE CLERK. A resolution (S. Res. 205) to set forth as an expression of the sense of the Senate a basic principle regarding the recognition by

the United States of foreign governments.

The PRESIDING OFFICER. Is there objection to the present consideration of the resolution?

There being no objection, the Senate proceeded to consider the resolution, which had been reported from the Committee on Foreign Relations with amendments on page 2, at the beginning of line 4, insert "of itself"; and in the same line, after the word "States", strike out "necessarily"; so as to make the resolution read:

Resolved, That it is the sense of the Senate that when the United States recognizes a foreign government and exchanges diplomatic representatives with it, this does not of itself imply that the United States approves of the form, ideology, or policy of that foreign government.

ORDER OF BUSINESS

The PRESIDING OFFICER. Under the previous unanimous-consent agreement, there is an order for the Senator from New York (Mr. GOODELL) to be recognized at the end of morning business for not to exceed 30 minutes.

The Senator from New York is recognized.

THE VIETNAM DISENGAGEMENT ACT

Mr. GOODELL. Mr. President, the war drags on.

It still bleeds the human, moral, and economic strength of our people.

Its slaughter reaches ever deeper into the ranks of our youth.

It still brutalizes our collective conscience, distorts our priorities, and frustrates our good intentions.

It knew no real beginning, and it seems to know no end.

Richard Nixon sought the Presidency with a pledge to end the Vietnam war. Since assuming office, he has pursued that end with diligence and patience. He has changed the nature of our involvement in the war by clearly reversing the policy of military escalation so disastrously implemented by the previous administration. He has made the first significant troop withdrawals since our involvement in the war began—now 25,000 men, with an estimated 40,000 additional troops by the end of the year.

Yet the President has been faced with enormous obstacles in seeking the path to peace. The Paris peace talks are stalemated by the intransigence of North Vietnam and the Vietcong. The South Vietnamese Government has consistently resisted our deescalation efforts. Our own military establishment has continued to favor in the field a policy of maximum offensive military pressure on the enemy, that has contributed to high casualty rates, and brought no results in Paris.

Our military leadership assumes that the situation in Vietnam can be "stabilized" by a strategy that, at the end of 2 years, would leave a continued commitment of about 200,000 American troops.

This strategy bears an ominous similarity to the plans offered by a seemingly

endless succession of generals, cabinet officials and Presidential envoys over the last 6 years—all of them offering the most optimistic predictions that the situation would be "stabilized" if we could maintain the American pressure in Vietnam for "only a few more years." None of these forecasts ever materialized, and we are still fighting on.

It makes no sense for us to keep 200,000 troops fighting and dying in Vietnam for 3, 4, or 5 years—or perhaps indefinitely.

Forty-five thousand young Americans have already died in Vietnam in the past 6 years. Today, American soldiers fall at the rate of 150 a week.

This slaughter must cease. The prosecution of the war with American troops must be ended, not merely reduced.

The only way of halting the loss of our young men's lives is to establish a clear timetable for terminating all American combat operations and troop commitments in Vietnam within the near future.

This objective can only be accomplished if the President and the Congress start facing up to some tough decisions.

This means a far more active role for Congress.

Many public officials and others have been putting the entire onus of ending the war on the President. There is no doubt that Congress must share this heavy responsibility, based upon its constitutional authority "to raise and support armies" and "to declare war."

I shall introduce in the Senate of the United States a new bill, the Vietnam Disengagement Act of 1969.

The operative provisions of this bill provide that no American military personnel shall be maintained in Vietnam after December 1, 1970.

The proposal would reassert the constitutional responsibility of Congress to share with the President the task of extricating the United States from the Vietnam war. It would end Congress' role as a passive bystander in a war effort directed by three Presidents.

The President, as Commander in Chief of the Armed Forces, has the responsibility for determining the strategy and managing the conduct of war. The Congress, however, shares the duty of deciding the basic issues of war and peace, under its constitutional power of raising armies and declaring war.

My proposal would require Congress to exercise this constitutional responsibility. It would involve Congress in setting a clear and unequivocal timetable for the termination of all American combat operations and the withdrawal of all American troops. Any variations from this schedule would require the enactment of new legislation by Congress.

This timetable would permit the South Vietnamese forces to take over military operations from American forces, as American troops are withdrawn.

The bill would give clear notice to the Thieu Government of South Vietnam that at the end of 1 year, they must assume the full burden of the fighting. Withdrawal would not be immediate, but would be an orderly process based on a schedule set by the President with a re-

quired termination date of December 1, 1970.

We have been fighting for 6 years in Vietnam to give the South Vietnamese the opportunity of self-determination. South Vietnam is relatively equal in resources and population to North Vietnam. If the South Vietnamese people support their government and are determined to maintain their independence, they should be able to do so without American troops, on the basis of the 1-year notice provided in the bill.

Nothing in the bill would prohibit the United States from continuing to provide such military supplies, equipment and military aid funds to South Vietnam as are necessary to match Soviet military assistance to North Vietnam.

The bill would preserve the President's constitutional prerogative as Commander in Chief to determine the manner of combat operations and the method of completing the withdrawal of American troops by the termination date.

I am personally convinced, however, that we should no longer pursue an offensive combat strategy which seeks to inflict maximum casualties upon the enemy, while they likewise seek to inflict similar losses upon us. During the withdrawal period, we should pursue a revised combat strategy designed to keep American casualties at a minimum.

The adoption of the proposal would express a clear intent of Congress that all American military personnel be withdrawn from Vietnam within a year. Should the President wish to present further proposals for the utilization of American noncombat training personnel in Vietnam after the termination date, he would be required to obtain the specific authorization of Congress before taking such action.

By setting a clear schedule for withdrawal, the bill would place upon the South Vietnamese Government the task of reforming itself and broadening its popular base, if it wishes to survive. This "self-help" approach is, I believe, far more likely to succeed than attempting to force reforms upon a recalcitrant South Vietnamese Government—as we unsuccessfully attempted to do in the case of the Diem regime in 1963.

Would a timetable of the sort I am proposing adversely affect the negotiations we are now conducting in Paris?

At this date, I do not think it would. For the first 9 months of this year, I purposely refrained from making any proposals on the conduct of the war in order to give the Paris negotiations a full chance to develop fruitful results. The indications are now reasonably clear—and the administration has stated—that the talks have not been productive because of the intransigence of the other side, which apparently feels that it need not negotiate at the bargaining table.

Would proposing such a timetable make the other side step up its efforts, in the hope of increasing the pace of our withdrawals?

I think this is an illogical way of looking at the problem. The reason we are in our present plight in Vietnam is that we have spent too much time speculating on what Hanoi might do, and not enough

time developing a workable long-range solution of our own. We have always tried simply to respond to North Vietnamese or Vietcong military initiatives, rather than preparing effective policy initiatives ourselves.

The purpose of my proposals to help the President and Congress develop a workable plan for ending American participation in the war—and the slaughter of American servicemen—in the very near future. At present, there is no visible plan of this kind, and the assumptions under which the military is now operating will probably keep us fighting for years. To say that a proposal such as mine should not be considered—because it will encourage Hanoi to persist in its obstinacy at the peace table—is presuming that past policies of failure will succeed in the future.

We have not won a victory in Vietnam. Victory is impossible through any military means acceptable to the American people. We have engaged in the wrong war, in the wrong place, at the wrong time and we have embraced a wrong-headed concept of American power and responsibility in the world. At inordinate sacrifice, we have for 6 years given the people of South Vietnam their option of freedom from North Vietnam. It is now for them alone to exercise that option. Now, it is for them alone to rally their people for war or peace. It is time for the South Vietnamese to make hard and realistic decisions without the protective mantle of American troops. It is time we told the South Vietnamese leaders that 1 year from now they will be on their own.

We would do well to remember the words of T. S. Eliot in the "Four Quartets":

Why should we celebrate
These dead men more than those dying

We cannot revive old factions
We cannot restore old policies
Or follow an antique drum.
We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.

Mr. President, I ask unanimous consent that the language of the bill, which I shall introduce, be printed in the RECORD at this point.

There being no objection, the text of the bill was ordered to be printed in the RECORD, as follows:

S. —

A bill to amend the Foreign Assistance Act of 1961

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Vietnam Disengagement Act of 1969."

SEC. 2. (a) Congress finds that the broad foreign policy interests of the United States require that the American military presence in Vietnam be removed at the earliest possible time, and that such action will promote the social and political well being of the people of South Vietnam; that the prosecution of the war in Vietnam with American troops must be ended, not merely reduced; that the loss of American lives in Vietnam can be halted only by establishing a clear timetable for terminating American combat operations and withdrawing American troop

commitments in the near future; and that the responsibility for ending the American involvement in Vietnam is not the President's alone, but must be shared by the Congress under its constitutional authority to "raise and support armies" and to "declare war."

(b) It is the purpose of this Act—

(1) to reassert the responsibility of Congress, under its constitutional authority to "raise and support armies" and "declare war," to share with the President the task of extricating this nation from the Vietnam war; and to involve Congress in setting a clear and unequivocal timetable for the withdrawal of American troops from Vietnam;

(2) to express the clear intent of Congress that all American military personnel be withdrawn from Vietnam on or before December 1, 1970; so that the retention even of noncombat military training personnel in Vietnam after that date would not be permitted without the enactment by Congress of further legislation specifically approving such retention;

(3) to give clear notice to the government of South Vietnam that following December 1, 1970, it must assume the burden of fighting; and to permit the withdrawal of American military personnel and the assumption of their combat functions in an orderly fashion on a schedule set by the President with a required termination date of December 1, 1970.

SEC. 3. Chapter 1 of part III of the Foreign Assistance Act of 1961 is amended by adding at the end thereof the following new section:

"SEC. 602A. Presence in Vietnam.—No part of any amount authorized to be appropriated under any Act shall be used after December 1, 1970, to maintain military personnel of the United States in Vietnam."

Mr. PERCY. Mr. President, will the Senator yield?

Mr. GOODELL. I yield to the Senator from Illinois.

Mr. PERCY. Mr. President, I am very sympathetic with the desire of the junior Senator from New York to find a way to end this tragic war. After all, the President himself has said the time has come to end the war. I have not had an opportunity to thoroughly appraise and analyze the proposal the Senator has made, but certainly all of us now will have a responsibility to do that.

I feel the time has come to appraise realistically the military and political situation in South Vietnam and to be guided by the concept of American disengagement. I believe a dialog should be started, and we should continue to try to seek an answer to this agonizing problem.

I think the program should encompass several decisions such as the following:

First, a faster timetable for American troop withdrawals. This is the most direct means we have to induce the Saigon government to assume an increasing share of the combat responsibility.

Second, when the American troop commitment is drawn down to a feasible level, no more draftees should be sent to Vietnam, except as volunteers. Today, nearly 40 percent of the U.S. troops in Vietnam are draftees. They could not be responsibly withdrawn now. But when the American troop commitment falls to half the present force or less, an all-volunteer policy should be instituted.

Third, greater diplomatic pressure should be brought to bear on North Viet-

nam to open serious negotiations toward a peace settlement. We should continue to explore every avenue toward peace, including the prospect of a general cease-fire and the dispatch of an international force to guarantee the cease-fire and supervise free elections.

Fourth, increased pressure should be put on the Saigon government to bring a full measure of social justice to the people of South Vietnam, to redistribute land holdings, to reform undemocratic practices and to halt official corruption, thus broadening the base of the Saigon regime and achieving a much-needed element of political stability.

On my own trips to Vietnam, I have talked with the South Vietnamese military leaders. I am convinced that until they become convinced that we are going to withdraw on a time schedule, they are not going to feel that they will have to assume significantly greater military and political responsibility.

Moreover, when the American troop commitment is drawn down to a feasible level, no more draftees should be sent there except as volunteers. I think if that could be done, it would do more to quell the disorders on our campuses and the dissatisfactions that I have seen in Vietnam. I just came back with a hospital flight from Vietnam; traveling with those boys, you cannot but be impressed with the fact that many of them simply are not convinced, as draftees, of the rightness of the war. We will be much better off to eliminate as rapidly as we can the use of draftees in a war as highly controversial as this one.

Mr. President, President Nixon has wisely set us on a course of reducing the number of Americans engaged in this tragic struggle, while moving to turn over the primary combat responsibility to the South Vietnamese army. I think we can contrast with this the earlier American buildup in South Vietnam and the bombing of North Vietnam, which brought much criticism against the Johnson administration, and against America itself.

Among other initiatives for peace, President Nixon has proposed free elections arranged by joint commissions under international supervision; offered to negotiate cease-fires under international supervision; declared the United States does not seek to retain military bases in Vietnam; offered to withdraw U.S. and allied forces over a 12-month period following a settlement; agreed to accept the outcome of free elections, whatever government is chosen; offered to negotiate point by point, in the 10-point program presented by Hanoi; convinced the Saigon government to sit with the National Liberation Front and North Vietnam representatives in Paris and persuaded General Thieu to agree to direct talks with the NLF.

The President has rejected a military conclusion to the war. He has turned us away from the dangerous and futile course of escalation. He has declared unequivocally that we are prepared to accept any government in South Vietnam that results from the free choice of the South Vietnamese people themselves.

In concrete terms, the President has

reduced the number of American troops in combat and made it clear that further troop withdrawals are scheduled.

Despite these policy decisions, a political settlement still eludes us and peace is not yet in sight. Much of the blame for this situation must rest with the leaders in Hanoi who have consistently refused to negotiate in good faith and who have not matched U.S. concessions with reciprocal deescalatory steps of their own.

The rigid refusal of the Hanoi leadership to negotiate a peace rests, in part, on their previous experience in negotiating with the French, first after World War II, and then, in 1954, when the so-called Geneva Accords were signed.

But North Vietnam also senses that the war is widely unpopular in America and has seemingly chosen to wait until public opinion in our country forces the administration to agree to an abrupt and unilateral withdrawal rather than a negotiated, phased, mutual withdrawal.

This is a risky policy for Hanoi. American public opinion has changed in the past and it can change again. A frustrated public could turn toward an all-out military response—as disastrous as that course would be for America—instead of increased pressure for withdrawal.

We must respond to this pressure from Hanoi with a positive program of our own based on further realistic appraisals of the military and political situation in South Vietnam and firmly rooted in the concept of American disengagement. What is needed now, more than ever, is strength and resolve from the administration and from the American people that will turn us away from the killing and put us, once and for all, on the path toward peace.

I think we in the Legislature have an opportunity now, as well as an obligation, duty, and responsibility, certainly, to put forward ideas that, in our judgment, will not interfere with the negotiations in Paris; that will not disturb in any way a program to disengage that is now going on, but will add further support to those efforts, and perhaps reinforce them with new approaches.

I thank the distinguished Senator from New York.

Mr. GOODELL. I thank the distinguished Senator from Illinois for his comments. I share his desire for a further dialog on this question. That is one of the purposes of my proposal—to have a full debate with a specific objective in mind. I am not merely calling upon the President to bear all the responsibility. I am, instead, calling upon Congress to exercise its constitutional duty to assert itself with reference to the problems involved in extricating this country from Vietnam.

I do not offer this proposal in criticism of the past actions of the Nixon administration. I do feel that we must move faster, and that there must be an indication from Congress of a specific timetable for withdrawal, with notice to the South Vietnamese Government that after 6 years of fighting with American troops and preserving their opportunity for independence, it is time that, in an orderly way, they took over the burden.

I yield to the Senator from Michigan.

Mr. GRIFFIN. I thank the Senator from New York for yielding. I am sure that it is not necessary for me to recite the great respect, affection, and admiration that I have for the junior Senator from New York. We have been comrades together in a number of battles—but occasionally we disagree.

Mr. GOODELL. I hope the Senator will not say too many nice things about me, because that is usually the preface for a strong disagreement.

Mr. GRIFFIN. As the Senator may have suspected, that is what is coming now. Although I realize that this is not the appropriate time for a full-fledged debate on the proposal the Senator is introducing, I certainly want to indicate my deep concern about the proposal.

I realize that the proposal has not been offered in terms of criticizing the President. But it should be remembered that the President does have a policy on Vietnam, and it seems to me that he has spelled it out very clearly. The President wants to withdraw all American troops from Vietnam as quickly as the South Vietnamese forces are ready to take their place—and sooner if possible.

We have turned the corner. American boys are no longer going over to Vietnam in increasing numbers; indeed, they are now coming home. As you know, the President has called for the withdrawal of more than 60,000 troops, a force reduction of such significance that now we are able to cut back on our draft calls.

I believe that President Nixon has essentially the same objectives as the junior Senator from New York. But I question how wise it is to tell the enemy by declaration, in a formal resolution, that as of a particular date all American troops will be withdrawn, regardless of what the consequences might be. It is very difficult for me to understand how that could be useful or helpful to the negotiations in Paris. If such a resolution were adopted, it seems clear there would be no further point in negotiating.

I also wonder what effect such a resolution would have on the President's recent eloquent appeal at the United Nations where he called upon the other member nations of that world organization to assist the United States, through diplomatic channels and in other ways, in working toward progress at the Paris negotiations.

These questions deeply disturb me, but I do not wish to be argumentative. Obviously, this is not the appropriate time for the Senate to make its decision, but I believe that the Senate should explore these matters very carefully.

Mr. GOODELL. I thank the Senator from Michigan for his comments. I share his concerns. I have shared them in the past. That is why I have withheld making this proposal until now. But I think it is quite evident that the Paris peace talks are going nowhere. There has been absolutely no progress, and there is no indication of potential progress, in the Paris negotiations.

I believe also that it is unrealistic to expect negotiations and concessions from the North Vietnamese for a very long time, under the circumstances surrounding the death of Ho Chi Minh and the

lack of a single governing authority in North Vietnam today.

So the objectives we share; and I reiterate that I know the President shares those objectives. But I think the time has come for us to tell the people of South Vietnam: "Your country is relatively equal in resources and population to North Vietnam. If your government is viable, if you are determined to maintain your freedom, we are not going to pull the boobytrap and let you fall through. We are giving you notice that, on an orderly basis, you must take up the burden of defending yourselves."

That is the purpose of the bill. It requires Members of Congress to stand on their own feet, and not just to continue to make speeches asking the President: "Please do something about this." We share the responsibility to end this tragic war.

Mr. GRIFFIN. Mr. President, will the Senator yield further?

Mr. GOODELL. I yield.

Mr. GRIFFIN. Would the Senator agree that whether or not the complete withdrawal of American troops should take place within 8 months, 12 months, 15 months, or 18 months might well depend, as a practical matter, upon military information, intelligence, and assessments.

Mr. GOODELL. Mr. President, the answer is "yes." I think it might very well depend on these factors. However, I think that we have all had our briefings from the military at various times.

I believe it is quite clear that, if we accept the recommendations of the military, we will be there for a long time. It is their view that we should remain there.

It is quite evident that the reductions made by the President in the number of our troops abroad have been made over the resistance of many of our leaders in the Pentagon. So we cannot rely just on the recommendations of the Pentagon. Following the recommendations of the Pentagon is what got us where we are today.

If we are to get out, we had better start exercising some independent judgment on these matters. I know that the President is exercising such independent judgment.

Mr. GRIFFIN. Mr. President, let me even in disagreement, salute the distinguished Senator from New York for his resourcefulness and careful preparation. He always presented intriguing ideas when he was a Member of the House and is continuing to do so now as a Member of the Senate.

Mr. GOODELL. Mr. President, I thank the Senator. In spite of his disagreement, I am still very proud of the fact that I assisted in getting him elected yesterday as the Republican Whip.

Mr. JAVITS. Mr. President, will the Senator yield?

Mr. GOODELL. I yield.

Mr. JAVITS. Mr. President, the bill will probably be referred to the committee on which I serve—the Committee on Foreign Relations. I assure my colleague that the measure will have the very earnest consideration of one member of that committee, at least, and, I believe, of all members of the committee. I can

and will bring the matter clearly to their attention.

Back timing now, as we said in the Army, it seems to me that what the Senator has really done is that he has shown us that there is a way in which we can stop this situation. That is very important, because the Senator's bill would be a law passed by Congress. Congress does have the power to pull the purse strings—and shut off the money. When Congress shuts off the money, that is the power that Congress has to negate anything that the President can do.

This is important because the President, we know, has the power as the Commander in Chief to do many things. He put the troops in Vietnam. It was not this President, happily for us on this side of the aisle. But it was President Johnson in the main who did this. And he put them there supported collaterally, as the lawyers say, by a resolution, the Gulf of Tonkin joint resolution.

Mr. President, if we were to repeal that resolution, we would not be doing too much. However, if we were to cut off the money, we would be doing everything.

The Senator renders a singular service, in my judgment, by showing Congress how it can exercise its power, if it chooses. We may not go along with the Senator right now. And I would not go along with him right now. I am telling the Senator that in a very straightforward manner. However, it does provide a tool if we want to use it.

It is critically important that the President understand at a time when the relationships between the President and the Congress on foreign policy are being realigned, as shown in the debate on the military procurement authorization bill, that we are not powerless.

I think that merely by introducing the bill, if nothing else happens, the Senator has rendered a very singular service.

As to the merits of the matter, there may be a great many imperfections in respect to the practicality of the bill. We may simply be physically unable to do it.

There may be a very good case for logistic support of the South Vietnamese, even if they have to take over, as I want them to do, the whole combat responsibility. However, again, the idea of emphasizing the phasing out of the U.S. forces from combat responsibility is the only course open at this time.

Paris is stalemated, as the Senator knows. I have been there recently. The Thieu government is not broadening its base. It is narrowing its base. It is becoming less and less willing to negotiate on its own.

There is only one course remaining. That is to say, "You take it over. It is yours. The heat is on you." Then, they might see things differently.

This is the course I have pursued. I am pleased that my colleague has joined me in that effort.

I fully support the idea that the combat responsibility must be shifted as quickly as possible from the United States to the South Vietnamese.

I assure the Senator that I will pursue the matter as a member of the Com-

mittee on Foreign Relations and otherwise, as the Senator himself will do, as a Senator and as a man of distinct importance in our country.

I think the Senator has done us a service in showing that the power of Congress is there. That is what is meant by the power of the purse.

The Senator calls for the utmost use of that power. We may not choose to use it at this time. I do not think that we should but the Senator has shown us that that power of Congress is still possessed by Congress. It has been a very singular contribution.

I assure the Senator that the matter will be treated with great seriousness by me and by many of my colleagues. It will have an important place in the historic resolution of a dreadful war. And the Senator has accurately described this dreadful war in which the United States has become entangled, seemingly, if we listen to many people, with no way of getting out.

We refuse to accept that statement that we cannot get ourselves out. It is untrue. The Senator has helped very materially in this regard.

Mr. GOODELL. Mr. President, I appreciate the comments of the senior Senator from New York.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. GOODELL. Mr. President, I ask unanimous consent that I be permitted to continue for an additional 3 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. AIKEN. Mr. President, will the Senator yield?

Mr. GOODELL. I yield.

The PRESIDING OFFICER. The Senator from Vermont is recognized.

Mr. AIKEN. Mr. President, I agree that the junior Senator from New York has made a contribution to the situation as it relates to our predicament in South Vietnam. I do not suppose that I could agree with everything he has said. Particularly, I would not set a definite date for the withdrawal to occur.

I feel, however, that what the Senator has said will be welcomed by millions of people, and there are millions of people in his own State, as contrasted to my State. I believe that his contribution has been worthwhile, although I realize that there will be other views, many different views, as to what should be done to end this war in Vietnam.

I compliment the distinguished Senator from New York and I hope that he gets reelected.

Mr. GOODELL. Mr. President, the Senator's voice is one of the strongest independent voices in the U.S. Senate.

The views of the distinguished Senator from Vermont are very highly regarded by everyone in the country on all matters, but particularly on matters of foreign relations.

The words of the Senator are very heartwarming, as are the words of my distinguished colleague from New York. I deeply appreciate it.

Mr. JAVITS. Mr. President, I ask unanimous consent that there be printed in the RECORD at this point an article from the New York Times of Sunday,

September 21, 1969, on Cyrus Vance's plans for a ceasefire.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

THE VANCE PLAN FOR A VIETNAM CEASE-FIRE
(By Robert Kleiman)

A 30-day race against time brought the first Vietnam war to an end at the 1954 Geneva Conference.

A simple two-word agreement on "temporary partition"—a phrase that never appeared in the official record—made peace possible. The outline of that agreement was found by Pierre Mendès-France in Foreign Ministry notes taken during private conversations held in Geneva, as he prepared to ask the French National Assembly for investiture as Premier. That is what led him to make his famous wager—that he would negotiate a settlement in a month or quit—a wager won him the Premiership and ended the war. Once the principle of partition had been accepted by both sides, Mendès-France realized, all that remained was to settle the details.

Is there a simple key to ending the second Vietnam war in 1969? Ambassador Cyrus R. Vance believes there may be. The former Vietnam peace negotiator thinks that that key is a "standstill cease-fire."

The attractiveness of the Vance Plan is that it is a proposal to negotiate a division of power—and territory—based on current realities. It would, simply, freeze the status quo and establish a *modus vivendi* between the contestants in Vietnam's two-decade civil war. Can it be done?

The leopard-spot distribution of Vietcong areas in South Vietnam has led some analysts to dismiss partition as an impossible solution. Most students of the problem in 1954 took the same view—for precisely the same reason. The Communist Vietminh then held areas in South Vietnam almost identical with those held by their Vietcong successors today, and held a similar though stronger position in the North.

But two young Frenchmen—one a diplomat, the other a colonel—believed otherwise, and devised a scheme. Foreign Minister Georges Bidault, a hawk who wanted to continue the war, brought it in his pocket to the Geneva conference for use if American intervention could not be obtained. The formula, without details, was suggested privately to a Vietminh delegate, Col. Ha Van Lau, who is now a delegate to the Paris peace talks.

Many weeks later, his agreement in principle was given on condition that the territory allocated to the Vietminh have the "character of a state," which he defined as an area with a capital and a port. It was a clear bid for the region of Tonkin, with its capital at Hanoi and its port at Haiphong.

Ha Van Lau's hand was on a map of Vietnam, covering that northern region, as he spoke. When his French interlocutor asked how far south he proposed to place the partition line, he moved his fingers into Annam Province and out again quickly, replying, "Not very far."

The cease-fire settlement of 1954 evacuated hundreds of thousands of French and Vietnamese troops from North Vietnam to the South, followed by a million civilians, mostly Roman Catholics. In the South, Vietminh forces regrouped into five zones and, later, 80,000 Vietminh troops and many of their families were evacuated to the North.

Beginning on this page are questions I posed to Mr. Vance, and his replies.

Q. Mr. Vance, why are the peace talks stalemated in Paris?

A. In my judgment, because there has not yet been proposed a realistic political-military package which could provide the basis for a settlement.

Q. Our side is proposing mutual with-

drawal of external forces and free elections run by a joint electoral commission, including the Communists. The Communists are proposing an interim coalition government to conduct the elections. Is there nothing negotiable here?

A. As presently formulated, neither proposal is acceptable to the other side. For example, Hanoi and the National Liberation Front (N.L.F.) have made it clear that they are not going to discuss mutual withdrawal until the shape of the political settlement has been generally outlined. On the other hand, Saigon (the G.V.N.) has made it clear that it is not going to agree to the N.L.F. demand that it step aside in favor of a coalition provisional government. A middle ground has to be found which bridges the differences between the two sides.

Q. What do you propose?

A. That we change our strategy so as to cut down the fighting, and also put on the table in Paris a political-military package which proposes negotiation of a standstill cease-fire as the first order of business. This latter element is tremendously important because merely to propose it is to recognize the military, territorial and political status quo. It is necessary, in my judgment, to recognize the status quo to get serious negotiations.

I'm convinced that President Nixon is determined to achieve peace in Vietnam. In order to do this, I believe a new initiative is required.

Q. What do you mean precisely by a standstill cease-fire?

A. A simple cease-fire is one in which the writ of the Saigon Government would run throughout the country. Obviously, that would not be accepted by the other side, as they would view it as a surrender.

In contrast, a standstill, or cease-fire in place, recognizes the status quo. Each of the sides remains in place, takes defensive positions and stops all offensive actions. Free movement of trade, civilians and unarmed military personnel would be permitted throughout all areas of South Vietnam. Procedures would be developed to permit the movement of the required logistics for the military forces of both sides. During the winding down process, it would have to be agreed that local incidents of noncompliance would not justify departure from the general cease-fire. Further, the principle that no military or political advantage should be gained by either side throughout the period of the cease-fire would be recognized by the parties.

Q. How could you assure that?

A. There would have to be, first, an assurance that no Government troops would enter the areas under N.L.F. control except with the approval of the local government. This is a commitment somewhat like those made in the past to the Hoa Hao and Cao Dai sects and to some of the *montagnard* provinces. In return, Vietcong terrorism in areas controlled by Saigon would have to cease.

Second, an understanding would be needed that in the areas which are currently under N.L.F. control, the authority of existing local officials of the "liberation committee" would be recognized, pending elections, and that appointments of Saigon Government officials within those territories would not be made over the objections of the local authorities. There is precedent for this. Similar arrangements have been made in the important areas controlled by the Hoa Hao and the Cao Dai. The kind of Saigon Government officials that I have in mind are those from the civilian ministries, such as Agriculture and Health.

Third, there would be recognition, pending elections, of N.L.F. control over taxes in its areas and N.L.F. use of such taxes for local purposes. Again, this is a procedure similar to that currently being used in Saigon-controlled rural areas. Moreover, the N.L.F. already collects taxes in these areas.

Further, you would need a recognition by

the Saigon Government of the legality of decrees by N.L.F. liberation committees on land tenure, unless Saigon first moves to institute its own program for land reform.

Q. Now, isn't this in effect, a kind of partition of South Vietnam?

A. In a sense it's a partition. But only by recognizing the realities that exist are you going to find a basis on which the two sides can negotiate a settlement.

Q. The places now partitioned—Germany, India-Pakistan, Korea, North and South Vietnam, Berlin, Ireland—are divided by a fixed line, two in the case of India-Pakistan. But in South Vietnam there is a leopard-spot division of territories, cutting across roads, railroads, canals, separating cities from their countryside. How can partition work in that kind of a jigsaw puzzle?

A. What I believe you would end up with is essentially a form of federation with the various local entities and their people represented in the national legislature, thus giving them a voice in the national government. At the local level you would have control resting in the hands of those who control the territory now.

Q. How would you prevent violations of the agreements?

A. The most practical mechanism to guard against violations of the cease-fire would be a modified International Control Commission (I.C.C.). The I.C.C. created by the 1954 settlement in Geneva consists of three parties—India, which serves as chairman, Canada and Poland. This peace-keeping force—either alone or in coordination with a joint military commission similar to that set up by the French and the Communist Vietminh in 1954—would establish and staff posts in the 43 province capitals and in the district towns. They would receive reports and make recommendations for the solution of difficulties and disputes. Local commanders would be instructed to comply with the recommendations of the local peace-keeping unit.

Q. How many posts would you need?

A. Perhaps 300 or so.

Q. How many people would this involve?

A. About 3,000. The posts could be small. The peace-keeping units would have to operate under majority rule; under the current procedures, the vote of one member can block action by the I.C.C. This would have to be changed. They would be guaranteed safe conduct and free movement to investigate reported violations rapidly.

Q. Do you have any reason to believe that the Vietcong would accept majority decisions by the I.C.C.?

A. They have never said either that they would or would not. But the Vietcong would have an interest in seeing that the peace-keeping force was effective. If the Vietcong is going to stop fighting, it will wish to be sure that its people will be protected, and therefore that it has effective machinery in place to which it can effectively appeal.

Now, I'm not suggesting that the Vietcong is going to turn in its arms, because that would be impractical during the period of working out the details of the political settlement.

Q. You mean that they would continue to retain their own armed force?

A. That's right.

Q. On a permanent basis?

A. No, on a permanent basis the nature and size of military forces that would be permitted is a matter that would have to be negotiated. Assuming a confederal type of settlement, one possibility is that the N.L.F. forces could become the local element of the national government forces in the particular area in which they lived.

Q. How can you define the status quo territorially when so much of the country is contested territory, under the control of Saigon in the daytime and under the control of the Vietcong at night?

A. This would have to be negotiated between Saigon and the N.L.F. in Paris.

Q. In the end, they would wind up trading some areas for others—some areas would be given to the Vietcong and others would be given to Saigon?

A. That's the case in any negotiation. In some disputed areas, the negotiators might agree to determine the majority allegiance by local balloting.

The idea of a leopard-spot federal or confederal solution is not a new theory, as you undoubtedly know. It has been discussed in Vietnamese circles and elsewhere. What has not always been seen clearly is that a proposal for a standstill cease-fire would almost automatically shape the solution in that way.

Q. What about the people who live in these areas? Would they have to remain there?

A. There would have to be complete freedom of movement for all civilians.

Q. Anybody who didn't want to stay in a zone allocated to the Vietcong could move into another area?

A. That's correct, and I would foresee elections in all areas eventually so that the people of South Vietnam would have a voice in determining their future.

Q. Do you think this movement in population would take place before the elections?

A. In a number of areas, yes. In others, there would be little movement. I would expect that local elections would precede national voting. You would first have elections of local representatives at the hamlet and village level, and perhaps at the provincial level as well. The elections, in areas where the N.L.F. is clearly in control, would obviously reflect the realities that exist on the ground. The same would be true in those areas where the Saigon Government is clearly in control.

Then you would have elections for the National Assembly—both the lower and upper houses—with all South Vietnamese entitled to vote. In this connection, I think you could expect to see the resulting legislature composed of various political, religious and ethnic groups.

Finally, there would be the election of a President and a Vice President.

Q. You see this as a series of elections rather than one election?

A. Probably. But the timing of the various elections would be for the parties to decide. What you would end up with, then, would be strong local governments in various areas which would be controlled and dominated by the N.L.F., as they actually are on the ground today. The Central Government's role in these areas would be a weak one. In other areas you would see the local governments dominated by Saigon. And in a third group of areas you would have sort of a mixed bag, with a center group emerging that is not aligned with either Saigon or the N.L.F. I think there is a large segment of Buddhists and others who fall into this category. It's a sort of third force that exists in all parts of South Vietnam.

Q. Do you think they might be drawn into some local as well as national role as a buffer between the two major political forces that are armed?

A. I think that's possible. You would also probably have Hoa Hao, Coa Dal and montagnard autonomous areas in the federation.

Q. Who would conduct the elections?

A. The elections would be conducted under a broadly representative electoral commission with the N.L.F. and the Saigon Government participating, and both sides pledged in advance to accept the outcome.

I want to make it clear that what I am suggesting is not a winner-take-all electoral solution. I don't think that either side is going to be willing to accept a winner-take-all election. The risks to each are too great, because in one fell swoop either might lose what it had been fighting and dying for over many years.

Q. Is it your assumption that the N.L.F. would give up the idea of sharing power

nationally through a coalition government? Are you saying that it would settle for minority representation in the national parliament if it were assured virtual local autonomy in the regions that it now controls?

A. I think so. In the settlement I've outlined, the two sides would divide and territorially control rather than seek to govern jointly through a coalition government at the start. The N.L.F. would be accepting a trade-off, obtaining local control by giving up its demands for a strong position in the Central Government. It would see the prospect that it might increase its political power later by peaceful competition. Meanwhile, it would be guaranteed what it has achieved on the ground over the years.

Q. Is this the essence of the political-military package you are proposing for the Paris talks?

A. Yes. But there are other important elements as well. Let me say first that this plan did not spring to life overnight, nor is the process by which my conclusions evolved in this direction a unique one. The thinking of many students of the problem has helped to shape my thinking. Clark Kerr's Committee for a National Political Settlement in Vietnam, with which I have associated myself recently, saw the need very early for a package proposal of this kind. Similar proposals have been examined within our Government. There are six essential elements in the political-military package:

1) A standstill cease-fire. 2) Self-determination for the South Vietnamese through free elections. 3) A broadly representative electoral commission with N.L.F. participation that could determine what changes are needed in the Constitution and election laws, and could then conduct the elections. 4) An international peace-keeping force. 5) A sweeping land-reform program. 6) Medical aid and relief to North as well as South Vietnam to bind up the wounds of war, along with economic assistance.

Q. One objection to the cease-fire approach is that the other side is a clandestine movement engaged in subversion and the use of terrorism. It moves by night under cover. Its activities would be difficult to regulate while the movement of the South Vietnamese Army and police in uniform would be controlled by the cease-fire. How would you get around that objection?

A. From what we have been able to observe over the years, it appears that the North Vietnamese and the N.L.F. have the ability to exercise firm control over the action of their troops in the field. I think there's good reason to believe that an agreement would be carried out if the instructions to do so were given by the commanders of the North Vietnamese and N.L.F. forces. Moreover, you would have the peace-keeping force policing the cease-fire. I want to underscore the fact that the recent three-day truce is not a valid indicator of what might happen in the future because the G.V.N., according to reports from South Vietnam, did not observe the truce.

Q. How could you control political infiltration and terrorism, and the use of threats, to extend N.L.F. political control during a period of cease-fire?

A. As I have indicated, you would have either the I.C.C. or the I.C.C. together with a joint military commission, which would police the cease-fire and to whom complaints could be made about violations. In my judgment, this would act as a deterrent.

I'm not suggesting that there might not be a rather messy situation when the cease-fire was put into effect. There undoubtedly would be violations, and people would be injured and killed in the process. It would be misleading if I didn't make it very clear that this is to be expected.

On the other hand, as the situation exists today, taking the total casualties on both sides, many hundreds are being wounded or killed each week. If there were a standstill

cease-fire, the casualties would be very substantially reduced—if not eliminated—even with the violations you would have to expect.

Q. I suppose you would have as a deterrent the fact that Saigon's forces could always resume the fighting if they felt the Communists were taking advantage of the cease-fire?

A. Yes.

Q. The Saigon secret police would also, presumably, be functioning. Might there be a kind of tong warfare and clandestine undercover fighting going on in some of these areas?

A. I'm sure you would have all kinds of violations of the cease-fire from time to time in various places throughout the country.

Q. Now, another objection that is raised is this: If you had a standstill cease-fire, the N.L.F., which has set up a phantom provisional government, would be able to announce a capital and proclaim themselves there as the Government of South Vietnam. This is something they have not been able to do at present. Although they control large regions clandestinely, there is no part of the country which the South Vietnamese Army and the American forces cannot seize if they wish. But if there were a cease-fire, the army of Saigon would not be permitted to enter N.L.F. areas. The argument made by the Saigon Government is that the political position of the N.L.F. would be upgraded very substantially, if it could set up a secure capital. What do you think of this argument?

A. It is possible that the N.L.F. might take that action. But assuming that were done, I believe it is questionable that it would materially change the situation.

Q. The final argument that's made against the cease-fire approach is that all these arrangements would weaken the Saigon Government, and its position might disintegrate. Is the Saigon Government that weak?

A. If the G.V.N. broadens its political base and takes the initiative for peace, it should be able to win the support of a broad spectrum of the South Vietnamese people. But it must broaden its political base.

Q. Do you see any broadening in the new Cabinet and in the replacement of a civilian Prime Minister with General Khiem?

A. No, I think it was a step backward. In my judgment, it is essential that President Thieu promptly name a strong advisory council with a very broad political and religious base.

Q. If the United States is withdrawing from Vietnam, does it have the right any longer to tell the Saigon leaders how to constitute their Government? We can't have it both ways, can we?

A. The United States has made a great expenditure of lives and blood in Vietnam, and I think we have the right to urge what we believe is required to end the fighting and give some hope of stability for the future.

Q. In other words, unilateral withdrawal or even a mutual withdrawal of the American and North Vietnamese forces might lead, not to peace, but to a continuation of the war?

A. If you could get mutual withdrawal of North Vietnamese and United States forces, it might put pressure on both the N.L.F. and the G.V.N. to reach a political accommodation. But most important, we must try to stop the fighting now and capture the initiative for peace. If the United States were to come forward with a proposal calling for a standstill cease-fire, it could have a profound impact throughout the world. In my judgment, it would gain the support of world opinion. And even if the cease-fire proposal were turned down initially, it could be left on the table and world opinion would in time have its effect on the parties. As you know, both the North and South Vietnamese are very sensitive to world opinion.

Vietnam has been riven by war for many, many years. I think there's a great desire for peace among the Vietnamese people, North and South, running from the grass

roots right up through all segments of the society. If a broadened Saigon Government were to offer the country peace and land reform, the other side would have to respond.

Q. How does land reform fit into the peace negotiation package you are proposing?

A. I hope that it will pass the Saigon legislature quickly, transferring all tenant-farmed land to the peasants who are tilling it. In my judgment, the land-reform program would have a major political effect throughout South Vietnam. I would think it would be of great concern to the N.L.F., and it could become a useful subject of negotiation with them. You might offer to withhold putting the program into effect in N.L.F. areas, pending a working out of the political settlement with the other side.

Q. How could the N.L.F. come out against distributing the land to the peasants?

A. They would claim they already had done that and that it was unnecessary for the Saigon Government to take any action in their areas.

Q. What makes you think Hanoi wants to negotiate a settlement? Might they not think now that they only have to sit tight and the United States will pull out?

A. They might, but one indicator is that they have shown great interest on a number of occasions in economic and technical assistance from the United States in the post-war period. Another indicator is the quality of the negotiators Hanoi has sent to Paris, which leads me to believe they have come to make a settlement, not to stall indefinitely. We were impressed by their serious attitude, their skill and precision and their courtesy. I also want to make it clear that the G.V.N. has also sent very able people to Paris.

Q. Do you think American aid to North and South Vietnam would help to guarantee that the peace agreements would be carried out?

A. It could have an important effect. I believe that the North Vietnamese want to remain independent of both China and the Soviet Union. To the extent that they could receive assistance elsewhere, it would fortify and strengthen this position. You will recall that both Hanoi and the N.L.F. have said that they look forward to good relations with the United States after the war.

Q. Do you think the N.L.F. is serious about its stated desire to assume a neutral posture along with the rest of Southeast Asia?

A. I hope so, but only time can tell.

Q. The settlement you propose, then, would not terminate the political or economic role that the United States plays in Southeast Asia in support of national independence by countries in the area?

A. No. Our Government has said on many occasions that it is prepared to take a very active role in supporting economic development for all of the peoples in Southeast Asia, including the North Vietnamese.

Q. Would the federation within South Vietnam that you foresee ultimately join in a confederation with North Vietnam, or unite with it in some other way?

A. That would be up to the North and the South to negotiate. My own feeling is that both North and South want some form of eventual unification. Indeed, I have heard individuals on both sides say that they wish to see North and South Vietnam eventually joined together in some way. Members of the N.L.F. have spoken to the press about a period of five or ten years before unification with the North.

Q. Is there a political inhibition against early reunification?

A. I think there's little question but that Southerners are Southerners in Vietnam. They want to pull themselves together politically so that they can deal with North Vietnam on an equal basis, rather than be taken over. The Saigon Government and the N.L.F., too, I believe, have suggested that the first steps be trade, exchange of letters, the

movement of families back and forth from North Vietnam to South Vietnam and vice versa. The fact that South Vietnam had abundant rice was a very important factor in the past in trade with the North.

Q. If Hanoi doesn't respond to all our offers, do you think we ought to continue unilateral withdrawal?

A. Yes. I think that we can and should remove substantially larger forces than we have so far. We must try to bring about an end to the fighting now, but, if we can't, we ought to turn it over to the G.V.N. as rapidly as possible.

Q. Would your objective in pulling out be to force Saigon to negotiate seriously?

A. In part.

Q. Do you think we are now in a period of de-escalation, and that if we reciprocate...?

A. The only way we'll ever know is to test it. That's why we ought to come forward at this point and put on the table a proposal for a standstill cease-fire and for a realistic political settlement. We have nothing to lose by doing it, and everything to gain.

Q. What would you do to deescalate in response to a lull?

A. I would cut back on the search and destroy operations, and cut back further on the B-52 operations.

Q. Why would you cut back on the B-52 operations?

A. B-52 operations was one of the subjects that the other side raised many times in Paris. Because of the importance the other side attaches to these operations, cutting them back further might provide the initiative for the cutting down of hostilities by mutual example. It is important to remember that it would be unrealistic to expect an immediate response from the other side. These things take time.

Q. What effect will Ho Chi Minh's death have on the Vietnam war and the Paris peace negotiations?

A. I don't know. The death of a charismatic leader who over the years was strong enough to reach compromises, as he did, with the French in the nineteen-forties and nineteen-fifties may lessen the chance for peace. On the other hand, there will undoubtedly be a period of uncertainty in the aftermath of his death during which there will be a struggle for succession. It may well be, therefore, that the collective leadership, while sorting out their own relationships and those of their country with other countries, may want to take a fresh look at the situation.

In any event, we should seize this opportunity to open up a new path toward peace. To this end, we should propose a practical political-military package which could provide a basis for a settlement.

UNITED STATES-MEXICAN COOPERATION IN DRUG CONTROL

Mr. JAVITS. Mr. President, newspaper and television coverage has focused public attention on the dramatic campaign now underway to interdict the mammoth traffic in illicit drugs across the United States-Mexican border. Allegedly, nearly all of the high-potency marihuana and a significant percentage of the heroin consumed in this country enter the United States from Mexico. As the report of the President's Task Force on Narcotics, Marihuana, and Dangerous Drugs rightly stresses:

The problem of illicit trafficking across the Mexican border is bilateral in nature. Neither country can solve it alone.

Given the bilateral nature of the problem, it is fortunate, in my judgment, that the authorities of the Republic of Mexico have adopted such a cooperative pos-

ture. The control of illicit drugs in Mexico is based on Federal statutes which are enforced by the Federal judicial police under the Attorney General of Mexico.

However, the fact of the matter is that the Mexican authorities are restricted in their efforts to enforce their own laws by a shortage of modern equipment and trained manpower. There is a special need for helicopters to aid in surveillance, discovery, and destruction of illicit crops. And, the increasing consumption of both marihuana and heroin in the United States has placed greatly increased strains on the limited capabilities for surveillance at the disposition of the Mexican authorities.

On occasions in the past, the United States has provided Mexico with aircraft for use in locating marihuana and opium fields, and for transporting agents to destroy these fields. I believe that this successful precedent should be used to provide significant material assistance to the Mexican authorities on a lend-lease basis in connection with the current campaign.

Inasmuch as the question of U.S. technical and material assistance is likely to be an important item of discussion at the next ad hoc meeting of United States and Mexican authorities—a meeting which will probably take place in Washington during the month of November—I urge the President to make available a program of U.S. technical assistance to Mexico including transport—helicopters and aircraft—and communications equipment on a lend-lease basis for the purpose of attacking the problem of illicit trafficking in drugs across the United States-Mexican border.

As to a joint United States-Mexican program against traffic in marihuana, I wish to make it clear that I do not thereby claim any wisdom, fairness, and efficacy in the current laws on marihuana. I am all for finding out scientifically as soon as possible about marihuana and its effects, concerning which there is so much controversy. I believe until we do find out more about marihuana, the proper course of action is to work to get the oppressive laws on penalties and prosecution reformed, but not in the meantime to allow the country to be inundated with marihuana because we cannot dam up the flood of it from Mexico.

I hope the administration will take my suggestions seriously on this subject.

Mr. DODD. Mr. President, will the Senator yield?

Mr. JAVITS. I yield.

Mr. DODD. Mr. President, I thoroughly agree with the Senator's statement. I think it is a very helpful statement. These facts need to be called to the attention of Congress and the American people.

The Senator will recall that he joined me in a discussion of the situation on the Mexican border several years ago. I know I had his support, sympathy, and advice on this subject.

We agreed then that we thought something should be done to stop the flow of these narcotics into the United States, and we tried to get it done and we tried to do some of the things the Senator suggests today.

This is perhaps the beginning of the end—of this situation on the border and I think the Senator deserves great credit for raising this subject on the floor of the Senate at this time.

Mr. JAVITS. I thank the Senator. I do recall our cooperation, which I welcomed, as I was then a member of the Committee on the Judiciary, on which the Senator serves so importantly.

The genesis of this idea comes from the fact that I serve on the Subcommittee on Latin America of the Committee on Foreign Relations, of which the Senator is also a member. I have gotten some ideas in that regard, and though they are in foreign policy, they bear on the drive which the United States is just setting up.

I am very grateful for the Senator's support.

U.S. RECOGNITION OF FOREIGN GOVERNMENTS

The Senate resumed the consideration of the resolution (S. Res. 205) to set forth as an expression of the Senate a basic principle regarding the recognition by the United States of foreign governments.

The PRESIDING OFFICER. Pursuant to the previous order, the Chair recognizes the Senator from California (Mr. CRANSTON).

Mr. CRANSTON. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. CRANSTON. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER (Mr. GRAVEL in the chair). Without objection, it is so ordered.

Mr. CRANSTON. Mr. President, I am deeply honored to be joined by the senior Senator from Vermont (Mr. AIKEN) in cosponsorship of the pending resolution. I know of the Senator's long experience in this field and of his great knowledge and prestige in this body and in the Nation with respect to foreign policy. His joining in this effort lends great strength, and I thank him for his helpfulness.

The resolution that Senator AIKEN and I have proposed is designed to make it plain that when the United States recognizes a foreign government, that act does not in itself imply that we approve that government, its policy, its behavior, or any particular aspect of that government. It simply states that when the United States recognizes a foreign government, there is no connotation beyond the fact that we have recognized it, and therefore propose to seek to talk with it and to conduct business with it.

This, in effect, would clarify a great deal of confusion that exists about American recognition policy in world affairs. It would dispel some unfortunate clouds which presently surround our recognition policy and lead some—people in other lands and many Americans—to wonder what we stand for. It would return America to its original recognition policy, the policy that our Nation followed with great success in the days

of Jefferson, Madison, Monroe, Adams, and other early leaders of our land.

In the early 1890's we began to leave that original recognition policy when we opted for dollar diplomacy. This caused a great deal of difficulty in our relations with other nations in this hemisphere. Two decades later, the dimension of democratic legitimacy was added to our foreign policy in terms of its recognition aspect, and this led to still greater problems and difficulties. More than once, the policy of nonrecognition was followed by absence of any communication, then by deepening misunderstanding. This in turn has led us on into military intervention in the affairs of the nation we have failed to recognize.

Nonrecognition has never really succeeded either in bringing down or coming to terms with a hostile regime. Often, nonrecognition has seemed to help more that it has seemed to hurt the nation that we have failed to recognize. Lack of communication and lack of understanding can lead to war among the people of this planet, and that is the most significant danger in our present policy.

What we lack is a fundamental principle in our policy that makes plain what recognition means and what recognition does not mean. Certainly, there are values that we want to preserve, protect, and project in this world. But let us seek effective ways to do that, and let us abandon ineffective ways. Nonrecognition makes it difficult for us to transmit our values and to state our purposes clearly. It deprives us of an opportunity to declare and discuss our policies and principles with others and to measure more effectively the effectiveness of our actions. It prevents us from exerting influence and from gaining intelligence and insight into the affairs, views and plans of other people and other governments; it holds increasingly grave risks of war out of misunderstanding in an age in which an atomic Armageddon is an ever present danger.

It is primarily for these reasons that the Senator from Vermont and I have offered this resolution, and I trust that it will have support of this body.

DOES OUR RECOGNITION POLICY NEED REDEFINING?

Mr. DODD. Mr. President, as I pointed out in my individual views, I am opposed to Senate Resolution 205 on three basic grounds.

First, the resolution is superfluous because, as the State Department pointed out, it simply "reflects the established position" of the U.S. Government, going back to the founding of our Republic.

I am opposed to it, secondly, because it is bound to generate confusion by conjuring up a pretended confusion where none, in fact, exists.

Contrary to the implications of the resolution's preamble, we have never in our long history made recognition dependent on political approval, or construed recognition as signifying our political approval.

I am opposed to the resolution in the third place because, in the name of giving the State Department greater flexibility, Senate Resolution 205 may wind up by restricting the flexible recognition policy

which successive administrations have followed in the past.

I do not say this is the intent of the Senator from California. But I wonder what is in the minds of some of those who are behind it, who are not in the Senate but outside.

Is it an effort to establish a policy of recognizing every country in this world, without respect to our national interests? I am afraid that this will be the next step. And that would be a change in our policy.

We would be abandoning the position which we have held from the beginning that recognition should not be granted where it would not serve the national interest and that recognition, when it is granted, does not mean political approval or should not be construed as signifying our political approval.

It is impossible to think of a single useful purpose that the resolution before us would serve; and a resolution that serves no purpose should not be enacted, even if it does not hold the possibility of mischief, as this one, I fear, does.

The Senator from California (Mr. CRANSTON), who has sponsored this resolution, denies that it is "a camouflaged attempt to bring about the immediate, unconditional recognition of Communist China." By the use of the word "denies," I do not mean I have any doubt about his denial. I am sure that is his thinking on this subject. But I wonder if there are not some who have been promoting the resolutions from other quarters who do have the recognition of China in mind.

Whether one supports or opposes the recognition of Red China, there might be some logic to the resolution if it were, in fact, intended to bring about recognition. At least we could debate and vote on it.

But if the resolution is not intended to clear the way for the recognition of Communist China, now or in the near future, then it is difficult to understand the motivation behind it.

The resolution holds that a half century of official statements have given Americans and foreigners the misguided impression that our recognition of another government implies approval of it.

But the record of the hearing failed to produce any specifications to support this contention.

Since the days of Secretary of State Thomas Jefferson, according to Mr. George H. Aldrich, Acting Legal Adviser of the State Department, our acts of recognition have not been intended to imply "approval." The basic, overriding consideration, Mr. Aldrich told the committee, has been "national interest."

The Senator from California has stated:

The resolution is not intended to have us follow the lead of the United Kingdom in adopting a policy of automatic recognition of a new government.

The historical preamble which seeks to justify the resolution is as inaccurate in its reference to British policy as it is in its reference to American policy.

The fact is that we recognize 136 governments, including Castro's Cuba, and have relations with 117, while the

United Kingdom, whose recognition policy is supposed to be virtually automatic, recognizes only 128 and Moscow recognizes only 99.

The Senator from California further argued that "we should carefully weigh the national interest of the United States before deciding to extend recognition." But this is precisely what our policy has been for almost 200 years.

The fact that we recognized Hitler, and Mussolini, and Trujillo certainly did not signify that we approved of their regimes.

Nor have I ever heard anyone argue that our recognition of the Communist governments of Europe and most of the motley succession of military dictatorships in Latin America signifies our approval of these regimes.

I happen to be one who thought and said that our recognition in a number of cases was ill-advised. But I never heard anyone answer me and say we approved of those governments.

We have withheld recognition from countries like North Korea, North Vietnam, Red China, and Rhodesia for the simple reason that we consider nonrecognition to be in our national interest.

On the other hand, during World War II we granted recognition to the governments in exile in London, even though these governments were not in de facto control of their countries, while we denied recognition to the quisling government in Norway and other quisling governments set up by the Nazis in the countries they occupied, even though these governments did enjoy substantial de facto control over their respective territories.

If we had pursued a policy which needed correction, then there might be some point to a Senate resolution like Senate Resolution 205. But even by the standards which the Senator from California and the majority report of the Foreign Relations Committee suggest, our policy of 200 years would have to be given very high marks. Indeed, I feel it meets the standards on every single point.

I question the wisdom of this resolution for the same reason that I would question the wisdom of a doctor who sought to persuade a completely healthy patient that he was ill, and then proceeded to prescribe a medicine for him.

This resolution is not needed because in seeking to correct a nonexistent confusion, it generates confusion; and in seeking to endow our recognition policy with enhanced flexibility, it may well wind up curtailing the complete flexibility we have enjoyed in the past in deciding on the issue of recognition or nonrecognition.

There is nothing wrong with our policy. That is my point.

The resolution is not needed because, in seeking to correct a nonexistent confusion, it will generate confusion.

If the resolution is agreed to, the newspapers, the radio, and television will say, We did something new here. They will say, we have changed our historic position. They will say, from now on everything will be different.

Adoption of the resolution, I fear, will encourage those who want to change our policy, who want recognition extended to certain governments that the American people do not want recognized.

I think the resolution may very well bring about the mischief I have referred to, so that ultimately there will be blanket recognition of every government.

I do not believe the Senator from California wants us to recognize Rhodesia. I believe that he is on record as saying he is opposed to the recognition of Rhodesia. I happen to be, too, because I do not think it is in our national interest to recognize Rhodesia. That is the policy of our Government.

But I fear that if this resolution is agreed to, there will be those who want to recognize Rhodesia for their own reasons, and they will say, that is what the resolution means, even though it may be contrary to the national interest of the United States of America to do so.

What I said at the beginning, I repeat in closing: that the resolution is not needed because there is no confusion to remedy. Not only will it generate confusion but in seeking to endow our recognition policy with enhanced flexibility, it may well wind up curtailing the flexibility we have enjoyed in the past in deciding on the issue of recognition or nonrecognition.

Mr. President, I have no illusions. I know that this resolution will be agreed to, as I was sure it would be from the beginning.

It is understandable that it will be approved. It sounds so sensible, people will think that if we pass this resolution, recognition will not therefore be construed as implying political approval.

If we keep saying that, pretty soon we will get people to think that before the resolution was passed political approval was a basis for our recognition, when the facts are 100 percent to the contrary.

I make this statement for the sake of the record, with the further observation that if any effort is made to use the resolution to extend recognition to countries to which recognition should not be extended in our national interest, someone will take the trouble to look at what has been said here today.

Mr. President, I hope that the resolution will not be agreed to. I shall not ask for a record vote. I do not care to delay the Senate. I know what will happen. It has happened before. It will not be the first time. I pray it will be the last time.

Mr. AIKEN. Mr. President, will the Senator from California yield?

Mr. CRANSTON. I am happy to yield to the Senator from Vermont.

Mr. AIKEN. Mr. President, I am very glad to join the Senator from California in sponsoring the resolution.

I can assure the Senate and the country that it is not a resolution looking to the early recognition of Communist China establishing a U.S. Embassy there. I realize that many other countries in the world have recognized Red China. I also realize that a great many of our industries in the United States would like to be able to do business with China

without going through a third party in some other country.

The Senator from California has explained the purpose of the resolution, so I shall not dwell on it any longer. I should like to make a few points.

The State Department has no objection to the proposed resolution. I cleared the wording of it with the State Department before it was submitted to the Senate.

The resolution merely proposes that when the United States recognizes a foreign government and exchanges diplomatic representatives with it, that the recognition does not of itself imply that the United States approves of the form, the ideology, or the policy of the foreign government that we recognize.

In other words, the resolution is a polite way of telling a country, "We can do business with you. We recognize that you are there, but we do not have to like you."

We have the responsibility of helping to break down the artificial barriers which have been constructed among ourselves and other parts of the world.

It is important, if we are to have peace in the world, that at least we talk with those who represent the governments of other countries. Our attitudes toward other countries change tremendously. If one reads history, he will be amazed at the revelations which appear there.

Take Cuba, for instance. Only 10 years ago, nearly everyone in the United States was rooting for Castro to win the revolution in Cuba. At that time, American interests owned or controlled 70 percent of the economy of Cuba. It was not long after that Cuba became anathema to much of the citizenry of the United States.

Take Russia, whom we have to watch carefully today, and I believe with good reason. Yet, during World War II, Russia fought on our side and lost a total of 16 million or more men killed while fighting with the Allies.

Take Germany, the most powerful enemy, perhaps, that the United States ever had. It is now one of our best customers and one of our foremost allies.

Take Japan. Today, Japan is our best customer. Only a few years ago, Japan was the worst enemy we had in the Pacific.

Take China, with its 800 million people. China was opened and developed largely by American business interests. For a long time China was looked upon not only as a fertile trading ground but also the Chinese people were considered to be strong friends of the United States. I expect that they would be today, if they had the opportunity.

Mr. President, those are some of the countries I point out as examples of why we cannot have any permanent rules which spell out whether we should recognize a country.

In the short history of the United States, we have fought for and against every major country on the face of the globe.

Mr. CRANSTON. Mr. President, will the Senator from Vermont yield?

Mr. AIKEN. I yield.

Mr. CRANSTON. Mr. President, I ask for the yeas and nays.

The yeas and nays were ordered.

Mr. AIKEN. But we cannot change the fact that all those countries—temporary friends and temporary foes alike—are still there. This is a fact of life.

We had our troubles in World War II. Who was it that held Hitler back a year from overrunning Southeast Europe and the Middle East? Yugoslavia, that is who. Who kept Russia from overrunning Greece, about the time General Eisenhower became President, and bringing all of Southeast Europe within the orbit of the Soviets? It was Yugoslavia. And how did she do it? She did it with guns and ammunition furnished by the United States. Fortunately, she did not have to go to war, but the fact that those guns and ammunition were in Yugoslavia kept Russia from going into the Middle East. This also kept Greece and other countries in that area from falling into the Communist orbit.

Also as long as we are talking about history, I would ask my colleagues to consider who made it possible for Russia to dominate Poland and Czechoslovakia? The United States, in the meeting at Yalta. That is when Europe was divided into two spheres of influence and the countries of Eastern Europe were placed in the Soviet orbit.

Speaking of Rumania, where private investments are now encouraged, the Government of West Germany, as well as private investors, have large investments in that so-called Communist state.

Rhodesia has been mentioned. I think it is ironic for the United States to discontinue its purchases of precious minerals—titanium, platinum, and chromium—from Rhodesia, thus forcing Rhodesia to put those minerals on the world market, where they can be purchased by Russia and sold to us at a substantial profit. It does not make sense. In private business, that would not be considered good business at all.

Then again, if we are worrying about an approach to communism and an approach to socialism, I might say that yesterday this Senate voted for a Federal welfare program which goes far beyond that in some of the other countries which we criticize today. I do not think the food stamp bill will become law in its present form, but if it does we will have some of the countries of Eastern Europe trailing behind us.

I think we are doing right when we say the recognition resolution cannot do any harm to the United States at all. It does not involve the recognition of any country which we do not want to recognize. It cannot hurt our position in the world, and may even help us to live in a friendlier world.

That is why I wholeheartedly support the resolution of the Senator from California, which I have had the privilege to cosponsor with him.

Mr. MILLER. Mr. President, I should like to address a few questions to my friend from California, who is managing the resolution.

To me, one thing that could cause concern is not so much what is in the resolution as what is not in the resolu-

tion. For example, if we adopt the resolution, we resolve—

That it is the sense of the Senate that when the United States recognizes a foreign government and exchanges diplomatic representatives with it, this does not of itself imply that the United States approves of the form, ideology, or policy of that foreign government.

Then the question comes up, What happens if we do not recognize and exchange diplomatic representatives?

I would like to ask my colleague whether the intention behind this language would include the following interpretation: that the failure to recognize and exchange diplomatic representatives does not of itself imply that the United States disapproves of the form, ideology, or policy of that government.

Mr. CRANSTON. Mr. President, let me say first to the Senator from Iowa that we endeavored to draft a resolution that would spell out what "recognition" means, and we found it exceedingly difficult to do. In consulting with the State Department, we came to the conclusion, with their advice, that we not try to spell out what was meant because we would get into too complicated a situation.

So, in direct answer to the question of the Senator, yes, that would be the implication. The implication would be if we did not recognize, that did not necessarily imply we did not approve. There might be some other reason for not recognizing the Government.

Mr. MILLER. I can see, for example, some misinterpretation—and I would like to get this matter clear for the Record—on the part of some superficial observers interpreting the failure of the United States to appoint an ambassador for a prolonged period of time is by itself an implication that the United States does not approve of the form, ideology, or policy of that Government.

Mr. CRANSTON. The purpose of the resolution is to make very plain that non-recognition has no such implication or significance.

Mr. MILLER. Further, I would presume that the mere fact that there is no recognition or exchange of diplomatic representatives with a foreign government does not imply that the United States does not recognize the existence of such government.

Mr. CRANSTON. The Senator is absolutely correct in that assumption.

Mr. MILLER. As I read the committee report, the Senator testified before the Foreign Relations Committee that—

In the first place, this resolution is not a camouflaged attempt to bring about the immediate, unconditional recognition of the Government of Communist China.

By the use of the word "unconditional" he implied that there could be conditional recognition. My question is: In the resolving clause of the resolution, where it says that "it is the sense of the Senate that when the United States recognizes," by the word "recognizes" does the Senator mean both unconditional and conditional recognition?

Mr. CRANSTON. That is correct; and the word "unconditional" was used there in that testimony for a different purpose.

Mr. MILLER. I thank my colleague.

Mr. CRANSTON. I thank the Senator very much for his penetrating questions.

Mr. AIKEN. Mr. President, if the Senator will yield, may I add that I think the U.S. Government would be very happy to recognize at least one, possibly more, friendly countries today where we do not now have ambassadors but where the country is covered by the ambassador from a nearby country.

Mr. MILLER. I agree with my colleague from Vermont, and that is why I thought it important for the Record to state that countries such as the Senator from Vermont referred to should not draw the erroneous inference from favorable action on this resolution that because we do not recognize them or exchange ambassadors, therefore we necessarily imply that the United States disapproves of the form, ideology, or policy of their governments.

Mr. AIKEN. On this point, we have recognized four different countries that have a population of less than 800,000, and we exchange ambassadors with them. With respect to other countries, with a greater population, the State Department might like to recognize one or two of them. The State Department certainly is not going to do so unless it is assured of the approval of the Congress.

Mr. MILLER. That is exactly what I was trying to get at in my question of the Senator from California; and I think now the record is abundantly clear on that point.

Mr. CRANSTON. The Senator's questions have helped make the record clearer than it would have been otherwise, and I am very grateful to the Senator from Iowa for doing that.

I should like to say, in regard to the questions about China, that, quite frankly, there are considerations other than this matter of approval involved. Under present conditions, there are other obstacles to recognition of China. The role and status of Taiwan would have to be worked out; the future of the Nationalist China Government is another problem that would have to be resolved. We would also, in the light of experience with other nations, have to be satisfied that any American representatives sent to China would not be abused or treated as hostages when they are there.

There are other elements which stand in the way of recognition at the present time. But perhaps some day those will be cleared away, and when those and other obstacles are cleared away, and when, as may become the fact, it is clearly in our national interest to recognize the Government of China, the passage of this resolution now will have removed an obstacle that might otherwise still stand in the way of recognizing them when, in our national interest, we should. That is another reason why the adoption of this resolution could serve a constructive purpose.

Mr. MILLER. I do not share the Senator's concern on his last point, because, as I understand it, we have recognized and exchanged diplomatic representatives with the Government of Greece, for example.

Mr. CRANSTON. That is correct; and I should like to say that one purpose of

this resolution is to show that we do not necessarily approve the Government of Greece, as many people think we do because we recognize them and do not recognize Albania, for example.

Mr. MILLER. I think that is true, from accounts I read about the government of that troubled country.

But my point is that since we have recognized and exchanged diplomatic representatives with Greece, and since even with this resolution, it is not implied that we thereby approve the ideology or policy or particular form of the government, that has not impeded us from doing what we are doing. Therefore, even without this resolution, if all of the matters the Senator referred to pertaining to Red China were taken care of, I do not believe we would be any more inhibited in going ahead than we have been inhibited in going ahead in case of Greece.

My feeling is, though, that with the answers for the record that the Senator from California has given, there is a little clarification here which might be timely. There are too many erroneous inferences being drawn both ways at this moment. There have been some very erroneous inferences drawn from the failure, under circumstances which have nothing to do with the case, of the United States to appoint an ambassador to a particular country.

For example, there are some, I have heard, who are concerned about the fact that we do not have an ambassador to Sweden. They may be concerned, but to draw an erroneous inference that the United States, all of a sudden, has by the failure to do this disapproved of the form, ideology, or policy of the Government of Sweden would be, I think, most unfortunate. So I think there is some merit to having something done by way of this resolution.

Mr. CRANSTON. I thank the Senator very much.

Quite briefly, Mr. President, I should like to respond to a few of the remarks made by my good friend, the Senator from Connecticut. He spoke of those "outside" who are "behind" this resolution, conjuring up, perhaps, images that there are sinister forces somewhere who, having ulterior motives, suggested this resolution to the distinguished Senator from Vermont and myself.

I should like to say that, outside the Senate, the only people consulted by Senator AIKEN and me—and we did not get the idea outside the Senate, indeed we developed it ourselves inside the Senate—were at the State Department. While I differ with the State Department often, I do not consider them sinister.

They stated that they favored the resolution in testimony before the committee. Just to summarize a letter from the State Department to Chairman FULBRIGHT of the Committee on Foreign Relations, the Department went on record as saying:

The Department agrees with the principles set forth in the proposed resolution.

Then they added:

Adoption of S. Res. 205 by the Senate could be useful in dispelling any uncertainty that might exist as to the implications that flow from United States recognition of a for-

ign government or from the exchange of diplomatic representatives with it.

One of those we consulted, and one of those who testified before the committee in behalf of the resolution, was Mr. Adrian Fisher, a former counsel for the State Department and an acknowledged expert in this field, along with many other experts whom we consulted; and he spoke of his support primarily for this reason:

I support the Senate resolution that is now before this committee as a step which will help eliminate some excess ideological baggage which has tended to confuse the discussion of the recognition policy of this country.

He referred to "verbal overkill," which has sometimes been employed in explaining why recognition has been withheld from some nations.

As to what the Senator from Connecticut referred to as a hole in the record, suggesting that there is no evidence that the United States has ever looked upon nonrecognition as meaning nonapproval, that hole in the record did not exist; it was covered in the record of the committee hearings, and I should like briefly to refer again to evidence that statements have been made by Secretaries of State, not to mention others, leading to the confusion and uncertainty that this resolution is designed to dispel.

Discussing possible recognition of the Communist regime in China in 1954, John Foster Dulles, then Secretary of State, declared:

It is one thing to recognize evil as a fact. It is another thing to take evil to one's breast and call it good. That explains our nonrecognition of the Communist regime.

If that does not mean we are not recognizing because of nonapproval, I do not know what it means.

Mr. DODD. Mr. President, will the Senator yield at that point?

Mr. CRANSTON. Yes, I am happy to yield.

Mr. DODD. Does it occur to the Senator that what Secretary Dulles said is not inconsistent at all with the determining factor in granting recognition, because he was asserting merely that it was not in our national interest?

If the Senator will read what the representative of the State Department said at the same hearing, he replied, when he was questioned about this matter, and I thought quite effectively, that the Dulles statement which the Senator has just quoted, and statements like it, are "taking a shorthand way of saying"—those were his exact words—"that we do not recognize it because we think that, in our national interest, it is not desirable to recognize it for a variety of reasons."

Mr. CRANSTON. That is not what the Secretary of State said, though. He said: "We do not recognize it because it is evil."

Mr. DODD. That could be a reason for it not being in our national interest, and this is all I was talking about. Other Presidents have said the same thing. Franklin Roosevelt was more direct about certain governments in the world, as was Harry Truman. There have been many Presidents who have said very direct things about foreign governments.

But the policy of his Government has

always been to put our national interest first, I repeat to the Senator what I said earlier: Show me a case where recognition of a government has either been extended or withheld for any reason other than our national interest. I do not think the Dulles statement he quoted disproves or answers my assertions.

Mr. CRANSTON. It is the withholding of recognition accompanied by statements stating that we do not recognize because the Nation is deemed to be evil that substantiates the case that caused Senator AIKEN and me to introduce this resolution. As another example, Senator Byrnes—a Democrat, from a Democratic administration, who served as Secretary of State—at one time suggested that recognizing the Communist governments in Eastern Europe would imply our approval, and so, he explained, we were not about to recognize them. He said we were recognizing Spain's Franco regime because we did approve of it. That is in the record, and is unchallengeable as to the statements that were made.

Finally, I should like to say that I concur with the Senator from Connecticut emphatically that the adoption of this resolution should not mean we must automatically recognize all governments. There will be times when it will serve our national interest not to recognize, and we should not recognize in those cases, and I would be very unhappy if this resolution were interpreted as meaning we had to recognize any nation automatically.

Again, to quote a distinguished committee witness, Adrian Fisher, former legal adviser to the State Department:

When you recognize the importance of recognition as a political act, you really come down to the decision that recognition should be extended only when the totality of U.S. interests would be advanced by such actions. You don't have to do it automatically.

I submit that the Senator from Vermont (Mr. AIKEN) and the Senator from Connecticut (Mr. DODD), I, and others would concur.

Mr. DODD. Mr. President, I do not want to prolong the debate. I will make a couple of observations and sit down.

I take it that if the Secretary of State at some time were to think that the government of a country was evil, he might very well logically conclude that for this reason among others, it would not be in our national interest to recognize that government.

Does the Senator want to close that door and say that no such judgment should ever be made?

Let us paint a bad picture and suppose that country X was murdering people wholesale and conducting itself in an utterly horrible way in international and domestic affairs. Let us suppose that a wholly evil situation existed. Let us suppose that it was not any particular ideology that was involved, but just plain evil and inhumanity. Does not the Senator think that the U.S. Government, through the President, should be free to say that it would not be in our national interest to recognize that government because it was evil or inhuman or racist? Is this not, in effect, what we are doing in the case of Rhodesia today?

As I say, while the resolution is well intended, it might lead us into a swamp of difficulties from which I fear we will not easily extricate ourselves.

If the Senator can show me a clear case where, once in nearly 200 years, we have done anything other than grant or withhold recognition on the basis of national interest, he will then have my vote.

The Senator knows that I posed this question a number of weeks ago. I asked the Congressional Library if there was a special case. They said no. That is why I do not know what we are tilting at.

I think that I ought to set the record straight on one point. I have great respect for the distinguished senior Senator from Vermont (Mr. AIKEN). However, Yugoslavia did not protect Greece from Russia. Yugoslavia almost overran Greece for Russia in the postwar period. Indeed, it was a chief support base for the Greek Communists.

I think the Senator will agree the Truman doctrine saved Greece from the Communists.

I know that Tito broke from the Kremlin later. That hurt the Greek Communists.

If the Yugoslav Communists had had their way, however, Greece long since would have had a Communist government.

Mr. AIKEN. Mr. President, the United States supplied Yugoslavia with ammunition until 1957 when they said they would not need it any longer.

Mr. DODD. The Senator is correct.

Mr. AIKEN. That was at a time when everything in southeast Europe was in a black state. Russia was perfectly willing to take over practically all of that area. I think that Yugoslavia did stand between us.

Mr. DODD. I understand the statement of the Senator. However, I merely wanted to clear the record.

Mr. MILLER. Mr. President, I regret that I neglected to ask this question in the previous colloquy I had.

At the time, I raised the question of whether or not "recognizes" includes both conditional and unconditional recognition. I neglected to ask whether any distinction was to be drawn between formal or official recognition and informal recognition. However, inasmuch as this is drawn to include an exchange of diplomatic relations, I would think this would mean only formal recognition, because without formal recognition, would it not be that we would not exchange diplomatic representatives?

Mr. CRANSTON. The Senator is correct.

Mr. MILLER. Mr. President, I thank the Senator.

The PRESIDING OFFICER. The question is on agreeing to the committee amendments.

The committee amendments were agreed to.

Mr. DODD. Mr. President, I did not mean to make any reference to anyone in particular. What I meant to say was that I have read some articles and some newspaper accounts in some of the newspapers. That was all I had reference to. It was the farthest thing from my mind

to make any reference to anyone in the Senate.

Mr. CRANSTON. Mr. President, I thank the Senator.

Mr. SPONG. Mr. President, an astronaut circles the globe in 90 minutes. A jet makes the trip between New York and London in 6 hours; between New York and Moscow in 9 hours. A telephone call is put through from New York to Paris or from New York to Hong Kong in several minutes. Events on one continent are transmitted to another via satellite in a matter of seconds.

As a result of these and similar developments, events within nations and among nations are of significance throughout the world. To believe that a nation can retreat into isolation and ignore world events is to hold a fallacious belief. Peoples of various nations are more interrelated and interdependent than ever before.

For these reasons, it is important, if not vital, for nations to have efficient channels of communication and exchange—even when these nations disagree on policy, procedures, and philosophies.

Senate Resolution 205 is a result of the fact that modern international life demands communication, and often cooperation, among nations with divergent political and philosophical views. It reflects the dual realization that other nations, whether they be allies or opponents, cannot be ignored and that all actions and policies of the foreign nations with which the United States has diplomatic relations cannot be condoned.

Senate Resolution 205 is simply an expression of a diplomatic fact of life: The United States must communicate with some nations of which it does not approve. Communication, therefore, does not reflect approval.

I support Senate Resolution 205 as an expression of this diplomatic fact of life and as a restatement of established policy. In doing so, I also accept conclusively the testimony and committee report language to the effect that Senate Resolution 205 does not represent a de facto recognition of Communist China nor does it prepare the way for recognition. The recognition of Communist China is a separate question a more complex question than the clarification issue raised by Senate Resolution 205. I oppose the recognition of Communist China and will continue to do so until a government on mainland China gives sufficient evidence of its willingness and intention to assume international and political responsibilities.

The PRESIDING OFFICER. The question is on agreeing to the resolution. On this question the yeas and nays have been ordered and the clerk will call the roll.

The bill clerk called the roll.

Mr. DOMINICK (after having voted in the negative). On this vote I have a pair with my colleague from Colorado, Mr. ALLOTT. If I were at liberty to vote, I should vote "nay." If he were present and voting, he would vote "yea." I therefore withdraw my vote.

Mr. KENNEDY. I announce that the

Senator from Tennessee (Mr. GORE), the Senator from Oklahoma (Mr. HARRIS), the Senator from Indiana (Mr. HARTKE), the Senator from Iowa (Mr. HUGHES), the Senator from Hawaii (Mr. INOUE), the Senator from Minnesota (Mr. MCCARTHY), the Senator from Wyoming (Mr. MCGEE), the Senator from Utah (Mr. MOSS), the Senator from Alabama (Mr. SPARKMAN), and the Senator from Texas (Mr. YARBOROUGH), are necessarily absent.

I further announce that the Senator from Washington (Mr. MAGNUSON) is officially absent.

I further announce that, if present and voting, the Senator from Tennessee (Mr. GORE), the Senator from Oklahoma (Mr. HARRIS), the Senator from Indiana (Mr. HARTKE), the Senator from Iowa (Mr. HUGHES), the Senator from Hawaii (Mr. INOUE), the Senator from Wyoming (Mr. MCGEE), the Senator from Utah (Mr. MOSS), the Senator from Alabama (Mr. SPARKMAN), the Senator from Texas (Mr. YARBOROUGH), and the Senator from Washington (Mr. MAGNUSON), would each vote "yea."

Mr. GRIFFIN. I announce that the Senator from Tennessee (Mr. BAKER), the Senator from KENTUCKY (Mr. COOK), the Senator from HAWAII (Mr. FONG), the Senator from ILLINOIS (Mr. SMITH), and the Senator from ARIZONA (Mr. GOLDWATER) are necessarily absent.

The Senator from NEBRASKA (Mr. HRUSKA), the Senator from MARYLAND (Mr. MATHIAS), and the Senator from COLORADO (Mr. ALLOTT) are detained on official business. If present and voting, the Senator from Tennessee (Mr. BAKER), the Senator from Kentucky (Mr. COOK), the Senator from Nebraska (Mr. HRUSKA), the Senator from Maryland (Mr. MATHIAS), and the Senator from Illinois (Mr. SMITH), would each vote "yea."

The pair of the Senators from Colorado (Mr. ALLOTT and Mr. DOMINICK) has been previously announced.

The result was announced—yeas 77, nays 3, as follows:

[No. 101 Leg.]

YEAS—77

Aiken	Griffin	Pastore
Anderson	Gurney	Pearson
Bayh	Hansen	Pell
Bellmon	Hart	Percy
Bennett	Hatfield	Prouty
Bible	Holland	Proxmire
Boggs	Hollings	Randolph
Brooke	Jackson	Ribicoff
Burdick	Javits	Russell
Byrd, Va.	Jordan, N.C.	Saxbe
Byrd, W. Va.	Jordan, Idaho	Schweiker
Cannon	Kennedy	Scott
Case	Long	Smith, Maine
Church	Mansfield	Spong
Cooper	McClellan	Stennis
Cranston	McGovern	Stevens
Curtis	McIntyre	Symington
Dole	Metcaif	Talmadge
Eagleton	Miller	Thurmond
Eastland	Mondale	Tower
Ellender	Montoya	Tydings
Ervin	Mundt	Williams, N.J.
Fannin	Murphy	Williams, Del.
Fulbright	Muskie	Young, N. Dak.
Goodell	Nelson	Young, Ohio
Gravel	Packwood	

NAYS—3

Allen Cotton Dodd
PRESENT AND GIVING A LIVE PAIR, AS PREVIOUSLY RECORDED—1
Dominick, against.

NOT VOTING—19

Allott	Hartke	McGee
Baker	Hruska	Moss
Cook	Hughes	Smith, Ill.
Fong	Inouye	Sparkman
Goldwater	Magnuson	Yarborough
Gore	Mathias	
Harris	McCarthy	

So the resolution (S. Res. 205) was agreed to as follows:

Whereas official statements over the last fifty years concerning the policy of the United States in granting or withholding recognition of a foreign government have given rise to uncertainty as to whether United States recognition of a foreign government implies approval of such a government; and

Whereas recognition by the United States of foreign governments has been interpreted by many Americans and by many foreigners as implying United States approval of those foreign governments; and

Whereas such uncertainty adversely affects the interests of the United States in its relations with foreign nations: Now, therefore, be it

Resolved, That it is the sense of the Senate that when the United States recognizes a foreign government and exchanges diplomatic representatives with it, this does not of itself imply that the United States approves of the form, ideology, or policy of that foreign government.

The PRESIDING OFFICER. Without objection, the preamble is agreed to.

Mr. PELL. Mr. President, the resolution the Senate has just passed is a positive and constructive step toward clarifying our national policy toward recognition or nonrecognition of foreign governments. The Senator from California (Mr. CRANSTON) deserves every congratulation in having pressed this resolution through to its conclusion.

In the past our national practice in according or withdrawing recognition has been inconsistent, but especially during the past 50 years, there has been a growing inclination to utilize recognition or nonrecognition as a symbol of official approval or disapproval of a government.

This practice has the regrettable and unfortunate consequence of severing the channels of diplomatic communication with a foreign government precisely at the time when direct communications are most needed and can be most useful.

There are other less awkward and more effective means of expressing approval or disapproval of a government. I believe these other means can and should be utilized and that the United States should return to the original concept of recognition; that is, when a government is in de facto control of a country, it should be accorded de jure recognition.

Mr. MANSFIELD. Mr. President, I join the Senator from Rhode Island in commending the distinguished Senator from California for his splendid effort in getting the resolution agreed to. The resolution clarifies a question which has plagued this country and this body too long.

I believe its overwhelming acceptance by the Senate speaks well for the fine manner and outstanding advocacy with which it was presented to the Senate.

Joining Senator CRANSTON, moreover, to assure this success, was the distinguished senior Senator from Vermont

(Mr. AIKEN), the ranking minority member of the Committee on Foreign Relations. It hardly needs saying that Senator AIKEN's endorsement of this resolution was indispensable to its swift adoption. He is to be commended.

Mr. HOLLAND. Mr. President, will the Senator yield?

Mr. MANSFIELD. I yield.

Mr. HOLLAND. Mr. President, since I have very great sympathy with the position taken in this matter by the distinguished Senator from Connecticut (Mr. DOBB), I want the record to show why I was impelled to vote for the resolution and why I regarded it as a useful resolution, worthy of passage. I quote two brief passages from the testimony of Mr. George H. Aldrich, Acting Legal Adviser of the Department of State, in the hearing on this matter:

The proposed resolution reflects the established position of the United States that recognition of a foreign government does not imply approval of that government's domestic policies or the means by which it came to power.

The second excerpt from his testimony reads:

We believe that Senate Resolution 205 could serve a useful purpose in the conduct of U.S. foreign relations by helping to make clear that no implications of approval or endorsement may reasonably be drawn from U.S. recognition of a foreign government or from the exchange of diplomatic representatives with it. That this may not today be fully understood results, I believe, in significant measure from confusion between the factors that enter into a recognition decision and the proper meaning and implications of that decision. The Department of State is pleased to support Senate Resolution 205 as a contribution to the effort to dispel that confusion.

Mr. President, I yield the floor.

FEDERAL COAL MINE HEALTH AND SAFETY ACT OF 1969

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the Senate turn to the consideration of Calendar No. 410, S. 2917.

The PRESIDING OFFICER. The bill will be read by title.

The LEGISLATIVE CLERK. A bill (S. 2917) to improve the health and safety conditions of persons working in the coal mining industry of the United States.

The PRESIDING OFFICER. Is there objection to the present consideration of the bill?

There being no objection, the Senate proceeded to consider the bill.

ORDER OF BUSINESS

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the pending business be laid aside temporarily.

The PRESIDING OFFICER. Without objection, it is so ordered.

INTERAGENCY COMMITTEE ON MEXICAN-AMERICAN AFFAIRS

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the Senate turn

to the consideration of Calendar No. 418, S. 740.

The PRESIDING OFFICER. The bill will be stated by title.

The LEGISLATIVE CLERK. A bill (S. 740) to establish the Interagency Committee on Mexican-American Affairs, and for other purposes.

The PRESIDING OFFICER. Is there objection to the present consideration of the bill?

There being no objection, the Senate proceeded to consider the bill, which had been reported from the Committee on Government Operations with an amendment to strike out all after the enacting clause and insert:

That it is the purpose of this Act to assure that Federal programs are reaching all Mexican Americans, Puerto Rican Americans, Cuban Americans, and all other Spanish-speaking and Spanish-surnamed Americans and providing the assistance they need, and to seek out new programs that may be necessary to handle problems that are unique to such persons.

SEC. 2. (a) There is hereby established the Cabinet Committee on Opportunities for Spanish-Speaking People (hereinafter referred to as the "Committee").

(b) The Committee shall be composed of—

- (1) the Secretary of Agriculture;
- (2) the Secretary of Commerce;
- (3) the Secretary of Labor;
- (4) the Secretary of Health, Education, and Welfare;

(5) the Secretary of Housing and Urban Development;

(6) the Secretary of the Treasury;

(7) the Attorney General;

(8) the Director of the Office of Economic Opportunity;

(9) the Administrator of the Small Business Administration;

(10) the Commissioner of the Equal Employment Opportunity Commission most concerned with the Spanish-speaking and Spanish-surnamed Americans;

(11) the Chairman of the Civil Service Commission;

(12) the Chairman of the Committee, who shall be appointed by the President, by and with the advice and consent of the Senate, from among individuals who are recognized for their knowledge of and familiarity with the special problems and needs of the Spanish speaking; and

(13) such other officers of Federal departments and agencies as may be designated by the President or the Chairman of the Committee to serve at the pleasure of the person so designating such officer.

(c) (1) The Chairman of the Committee shall not concurrently hold any other office or position of employment with the United States, but shall serve in a full-time capacity as the chief officer of the Committee.

(2) The Chairman of the Committee shall receive compensation at the rate prescribed for level V of the Executive Schedule by section 5316 of title 5, United States Code.

(3) The Chairman of the Committee shall designate one of the other Committee members to serve as acting Chairman during the absence or disability of the Chairman.

(d) The Committee shall meet at least quarterly during each year.

SEC. 3. (a) The Committee shall have the following functions:

(1) to advise Federal departments and agencies regarding appropriate action to be taken to help assure that Federal programs are providing the assistance needed by Spanish-surnamed Americans; and

(2) to advise Federal departments and agencies on the development and implementation of comprehensive and coordinated policies, plans, and programs focusing on the

special problems and needs of Spanish-speaking and Spanish-surnamed Americans, and on priorities thereunder.

(b) In carrying out its functions, the Committee may foster such surveys, studies, research, and demonstration and technical assistance projects, establish such relationships with State and local governments and the private sector, and promote such participation of State and local governments and the private sector as may be appropriate to identify and assist in solving the special problems of Spanish-speaking and Spanish-surnamed Americans.

SEC. 4. (a) The Committee is authorized to prescribe rules and regulations as may be necessary to carry out the provisions of this Act.

(b) The Committee shall consult with and coordinate its activities with appropriate Federal departments and agencies and shall utilize the facilities and resources of such departments and agencies to the maximum extent possible in carrying out its functions.

(c) The Committee is authorized in carrying out its functions to enter into agreements with Federal departments and agencies as appropriate.

SEC. 5. The Committee is authorized to request directly from any Federal department or agency any information it deems necessary to carry out its functions under this Act, and to utilize the services and facilities of such department or agency; and each Federal department or agency is authorized to furnish such information, services, and facilities to the Committee upon request of the Chairman to the extent permitted by law and within the limits of available funds.

SEC. 6. (a) The Chairman shall appoint and fix the compensation of such personnel as may be necessary to carry out the functions of the Committee and may obtain the services of experts and consultants in accordance with section 3109 of title 5, United States Code, at rates for individuals not in excess of the daily equivalent paid for positions under GS-18 of the General Schedule under section 5332 of such title.

(b) Federal departments and agencies, in their discretion, may detail to temporary duty with the Committee such personnel as the Chairman may request for carrying out the functions of the Committee, each such detail to be without loss of seniority, pay, or other employee status.

SEC. 7. (a) There is established an Advisory Council on Spanish-Speaking Americans (hereinafter referred to as the Advisory Council) composed of nine members appointed by the President from among individuals who are representative of the Mexican American, Puerto Rican American, Cuban American and other elements of the Spanish-speaking and Spanish-surnamed community in the United States. In making such appointments the President shall give due consideration to any recommendations submitted by the Committee.

(b) The Advisory Council shall advise the Committee with respect to such matters as the Chairman of the Committee may request. The President shall designate the Chairman and Vice Chairman of the Advisory Council. The Advisory Council is authorized to—

(1) appoint and fix the compensation of such personnel, and

(2) obtain the services of such experts and consultants in accordance with section 3109 of title 5, at rates for individuals not in excess of the daily equivalent paid for positions under GS-18 of the General Schedule under section 5302 of such title, as may be necessary to carry out its functions.

(c) Each member of the Advisory Council who is appointed from private life shall receive \$100 a day (including traveltime) for each day during which he is engaged in the actual performance of his duties as a

member of the Council. A member of the Council who is an officer or employee of the Federal Government shall serve without additional compensation. All members of the Council shall be reimbursed for travel, subsistence, and other necessary expenses incurred by them in the performance of such duties.

SEC. 8. Nothing in this legislation shall be construed to restrict or infringe upon the authority of any Federal department or agency.

SEC. 9. There are hereby authorized to be appropriated such sums as may be necessary to carry out the provisions of this Act, and any funds heretofore made available for expenses of the Interagency Committee on Mexican-American Affairs established by the President's memorandum of June 9, 1967, shall be available for the purposes of this Act.

SEC. 10. The Committee shall, as soon as practicable, after the end of each fiscal year, submit a report to the President and the Congress of its activities for the preceding year, including in such report any recommendations the Committee deems appropriate to accomplish the purposes of this Act.

MR. MONTROYA. Mr. President, I am greatly pleased to be the prime sponsor of this measure to establish legislatively the Cabinet Committee on Opportunities for Spanish-Speaking People. Enactment of this measure, Mr. President, I predict, will mark the turning point for all Spanish-speaking people of this Nation as they continue their quest for full equality of opportunity. Mr. President, the Senate today is indeed approving a landmark measure.

I will not dwell long, Mr. President, on the need for this legislation. I think the need for it has been clearly recognized by a majority of the Members of this body. I have been joined by 38 of my colleagues in sponsoring this proposal, both Republicans and Democrats. That in itself is testimony sufficient. The hearings held by the Subcommittee on Executive Reorganization of the Senate Government Operations Committee went into the problems confronting Spanish-speaking Americans in great depth for the first time in history. The measure was reported out unanimously by the subcommittee and has been reported out unanimously by the full committee.

Spanish-speaking Americans throughout this Nation can well find much to rejoice over, knowing that the U.S. Congress is finally taking heed, taking notice of their special and specific problems. Spanish-speaking Americans everywhere can look at the present economic and social status of their community as a whole and look forward to the day when things will improve.

Mr. President, the Spanish-speaking people of this Nation should be commended and I do commend them. They have been patient. They have been silent. They have been proud. Even though they rank at the bottom of the totem pole in education, in employment, in health, in housing, and in every other social and economic facet of life, they have been patient. Their patience is running out, however, and we are seeing small militant groups attempting to be rabble rousers and stir up dissension. Fortunately, Mr. President, we are today holding out a second alternative. We are saying to the Spanish-speaking Americans,

"Do not despair. We have neglected to act to meet your problems in the past, but we recognize our mistakes and are moving now to rectify it." Mr. President, by enacting this bill today, we are providing the machinery within the highest chambers of the executive branch by which the Spanish-speaking of this Nation can make their needs and influence known.

I move quickly to caution, however, Mr. President, that this bill in and of itself will not change conditions for even one destitute Spanish American. This bill in and of itself will mean nothing if there is not a dedication, a full-fledged commitment on the part of the administration and on the part of us in Congress to see that its intent is carried out. We in Congress are providing the legislation and the funding. Now, I challenge the administration to put the full weight of the White House behind this new Cabinet-level committee so that the Spanish-American community can share in the American dream.

Mr. President, as the principal author of this measure, and the only U.S. Senator of Spanish heritage, I pledge to my people that I shall keep careful watch, that I shall keep careful surveillance over the activities of this new Cabinet-level committee to insure that it carries out its work in the dedicated spirit I know it is capable of.

In closing, Mr. President, I wish to pay tribute to Equal Employment Opportunity Commissioner Vicente Ximenes, who until this year served as Chairman of the Inter-Agency Committee on Mexican-American Affairs. It is Commissioner Ximenes' groundwork, his spadework which has made this legislation possible. It is his spadework which will make the job of his successor as Chairman, Mr. Martin Castillo, much easier. But so much yet needs to be done and we have hardly begun.

Mr. President, I ask unanimous consent to have printed in the RECORD at this point a listing of all 39 cosponsors. I will state for the RECORD, Mr. President, that the printed copy of the bill before us does not contain a complete listing of all the cosponsors and they should all receive due recognition.

There being no objection, the list was ordered to be printed in the RECORD, as follows:

Mr. Allen, Mr. Bayh, Mr. Bible, Mr. Brooke, Mr. Cannon, Mr. Church, Mr. Cranston, Mr. Dodd, Mr. Dominick.

Mr. Eagleton, Mr. Fannin, Mr. Goldwater, Mr. Goodell, Mr. Gurney, Mr. Harris, Mr. Hart, Mr. Hartke.

Mr. Hatfield, Mr. Hughes, Mr. Inouye, Mr. Jackson, Mr. Javits, Mr. Kennedy, Mr. Magnuson, Mr. McCarthy.

Mr. McClellan, Mr. McGee, Mr. Metcalf, Mr. Mondale, Mr. Moss, Mr. Murphy, Mr. Muskie, Mr. Nelson.

Mr. Packwood, Mr. Randolph, Mr. Sparkman, Mr. Stevens, Mr. Tower, Mr. Tydings, Mr. Yarborough.

Mr. MANSFIELD. Mr. President, the senior Senator from Texas (Mr. YARBOROUGH), is a prime sponsor of this measure which is designed to contribute immensely to the resolution of the problems faced by our many Spanish-speaking citizens. He certainly has been in the forefront of this highly important area.

It means so much to him. It means a great deal to the many Spanish-speaking people of his State.

Regrettably, Senator YARBOROUGH is necessarily absent from the Senate today but has prepared a splendid statement in support of this measure. I ask unanimous consent that his statement appear at this point in the RECORD.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

MR. YARBOROUGH. Mr. President, we have before us today for consideration S. 740 which represents a major step forward in solving the many social and economic problems which plague our Spanish-speaking citizens. This bill would replace the Interagency Committee on Mexican-American Affairs which was established by Executive Order by President Johnson in 1967 with a permanent Cabinet level committee entitled the Cabinet Committee on Opportunities for Spanish-Speaking People.

During its three year history, the Interagency Committee on Mexican-American Affairs has contributed greatly to improving the lives of the people who comprise our second largest minority group. However, this Committee is in danger of going out of existence unless Congress takes prompt action on S. 740.

The primary functions of the new committee created by S. 740 would be to advise the Federal department and agencies of what action should be taken to assure that Federal programs are serving the needs of Spanish-speaking Americans and to develop new programs and policies that would substantially benefit these underprivileged people.

I believe that the importance of this bill cannot be emphasized too strongly. It represents a significant effort on the part of Congress to bridge the gap that exists between our Spanish-speaking citizens and the more affluent elements of our society. Because I believe so deeply in the purpose for this Committee, I am proud to be a co-sponsor of S. 740 and I urge all of my colleagues to give this measure their support.

MR. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-422), explaining the purposes of the measure.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE

S. 740, as amended, is designed (1) to insure that Federal programs are reaching and providing the necessary assistance for all Spanish-speaking and Spanish-surnamed Americans, including Mexican, Puerto Rican, and Cuban Americans; (2) to provide for the development of new programs which may be necessary to meet the problems which are unique to such persons; and (3) to give impetus to an integrated, Government-wide effort of assistance to such groups by providing for the establishment by law of a permanent body—the Cabinet Committee on Opportunities for Spanish-Speaking People—to replace the Interagency Committee on Mexican-American Affairs, established by Presidential memorandum in 1967.

The principal functions of the proposed Cabinet Committee would be to advise Federal departments and agencies regarding (1) appropriate action to be taken to assure that Federal programs are providing the assistance required by such Spanish Americans, and (2) the development and implementation of comprehensive and coordinated policies, plans, and programs focusing on the special problems and needs of the Spanish-American community. In connection there-

with, the Committee would be authorized to foster such surveys, studies, research and demonstration, and technical assistance projects and establish and promote such relationships with and participation by State and local governments and the private sector as may be appropriate to identify and assist in solving the special problems of the people concerned. The Committee would be required to meet at least quarterly each year and to submit to the President and the Congress an annual report of its activities during the preceding year, including appropriate recommendations.

The Committee would be composed of seven Cabinet members—the Secretaries of Agriculture, Commerce, HEW, HUD, Labor, Treasury, and the Attorney General—and the Director of the Office of Economic Opportunity; the Administrator of the Small Business Administration; the Chairman of the Civil Service Commission; the Commissioner of the Equal Employment Opportunity Commission most concerned with Spanish American Affairs; a full-time Chairman, appointed by the President, subject to Senate confirmation at level V, executive schedule (\$36,000), who would be barred from holding any other Federal office or position concurrently; and such other Federal officers as the President or the Chairman of the Committee may designate to serve at the pleasure of the designator.

The Committee would be further authorized to (1) prescribe appropriate rules and regulations; (2) consult, and coordinate its activities, with appropriate Federal departments and agencies, enter into agreements with them, and utilize their facilities and resources; and (3) acquire directly from any such Federal agencies information which it deems necessary to carry out its functions and utilize their services and facilities; and all such agencies would be authorized to furnish such information, services or facilities to the Committee, upon the request of its Chairman, to the extent permitted by law and available funds.

In addition, S. 740 would (1) authorize the Chairman of the Committee to appoint and fix the compensation of necessary personnel and procure the services of experts and consultants at rates not in excess of the daily equivalent paid for positions under GS-18, General Schedule; (2) authorize Federal departments and agencies, in their discretion, to provide the Committee with such temporary personnel as its Chairman may request; (3) authorize the appropriation of sums necessary to carry out the provisions of the act as well as any funds heretofore made available for expenses of the Interagency Committee on Mexican-American Affairs; and (4) provide that nothing contained therein shall be construed to restrict or infringe upon the authority of any Federal department or agency.

Finally, the bill, as amended, would establish an Advisory Council on Spanish-Speaking Americans, composed of nine Presidentially appointed members chosen from among representatives of various elements of the Spanish American community. The Council's Chairman and Vice Chairman would be designated by the President and its principal function would be to advise the Cabinet Committee with respect to such matters as the Chairman of the Committee may request.

BACKGROUND

According to testimony presented to the committee during hearings on S. 740, there are approximately 10 million Spanish-speaking and Spanish-surnamed Americans in the United States, of whom six and a half million reside in the Southwestern States of Arizona, California, Colorado, New Mexico, and Texas. Nearly 80 percent of these persons work in unskilled or semiskilled jobs; nearly 50 percent of all Spanish-speaking families fall below the poverty line of \$3,200 annual

income; most of them barely complete the eighth grade and many are functionally illiterate; and they own less than 1 percent of the businesses in the United States.

Establishment of committee

In an effort to improve the social and economic plight of these Spanish-speaking and Spanish-surnamed Americans, President Lyndon B. Johnson, by Presidential memorandum dated June 9, 1967, established a Cabinet Committee, designated as the Interagency Committee on Mexican-American Affairs. Noting that the time had come to focus our efforts more intensely on the Mexican Americans of our Nation, the President stated that the purpose of the Committee was "to assure that Federal programs are reaching the Mexican Americans and providing the assistance they need; and [to] seek out new programs that may be necessary to handle problems that are unique to the Mexican American community." He stated further that he was also asking members of the Committee "to meet with Mexican Americans, to review their problems and to hear from them what their needs are, and how the Federal Government can best work with State and local governments, with private industry, and with the Mexican Americans themselves in solving those problems."

Initially, the President appointed to the Committee the Secretaries of Agriculture, HEW; HUD; and Labor; the Director of the Office of Economic Opportunity; and a member of the Equal Employment Opportunity Commission, familiar with Mexican American problems, who was appointed Chairman. The Secretary of Commerce was subsequently added to the Committee. The Committee was funded by contributions from its member agencies. The approved level of spending for fiscal year 1969 was \$485,000 and for fiscal year 1970, \$510,000.

Committee's activities, 1967-69

In general, the Interagency Committee has served as the central liaison point between the Spanish-speaking and Spanish-surnamed communities and the Federal Government. Its principal activities during the past 2 years may be summarized as follows:

1. Providing technical assistance to Federal agencies which have either grant-in-aid or direct programs of significance to the community so that these programs will match the real needs of the community;
2. Providing technical assistance to community organizations seeking program assistance from the Federal Government;
3. As the occasion demands, matching the needs of the community with both private and public resources outside the community;
4. Providing research and statistical assistance to Federal agencies serving as a clearinghouse for the agencies and the community with respect to developments in this field;
5. Alerting Federal agencies to the largely untapped personnel resources of the community and supplying placement assistance; and
6. Assisting Federal agencies in the communications field so that the Government can, in a meaningful way, let the community know what services are available.

HEARINGS

Hearings on S. 740 were held by the Subcommittee on Executive Reorganization on June 11 and 12, 1969. Testimony was received from Senators Joseph M. Montoya, Ralph W. Yarborough, and Barry M. Goldwater; Vincent T. Ximenes, Commissioner, Equal Employment Opportunity Commission and former Chairman, Interagency Committee on Mexican-American Affairs; and Manuel Diaz, Jr., deputy commissioner, Manpower and Career Development Agency, Human Resources Administration, city of New York. Statements were submitted for the record by Senator Lee Metcalf, George Murphy, Ed-

mund S. Muskie, John G. Tower, and other interested parties. All of the witnesses, as well as the executive branch agencies from which reports were requested, supported the bill and recommended its enactment. (Agency comments have been incorporated into the hearing record as exhibit No. 11.)

In general, the testimony presented consisted of (1) detailed information, supported by statistical data and studies, depicting the plight of some 10 million Spanish-speaking and Spanish-surnamed Americans relative to education, employment, housing, and income; (2) a review of the work and accomplishment of the interagency committee since its inception; and (3) a discussion of the necessity for the establishment of a resources committee to handle these problems.

Senators Montoya and Goldwater discussed several amendments which they felt were necessary to enable the proposed Committee to function effectively. These amendments are discussed below.

EXPLANATION OF AMENDMENTS

The committee adopted a number of amendments which incorporated recommendations of Senators Montoya, Goldwater, and other witnesses during the hearings on the bill. In general, they were designed to clarify the scope and coverage of the measure, give broader representation to all elements of the Spanish-American community, and strengthen the organization and operation of the Cabinet Committee.

S. 740, as introduced, referred only to Spanish-Americans and Spanish-surnamed Americans. In order to eliminate confusion and misunderstanding the bill was amended to indicate clearly that the new agency would be concerned with the problems of Mexican, Puerto Rican, Cuban, and all other Spanish-speaking and Spanish-surnamed Americans.

S. 740, as introduced, retained the existing name of the Interagency Committee on Mexican-American Affairs. The committee found that the existing agency was serving the needs of all Spanish Americans and had never limited its activities to Mexican Americans. Knowledgeable witnesses advised the committee that the existing name was confusing and that many Spanish Americans who are not of Mexican extraction felt that the body was not concerned with them or their problems. Accordingly, the committee adopted an amendment changing the name of the Committee from "Interagency Committee on Mexican-American Affairs" to "Cabinet Committee on Opportunities for Spanish-Speaking People."

Testimony at the hearings indicated that although Federal employment was an important factor in improving the economic conditions of Spanish Americans, the Federal Government employs only a relatively small number. In order to focus greater attention on this aspect, the committee adopted an amendment making the Chairman of the U.S. Civil Service Commission a member of the proposed Cabinet Committee.

S. 740, as introduced, provided that the Chairman of the Committee would be the Commissioner of the Equal Employment Opportunity Commission most concerned with Mexican-American affairs. In order to give status to the Chairman and insure his independence and fulltime attention to his responsibilities, the committee adopted an amendment (1) providing for the appointment of the Chairman by the President, subject to Senate confirmation, from among individuals who are recognized for their knowledge of and familiarity with the special problems and needs of the Spanish speaking; (2) prohibiting the Chairman from holding any other Federal office or position; and (3) requiring that he serve as chief officer of the Committee in a full-time capacity.

Testimony during the hearings revealed that the existing Committee met three times

in 1967 and only twice in 1968. In view of the importance of the work and responsibilities of the Committee relative to some 10 million Americans, it was felt that a minimum of four meetings each year should be required and the committee adopted an amendment to that effect. In this connection, Senator Montoya, the sponsor of the bill, stressed the fact that this should not be interpreted as a maximum limitation or as a guideline with respect to the number of meetings each year. In general, it was felt that this should represent a bare minimum and that meetings should occur as often as necessary.

Expressing agreement with witnesses who testified that representation of Spanish-speaking Americans throughout the Nation should be broader than that which can be achieved through membership on the Cabinet Committee, the committee adopted an amendment establishing an Advisory Council on Spanish-Speaking Americans. This Council would be composed of nine members appointed by the President from among individuals who are representative of the Mexican American, Puerto Rican American, Cuban American, and other elements of the Spanish-speaking and Spanish-surnamed community in the United States, which would advise the Cabinet Committee with respect to such matters as the Committee Chairman may request.

Mr. JAVITS. Mr. President, will the Senator yield?

Mr. MANSFIELD. I yield.

Mr. JAVITS. Mr. President, before the bill is passed, I wish to ask the Senator a question. It is a fact that the bill does now include Puerto Rico; is that right?

Mr. MONTOYA. Yes; the bill includes all Spanish-speaking Americans.

Mr. JAVITS. I thank the Senator. I think the Senator was very sensible and statesmanlike in his willingness to make that inclusion.

Mr. MONTOYA. Mr. President, I wish to express my thanks to the Senator from New York, to the Senator from Connecticut who headed the subcommittee hearings, and the membership of the Committee on Government Operations, including the distinguished chairman of that committee, the Senator from Arkansas (Mr. McCLELLAN), whose committee reported the resolution unanimously. I also commend the Members on the other side who gave this resolution bipartisan support and joined me in sponsoring the resolution.

Mr. JAVITS. I thank the Senator.

Mr. TOWER. Mr. President, will the Senator yield?

Mr. MANSFIELD. I yield.

Mr. TOWER. Mr. President, I commend the Senator from New Mexico. I think this is a tremendously constructive step. My State, as does his State, share the border with Mexico. We have many Mexican-American people in our respective States and the longest international border of any State. I want to add my commendation, among the many others, to the Senator from New Mexico.

Mr. MONTOYA. I thank the Senator from Texas.

The PRESIDING OFFICER. Without objection, the amendment is agreed to. The question is on the engrossment and third reading of the bill.

The bill was ordered to be engrossed for a third reading, was read the third time, and passed.

The title was amended, so as to read:

"A bill to establish the Cabinet Committee on Opportunities for Spanish-Speaking People, and for other purposes."

Mr. MANSFIELD. Mr. President, I move that the vote by which the bill was passed be reconsidered.

Mr. MONTOYA. Mr. President, I move that the motion to reconsider be laid on the table.

The motion to lay on the table was agreed to.

C-5A OPPONENTS WIN BELATED VICTORY—FIFTH SQUADRON FUNDS CUT

Mr. PROXMIRE. Mr. President, during debate on the military authorization bill, and especially the C-5A amendment which I proposed, it became clear that the bill included funds not only for the fourth squadron of the C-5A but also \$52 million in long leadtime items for the fifth squadron. In other words, not only was there money for planes 59 through 81, but long leadtime funds were included for planes 82 through 101, or 20 more planes.

MONEY FOR FIFTH SQUADRON DETECTED

When I discovered this fact, shortly before the vote on my amendment on September 9th, I drafted a substitute amendment which would have knocked out the \$52 million and limited the authorization of funds solely to the fourth squadron. I presented that amendment to the chairman of the committee, the Senator from Mississippi (Mr. STENNIS), who seemed favorably inclined toward it. He took it up with various members of his committee, many of whom favored it, as a possible substitute for the amendment I had pending.

PENTAGON OPPOSED CUTTING \$52 MILLION

However, even though there was general sympathy and general approval of it, the Defense Department at that time said they could not accept it. As a consequence I did not offer it formally on the grounds that if the amendment lost it would give the appearance that the Senate had clearly authorized the fifth squadron. I felt it would be easier to stop the fifth squadron of the plane without a vote rather than to have a vote and lose it. With vigorous Pentagon opposition, that also appeared to be its fate. This would have strengthened the Air Force's later arguments that the Senate had made an affirmative decision in favor of the fifth squadron.

After the vote, in which the Pentagon pulled out all the stops to authorize the fourth squadron of the C-5A, I felt that the amendment could not pass if the Pentagon continued in its opposition.

PENTAGON SUPPORTS OUR POSITION

Now, however, 15 days after the Pentagon refused to support my proposal to cut the \$52 million in long leadtime funds for the fifth squadron of the C-5A, the Pentagon has reversed its field. In the report in today's Washington Post of the House Armed Services Committee's action yesterday on that same military authorization bill, I read the following:

In a surprise announcement (Chairman Mendel) Rivers told committee members in

executive session that the Pentagon had decided it did not need the \$52 million requested to buy hardware for a fifth squadron of C-5A's.

Rivers, according to committee sources, said that David Packard, Deputy Secretary of Defense, had just told him about the change of position on the C-5A.

However, it was not clear last night even to congressmen who attended the committee session whether Packard was merely postponing the money request or settling for the four squadrons totaling 81 planes rather than the original goal of 120 C-5A's.

PENTAGON FLIP-FLOP WELCOMED

Mr. President, whether this is a temporary or permanent decision it represents a great victory for the American people and the American taxpayer. If the amendment prevails in the House and in conference, as it should, at least the Air Force will have to come back to Congress in order to get further authorization. From the temper of most members of the Senate Armed Services Committee, as expressed to me, I believe that a fifth wing would not be approved. Certainly, it should not be approved.

By cutting out this \$52 million and stopping the fifth squadron, about \$1 billion will be saved for the American taxpayer.

I only wish the Pentagon had been willing to take this step 2 weeks ago. But it does represent a change and a change which many of us have pressed very hard to obtain.

FIGHT WILL CONTINUE

I serve notice that this Senator will continue to fight against any additional squadrons for the C-5A. Our group who fought for a second look at the C-5A and other weapons have been vindicated with this shift, however reluctant it may have been, at the Pentagon.

Mr. President, I ask unanimous consent to have printed in the RECORD the article to which I have referred.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

RIVERS ADDS BILLION IN BILL FOR SHIPS (By George C. Wilson)

Chairman L. Mendel Rivers (D-S.C.) of the House Armed Services Committee yesterday added \$1 billion to the military procurement bill to enable the Navy to authorize more ships in Fiscal 1970.

The addition was made over the protests of a handful of congressmen on the committee who also lost in several other attempts to curb military projects, including the anti-ballistic-missile defense and the C-5A transport.

In a surprise announcement, Rivers told committee members in executive session that the Pentagon had decided it did not need the \$52 million requested to buy hardware for a fifth squadron of C-5A's.

Rivers, according to committee sources, said that David Packard, Deputy Secretary of Defense, had just told him about the change of position on the C-5A.

However, it was not clear last night even to congressmen who attended the committee session whether Packard was merely postponing the money request or settling for the four squadrons totaling 81 planes rather than the original goal of 120 C-5A's.

But the very fact that Packard was willing to forgo the \$52 million for the C-5A was seen by critics of the program as strengthen-

ing their argument that the full force of 120 planes was not urgently needed.

Adding to the controversy, Rivers reportedly told his colleagues that the Pentagon now wanted the \$52 million to go for a Freedom Fighter that the United States could sell abroad in competition with French planes.

Rep. Robert L. Leggett (D-Calif.) rebelled, figuring the money would go into Rivers' effort to help the Northrop Corp. build and market an overseas version of its F-5.

Rivers, without any request from the Pentagon, early this year added money to the Fiscal 1969 Pentagon authorization to help Northrop tool up for the export model of the F-5. But the Senate did not go along.

Leggett confirmed last night that he tried to strike out \$36 million of the \$52 million now headed for the Freedom Fighter program. He said he lost on a voice vote.

According to the explanation Leggett said he received about the Pentagon request, the \$52 million would not necessarily go to Northrop. But Rivers had made clear his previous action had Northrop's plane in mind.

Packard figured in another action by Rivers yesterday. The committee's draft bill—still labeled confidential—would abolish the Pentagon's Office of Systems Analysis—headquarters for the civilian Whiz Kids who have been challenging the military since the days of former Defense Secretary Robert S. McNamara.

But Rivers according to committee sources, told his colleagues that Packard had promised to get the Whiz Kids "in hand." So the following section in the draft bill was deleted:

"The Office of Assistant Secretary of Defense for Systems Analysis is abolished. The functions heretofore performed by this office are transferred to the office of the Deputy Secretary of Defense, who shall allocate such functions within the department . . . to assure that the views of civilian and military personnel are given equal consideration."

Rivers long has disapproved of the Whiz Kids. Their proposal earlier this year to sink 10 of the oldest Polaris submarines to save money sent him into a rage.

Another sore spot with Rivers and one of his staunch allies on the committee, Rep. F. Edward Hébert (D-La.), is the refusal of some colleges and universities to cooperate with the military on recruiting and ROTC.

A section in their draft bill would require the Pentagon to notify Congress 60 days in advance of awarding any research money to educational institutions about "the record of the school, college or university with regard to cooperation on military matters . . ."

Hébert said last night that his committee "will not tolerate any weakening of the ROTC program on campus." He said the ROTC units should "stand as Gibaltars of strength against the minority which is attempting to downgrade the military and destroy our constitution and the nation."

While the military critics on the committee lost in most of their battles with Rivers, there was agreement between the hawks and doves on the need to reduce military manpower.

The House bill would cut the number of men in uniform to 3,285,000 by July 1, 1970, compared with about 3.5 million now, a reduction of 176,000 men. The Senate-passed procurement bill sets the ceiling at 3,461,000 but states it must be reduced by the number of troops withdrawn from Vietnam.

Rep. Lucien N. Nedzi (D. Mich.), one of the rebels on the House Armed Services Committee, said he and his allies mustered between

four and eight votes on their amendment offered in committee yesterday.

The highest number of dissenting votes, eight, was cast for the amendment to strike \$584 million for the ABM (anti-ballistic-missile) from the bill. The entire bill, to go before the House Rules Committee on Tuesday, was passed in committee by a 36 to 3 vote.

It is unusual for the House Armed Services Committee to split on the whole procurement bill. Voting against it were Nedzi, Reps. Otis G. Pike (D-N.Y.) and Rep. Charles W. Whalen Jr. (R-Ohio).

In contrast with the lengthy debate in the Senate, on the \$20 billion procurement bills the House is expected to dispose of its version next week when amendments beaten down in committee will be offered again. Only three hours of debate will be requested for the bill, with amendments granted additional time.

Mr. TOWER. Mr. President, will the Senator from Wisconsin yield?

Mr. PROXMIRE. I yield.

Mr. TOWER. I think probably the acceptance of the reduction by the Department of Defense results from the desire to make some necessary or what it considers to be necessary economies in the Department, by virtue of the current fiscal and monetary fix we find ourselves in, rather than any diminution of need for the carrying capability that an additional squadron of C-5A's will give us.

Mr. PROXMIRE. I thank the Senator from Texas. Of course, it is possible for the Secretary of Defense and the Under Secretary of Defense to withhold these funds if they wish to do so, rather than tell the Armed Services Committee in the other body that they could delete the funds and that the advanced funds for the fifth squadron of C-5A's would not be necessary.

OFFERING FOR SALE OF U.S. ARMS BY SOUTH VIETNAM

Mr. PROXMIRE. Mr. President, the charge that South Vietnam is offering for sale arms obtained from the United States is most serious and requires an immediate investigation.

It would be an outrage to the taxpayer if U.S. arms intended to be used against the Vietcong are instead being sold by the South Vietnamese.

I am informed that the South Vietnam Embassy in Washington has confirmed the fact that these sales are occurring.

My understanding is that the arms offered to private arms dealers include over 5,000 M-16 rifles, as well as grenade launchers, Browning automatic rifles, submachineguns, and pistols.

The M-16 is our latest rifle and in the recent past we have had shortages and difficulty in getting them into the hands of our own troops.

I also understand that under an agreement between South Vietnam and the United States all surplus arms in the hands of the South Vietnamese army which were originally provided by the United States are to be turned over to self-defense units in the South Vietnamese hamlets. If, instead, they are being sold on the international arms market,

there may be a serious violation of our agreement.

I have today requested the State Department and the Pentagon to confirm the charge that has been made and to make an immediate and full investigation of the facts.

The American people are entitled to know whether its tax dollars are being used to provide arms to a government which is selling those same arms on the open market.

What are the names of the private arms dealers involved in these sales and from what countries do they come?

How many sales have occurred so far?

What assurance is there that once the sales are made the arms will not turn up in the hands of the Vietcong, or of extremist groups in the United States?

What is the nature of the agreement between the government of South Vietnam and ourselves with respect to the disposition of arms which we provide to them?

Has any U.S. official checked to determine the condition of the weapons being sold? What are their condition?

If the arms have been declared surplus, could they be reconditioned and put back into use?

If they could not be used again as weapons, why would arms dealers be interested in purchasing them?

These are some of the questions that need to be answered. I hope a comprehensive report will be made by the Pentagon and the State Department at the earliest possible time.

RELIGIOUS GROUPS STRONGLY SUPPORT SENATE RATIFICATION OF THE HUMAN RIGHTS CONVENTION

Mr. PROXMIRE, Mr. President, as an advocate of Senate ratification of the Human Rights Conventions on Forced Labor, Genocide, and Political Rights of Women, I am deeply grateful for the invaluable support in behalf of ratification provided by American churches and religious organizations.

Among the American religious organizations which have worked long and hard for Senate ratification of these conventions are B'nai B'rith, the Episcopal Church, United Church of Christ, Unitarian-Universalist Association, National Council of Churches of Christ in the U.S.A., National Catholic Conference for Interracial Justice, General Board of Christian Social Concerns, the Methodist Church, American Friends Service Committee, National Conference of Christians and Jews, National Spiritual Assembly of the Bahai's of the United States, Catholic Association for International Peace, American Baptist Convention, American Jewish Congress, and Hadassah.

What a remarkable ecumenical display.

These groups with literally millions of members share one basic tenet—a belief in and a dedication to the real dignity of man.

I urge the Senate to heed the wise message of these millions of men and women of good will.

I also urge the Senate to ratify the Human Rights Conventions on forced Labor, Genocide, and Political Rights of Women, and thereby put the United States squarely on record on the fundamental question of human dignity.

FEDERAL COAL MINE HEALTH AND SAFETY ACT OF 1969

The Senate resumed the consideration of the bill (S. 2917) to improve the health and safety conditions of persons working in the coal mining industry of the United States.

Mr. WILLIAMS of New Jersey, Mr. President, today, the Senate begins consideration of S. 2917, a bill to require urgently-needed improvements in health and safety at all coal mines in the United States. S. 2917 is legislation which, perhaps, should be known as a bill to reduce the cost of coal; not the cost in dollars and cents to the corporate operators of our coal mines, but the infinitely greater cost that does not appear on profit and loss records; the cost in human pain and suffering to our Nation's coal miners and to their families.

Ever since the Civil War, the Nation has witnessed the annual slaughter, in our coal mines, Countless Americans have burned in their memories the picture of the long-suffering coal miner's wife and family waiting at the portal of a Farmington, W. Va., mine last November 20, for the husband or father, son or brother to walk out of the mine or be carried out of it after a series of explosions. For 78 miners, they are still waiting.

Periodically, in the past 100 years, the Nation has responded to mine disasters with legislation, but the legislation has always been too timid and ineffective. Such legislation has frequently left more undone than has done.

In 1910, after a series of disasters, Congress created the U.S. Bureau of Mines, but deprived the Bureau of authority to make inspections.

Another series of disasters prior to the second World War prompted the enactment of the first Federal Coal Mine Safety Act in 1941. This act authorized inspections, but deprived the Bureau of authority to establish even the most rudimentary safety standards and enforcement powers.

During the Korean war, after one explosion had snuffed out the lives of 119 miners just 4 days before Christmas 1951, Congress enacted the 1952 Federal Coal Mine Safety Act which President Truman called "a sham." As he noted, on signing the bill, it exempted from compliance all mines employing 15 persons or less; it left prevention of a broad area of accidents to the States, despite the recognized inability of the States to fulfill that responsibility; it included exemptions worded in such a way as to permit unsafe conditions and practices to continue for years—indeed, in many

instances they still continue; and its complex procedural provisions led the President to conclude:

It could be exceedingly difficult, if not impossible, to carry out an effective enforcement program.

In 1966, the act was amended to provide limited coverage for miners in small mines, responding in part to one of President Truman's objections.

President Truman, however, was, indeed, prophetic. For, from 1952 through 1968, there have been nearly 5,000 miners killed, and 200,000 injured in underground coal mines of the United States, despite the passage of the 1952 act. During 1968, the Nation's underground coal miners produced about 350 million tons of coal, resulting in the death of 311 miners, or about one miner for every one million tons of production.

In the early morning of one bleak day last November, a series of explosions rocked Consolidation Coal Co.'s No. 9 mine at Farmington, W. Va., killing 78 miners.

Often described as the size of Manhattan Island, this mine was finally sealed 2 days after Thanksgiving Day. As we debate this bill today, men are risking their lives in an attempt to reopen this mine, recover the dead, and ascertain the cause of this tragedy.

Many of our miners who are lucky enough to escape the violence that has plagued the Nation's mines for years, are subject to another peril which often causes total disability or death. They pay the price of having to work in an atmosphere often saturated with coal dust, which is inhaled daily into their lungs, causing respiratory disability and later death, sometimes by cardiac failure. The press and others refer to this disease as "black lung." The doctors call it coal workers' pneumoconiosis. Whatever it is called, the fact is that the Surgeon General estimates that over 100,000 active and retired miners are afflicted with it.

Thus, the sudden violence of Farmington, and the slower, and often equally deadly, effects of black lung are the catalysts that have caused the public in general, and the miners in particular, to demand Federal action to eliminate the causes of this violence and disease, and to reduce the death and injury rate for this industry—a death and injury rate which is several times as high as the average for all other industries.

Indeed, this industry's record was described by Secretary Udall last December as "disgraceful."

The urgency of this action is dramatically and forcefully underscored by the near tragedy of just this week at another Consolidation Coal Mine in Fairview, W. Va., only 2 or 3 miles from the ill-fated Farmington mine.

At 5 a.m., while 116 men were underground, a mine fire started and got out of hand, requiring that the section be sealed. All escaped, fortunately. But the accident demonstrates the urgent need for this legislation.

Mr. President, S. 2917—the Federal

Coal Mine Health and Safety Act of 1969—is the first of a series of actions that must be taken if this demand is to be met. It is aimed at reducing and ultimately eliminating the excessively high price paid to produce coal each day, not by the industry, not by the consumer, but exclusively by the miner—the most valuable resource of this industry—and by his family.

The bill is the culmination of long and arduous work by members of the Labor Subcommittee and the full Labor and Public Welfare Committee, beginning with 9 days of public hearings and ending with 13 days of executive sessions, as well as untold hours of staff work. The issues involved were complex. The subject matter was extremely technical. The terminology used is unique to this industry.

Yet, despite this, with the able guidance of those Senators who represent the major coal producing States and who have a first-hand knowledge of this industry, with the remarkable diligence displayed by all members of the committee, the committee was able to develop and report out unanimously the most comprehensive coal mine health and safety bill ever to be considered by this body.

All of the members of the committee deserve a special word of gratitude for their tireless efforts.

I also wish, Mr. President, to express my gratitude to the senior Senator from Kentucky (Mr. COOPER), who, though not a member of our committee, accepted my invitation to meet with the subcommittee during its executive deliberations. He made a number of suggestions, several of which were adopted by the committee, and, in my judgment, helped to improve the legislation greatly.

Just last December, the chairman of the National Coal Association and president of Consolidation Coal Co. publicly stated:

There can be no question that the health and safety of employees in the coal mining industry must be given first priority.

Later, in March of this year, the president of that association assured the subcommittee, stating:

The industry does not believe profits should be put ahead of the health and safety of mineworkers.

I certainly concur with both of these statements. But to achieve these admirable industrial goals, the industry must make major changes in its health and safety practices. For, as the Department of the Interior stated:

While the coal mining industry has made giant strides in its ability to extract the natural resource coal from the depths of the earth, it has lagged behind other industries in protecting its most valuable resource—the miner.

The purpose of S. 2917 is to insure that both the industry and the Government do, in fact, give first priority to the health and safety of the miner; to insure an end to the annual carnage in our Nation's coal mines; and to insure that new generations of coal miners are not ravaged by black lung.

The evidence is unmistakable that the miners themselves are no longer willing to accept the fatalistic attitude still prevalent in this industry—the attitude which almost accepts with a shrug of the shoulders the proposition that “mining is a hazardous occupation.” They know that coal mining need not be so hazardous if only the operators and the Government will place as high a priority on the health and safety of the miner as is placed on economics.

That is what this bill is about. It recognizes that voluntarism in this industry which has been the byword of the past 17 years is not enough.

This bill provides the tools for better health and safety. The bill, however effective it may be, will never achieve adequate health and safety for the miner unless the Department of the Interior acquires new perspective and focus concerning the importance of the miner and unless there is strong and vigorous administration by the Department.

This Federal Coal Mine Health and Safety Act of 1969 makes an across-the-board comprehensive attack on both the safety and health problems. It not only corrects the deficiencies in the 1952 act, it accounts for all we have learned since 1952, and provides for the development and implementation of safeguards against hazards which may develop in the future. For the first time, it covers the health of the miner; covers surface, as well as underground coal mines; authorizes health and safety standards by regulation, not just by statute, and permits administrative change of the standards in the bill to improve health and safety; establishes an extensive array of interim mandatory health and safety standards; provides for injunctions and civil and criminal penalties for violations; requires an expansion of the sadly deficient Bureau of Mines safety and health research program, and provides for a health and safety research trust fund; and expands the coverage of the law to afford protection against all accidents, not just those that kill five or more at one time, as the 1952 act provided.

At this point, I should like to discuss some of the major issues in this legislation and the provisions in the bill which deal with them.

1. CONTROL OF RESPIRABLE DUST

A new dimension has been added to the already known hazards of coal mining. The new hazard is not violent, it is not even visible, yet it embraces in its deadly arms over 100,000 of our Nation's miners—black lung.

What is black lung? I ask my colleagues to take volume IV of the hearing record, that thin 12-page volume on your desks. In figure 1 you have a photograph of an actual lung cross section. It is a healthy lung. It was taken, during an autopsy, from a 90-year-old schoolteacher. Now look at the next page—figure 2. That is a lung section from a 40-year-old miner. That is black lung. Or look at figures 7 and 8, or figure 12. That, too, is black lung.

Unlike the violent death that may result from a methane ignition, mine fire,

or other accident, black lung does not kill instantly. First, it causes many years of painful breathlessness before ultimate death—or—it causes heart failure.

The disease is caused by respirable coal dust, and, although the industry and the Government have known about the disease and its cause for some time now, the United States is the only major coal-producing nation in the world which does not have an industrywide Government standard to control this dust. Great Britain has a standard. Poland, Czechoslovakia, and even the Soviet Union have standards. But not the United States.

It is clear that a properly enforced official standard for respirable coal dust would make a significant reduction in new cases of coal workers' pneumoconiosis, and hopefully reduce the rate of progression in miners who have already contracted the disease.

The Surgeon General, in testifying on this legislation, cautioned the committee that the ideal dust level, in terms of absolute prevention of the disease, would be a zero dust level. The ideal would be to prohibit any respirable coal dust in any coal mine. He recognized, however, that this is a goal which cannot be achieved immediately.

On the basis of all of the testimony before the committee, and the entire five-volume record now before the Senate, especially the recommendations of the Surgeon General, S. 2917 provides for a two-phased mandatory reduction of the respirable coal dust levels in all U.S. mines.

Six months after enactment the bill requires that each coal mine operator maintain the respirable coal dust at a level no greater than 3.0 milligrams per cubic meter of air. Then, 3 years after enactment, he must reduce the level to 2.0 milligrams.

The committee recognized that not all mines would be able to achieve these statutory levels within the time prescribed. Therefore, the bill provides a procedure under which operators may obtain permission to operate at a higher level for a limited period of time. During the 2½-year period when the statutory level is 3.0 milligrams, an operator who cannot achieve the level may be permitted to operate at not more than 4.5 milligrams. Then, when the statutory level drops to 2.0, an operator who cannot achieve this new level may be permitted to operate for an additional period of up to 3 years at a 3.0 level. At the end of the sixth year after enactment, all mines must achieve the 2.0 level.

In the event, however, that it is technologically impossible to achieve this 2.0 level within the time permitted, the Secretary of the Interior may extend the period during which operators may be permitted to operate at 3.0 by filing an extension plan with the Congress. If neither the House nor the Senate disapproves of the extension plan, the plan would become effective.

I believe in this debate we should discuss the deliberations that led us to these periods, which might seem very long, for adjustment to the levels that the statute

provides. It was a long deliberative process, and recognizing the problems that will be faced by industry in meeting our standards.

I note that my good friend, the senior Senator from Kentucky, is present in the Chamber. We went an unusual extra mile to be realistic and understand the problems that industry will face as we bring to the industry the requirement that it measures the air in terms of dust levels. Our objective is the elimination of this killing disease, pneumoconiosis, the so-called black lung.

The bill also directs the Surgeon General to establish, within 1 year, a health standard for application, as early as possible, which will insure that coal miners can work their entire adult lives in the mines without incurring black lung or any other occupationally caused disease.

Although the standards established by the bill will not in themselves completely prevent a miner from contracting pneumoconiosis, they will significantly reduce the probability that any given miner will be afflicted with the disease.

In addition to requiring reduced dust levels, the bill also provides for comprehensive medical examinations under the supervision of the Surgeon General, and for greatly expanded and intensified research by both the Government and the industry.

2. INTERIM SAFETY STANDARDS

To ward off the heavy toll of on-the-job fatalities and injuries, S. 2917 provides both a comprehensive set of interim safety standards and authority in the Secretary of the Interior to promulgate new and improved standards. The interim safety standards in the bill are directed at eliminating the extreme hazards of coal mining.

Specifically, the bill, which is applicable to all mines, includes provisions directed at the control of the roof falls which killed 99 miners last year. It requires improvements in ventilation to control methane; increased testing for methane; improvements in control of combustibles—such as loose coal—that propagate explosions; and broadened protection against potential dangers from the use of electrical equipment which killed 17 miners last year.

The bill contains provisions for the filing and updating of adequate mine maps and requires two adequately and clearly marked escapeways. The bill also requires for the first time, that mines be illuminated—a requirement which should eliminate many of the day-to-day accidents that occur.

3. ELIMINATION OF GASSY AND NONGASSY DISTINCTION

One of the major causes of deaths and injuries in the mines is the ignition or explosion of methane—a hazard that has killed over 1,100 miners and injured over 950 since 1941.

The bill requires greatly improved methods to prevent the accumulation of methane gas in explosive quantities. These include improved ventilation requirements, rock dusting requirements, and mine examinations.

In addition, the bill expands and improves measures in the 1952 act designed to eliminate the causes of methane ignition. These improved measures include prohibitions against smoking and the use of open flames, safer use of explosives, greater protection in the use of trailing cables, and the use of electric equipment in the face area of mines which meets ignition and explosion proofing standards.

Under the 1952 Federal Coal Mine Safety Act, as amended, special provisions permit the use of electric face equipment which is not arc or spark proof; that is, has not met the permissibility standards of the Bureau of Mines in mines that have never had an ignition or have never been found to have methane of more than 0.25 percent. These so-called nongassy mines have received special treatment under the premise of the 1952 act that a mine need not adopt special measures to control methane and prevent ignitions until there was "evidence of gas."

The Department of the Interior has consistently taken the position that all mines are potentially gassy. The committee, therefore, acting on the recommendation of the Department of the Interior, treated all mines alike in providing new and additional safeguards to control methane and prevent ignitions.

This decision is based on a conclusion that the only method of protecting all of the Nation's coal miners would be to treat all mines alike in preventing gas ignitions and explosions. In doing so, the committee provided that all low horsepower electric face equipment and large electric face equipment "grandfathered" under the 1952 act be arc and spark proof—that is, permissible, within 16 months after enactment. In addition, the committee provided that all large electric face equipment at the so-called nongassy mines must be permissible in this time frame, but, where the equipment is unavailable, an additional period of 32 months is allowed to convert.

The committee was impressed by the fact that although a substantial portion of the deaths and injuries caused by methane ignitions have occurred in gassy mines, the fact is that since 1941, 84 miners have been killed by methane ignitions in so-called nongassy mines—that is mines in which the law says there is not supposed to be any methane.

In fact, while the legislation was pending before the committee, five men were burned when a spark from a large piece of equipment in nonpermissible condition ignited methane in a so-called nongassy mine in West Virginia.

In short, the committee believed that it was not enough to tighten controls on gassy mines. The so-called nongassy mines also present a problem because ignitions occur there, too, as the record shows. Accordingly, the committee determined to meet both problems; yet, it recognized that more time is needed for the nongassy mines.

Mr. President, I ask unanimous consent that there be printed in the RECORD as exhibit 1 to my statement an analysis of the costs of this electrical equip-

ment section as prepared by the Department of Interior. I also include as part of exhibit 1 the investigations reports prepared by the Bureau of Mines of five ignitions in nongassy mines caused by nonpermissible large equipment or by large equipment in nonpermissible condition.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See exhibit 1.)

4. THE FEDERAL COAL MINE SAFETY ACT OF 1952

Mr. WILLIAMS of New Jersey. Mr. President, under the Federal Coal Mine Safety Act of 1952, there is a Coal Mine Safety Board of Review composed of two representatives of coal mine operators, two representatives of coal mine employees, and one public chairman—the most recent chairman having been a former vice president of a large coal company.

Both the outgoing and incoming administration bills, S. 355 and S. 1300, proposed that this Board continue in existence with veto power over the Secretary in enforcement actions.

In testifying on such a Board, which on its face appears to be an industry-oriented Board, or a special interest Board, the Director of the Bureau of Mines said that the Board was "an escape valve" for the industry. In the Board's own presentation before the subcommittee of the Committee on Appropriations, it referred to itself "essentially as a buffer between the U.S. Bureau of Mines, and the coal industry."

To put an "escape valve," "buffer" Board of this character over the Secretary would weaken any possibility for effective enforcement of a health and safety statute.

As noted by one of the most eminent professors of administrative practice and procedure, Prof. Louis L. Jaffe, Harvard Law School:

The process precisely inverts what would be the proper sequence. There might be some warrant for an initial industry judgment prior to a final decision by the public officer, but it is difficult to see what legitimate interest is served by subjecting the Secretary's judgment to the final decision of an industry board.

The most effective enforcement can be expected if the Cabinet-level official charged with responsibility for the health and safety of coal miners is given the authority and responsibility for enforcing this law. Speedy due process will best be protected by immediate appeals of his decisions to the Federal courts of appeals.

5. RESEARCH

For 100 years, neither the industry nor the Government has made the concerted effort that is necessary to protect the men who go down into the mines to bring forth the Nation's source of energy. With a misguided sense of values, both industry and Government have spent hundreds of millions of dollars—over \$350 million—on production research, on marketing research, on economic research in the past 17 years. But we have spent less than \$2 million a year on human research, on the research necessary to protect the lives of those miners. Just this week, the Senate passed the

House-enacted appropriations bill for the Department of the Interior, including \$22 million for commercial coal research and only \$3 million for health and safety research in all mining operations, not just coal.

It is, therefore, not surprising, though greatly depressing, that the frequency rate for coal mining fatalities has been a relatively constant 1.1 to 1.5 fatalities per million man-hours of work every year since 1952 with the exception of 1966. Between 50 and 58 miners have been injured for each million man-hours of work since 1952, with the exception of 1965, when the rate was 49.33 nonfatal injuries per million man-hours of work. This is a rate several times as high as the average rate for all other industries, according to the National Safety Council.

S. 2917 provides a new and major section establishing the coal mine health and safety research trust fund. There will be a research assessment on each ton of coal sold or used, beginning with 1 cent in the first year, and increasing a penny a year until it reaches a level of 4 cents per ton in the fourth year. This research assessment is expected to yield, by the fourth year, a minimum of \$20 million annually for health and safety research. It will assure that the industry itself bears, in some measure, the increased costs of health and safety research—costs directly attributable to the industry's strange reluctance to solve its own problems.

At this point, I ask unanimous consent to have printed in the RECORD, as exhibit 2, a copy of the 1969 annual report of the Office of Coal Research. This report demonstrates part of the extensive nature of the Government's financing of commercial coal research.

The PRESIDING OFFICER. Without objection, it is so ordered.
(See exhibit 2.)

Mr. WILLIAMS of New Jersey. Mr. President, S. 2917 is a major comprehensive measure which offers our Nation's coal miners the promise of a lifetime of productive work free from the hazards that have depleted this work force. It offers the families of our coal miners the hope of relief from the daily fears that permeate their lives.

The bill not only provides the means to improve the health and safety conditions and practices at all underground coal mines; it encompasses all other coal mines including strip mines, not now covered by the Federal Coal Mine Safety Act.

Mr. President, as I said earlier, this bill is the first Federal action aimed at meeting the demand for better health and safety in the coal mines. There must, however, be others if we expect to accomplish the goals of this legislation. The officials and employees of the Interior Department and the Bureau of Mines must reorient their attitudes toward the miner. Business as usual is no longer acceptable. They must develop the role of the "advocate" for the miner. They must vigorously seek sufficient manpower and funds to do the job. They

must accelerate their health and safety research, always looking for new ways to save a life. They must institute a broad program of education of the operators and the miners to be safety and health conscious at all times. Time is no longer on their side. The Nation is demanding action. Any delay may well be disastrous.

A fatalistic attitude has permeated this industry for years. But the Nation's miners, the public, and Congress will no longer accept this attitude. Men's lives are at stake and those of their families who are dependent on them.

I believe that the hazards of coal mining can be substantially reduced or eliminated. Many are due to bad practices and a failure on the part of both the industry and the Government to act vigorously years ago to change them. We owe it to the miners who died at Farmington and their families, and to the 144 miners who have died with little publicity since Farmington, through July of this year.

We owe it even more to the living—the active hard-working miners in the mines today, and to their families. No longer can they be forced to bear the cost, in pain and suffering, of the Nation's coal production.

Mr. President (Mr. STEVENS in the chair), for all these reasons, I earnestly urge passage of S. 2917 as it is before us, as it was reported by a unanimous vote by the Committee on Labor and Public Welfare.

EXHIBIT 1

REPORT OF GAS EXPLOSION BARTON MINE
YOUGHIOGHENY AND OHIO COAL COMPANY,
BARTON, BELMONT COUNTY, OHIO, SEPTEMBER 5, 1944

(By O. V. Simpson, Coal-Mine Inspector)

INTRODUCTION

A gas explosion occurred in the Barton mine of the Youghio gheny and Ohio Coal Company at Barton, Belmont County, Ohio, about 11 a.m., September 5, 1944, while 258 men were in the mine. Three men in the 50 B right entry off 12 north received burns about the face and hands, but the remaining 49 men in this section escaped uninjured and unassisted from the mine. The other 206 men were not called out of the mine.

GENERAL INFORMATION

The Barton mine is opened by two drifts and one shaft. One drift is used as a return airway and main haulage road, and the other drift is closed by heavy rock falls. The shaft is used both as an intake and return airway, and as an emergency escape-way. The shaft is 280 feet deep and is equipped with a stairway which is in intake air. The mine is developed in the Pittsburgh No. 8 coal bed, averaging 5 feet and 3 inches in thickness. The untreated coal dust has a ratio of volatile matter to total combustible matter of 0.44 and therefore is highly explosive.

MINING METHOD AND CONDITIONS

The panel room-and-pillar method of mining is employed. Pillar-recovery work is confined to entry-barrier pillars. All coal is loaded by hand. Face entries are driven in sets of 3 from the main entries at 1,530-foot intervals. Room entries on 480-foot centers are driven from the face entries in pairs. Entry-barrier pillars 200 feet wide and about 400 feet long are left between the face en-

tries and the first rooms off the room entries. These pillars are recovered after room work in the room entries has been completed by driving a pair of entries into the center of the barrier pillar parallel to and between sets of room entries. Rooms are driven off both sides of this pair of entries. The butt entries that are driven into the center of the barrier pillars are driven to a depth of 170 feet, and the rooms off these butt entries are driven 160 feet deep. This system of recovering barrier pillars has only been in effect a very short time.

The Barton mine is rated nongassy by the Ohio Division of Mines and is operated as a nongassy mine. No permissible electrical equipment is used in the mine. The mine is ventilated by 4 air splits; the air enters through the fan shaft and is directed to the 3, 6, and 10 north, 12 north, 16 north, and 24 south. The air from 12 and 16 north, and 24 south returns along the main haulage road, thence to the surface through the shaft. The air from 3, 6, and 10 north returns through the main haulage entry to the surface.

STORY OF THE EXPLOSION

A mining-machine crew had undercut No. 4 room off 50 B right off 12 north, (50 A and B right entries are driven into the barrier pillar between 50 and 51 right room entries) a distance of about 12 feet from the right-hand rib. The machine operator had stopped the shortwall machine to remove some blocks from under the rear end of the machine, and when he started the machine again, an arc from the controller ignited the gas. The machine operator, helper, and a miner who were in the place received burns of the face and hands. The No. 4 room in which the machine was operating had holed into "A" room off 51 right and released a body of gas. The 51 right butt entries had been worked out and were sealed out by "A" room. "A" and "B" rooms had been driven from 51 right in the barrier pillar. The mining-machine crew stated that they did not know that they had cut into the abandoned room until the gas was ignited. A door or curtain was not being used to deflect the air into the No. 4 room, and a line brattice was not being used to the face of the room. The face of No. 4 room was 35 feet in by the crosscut between it and No. 3 room. The No. 4 room was 57 feet deep.

The entries and rooms that were being driven into the barrier pillars were laid out by the section foreman. It was stated that "A" and "B" rooms off 51 right were driven without engineers' driving points or spads. Moreover, it was stated that a plan or sketch had not been provided by the engineering department for the pillar work. The mine map had not been brought up to date for several months. The superintendent stated that a 30-foot pillar was supposed to be left between the barrier-pillar places and the abandoned entries and that a small pillar was to be left between No. 4 room off 50 B right and "A" room off 51 right. It was also stated that drill holes 6 feet deep were kept ahead of the face of No. 4 room.

At the time of the investigation, the section foreman for the 12 north section stated that methane was detected on the 12-north main entry with a flame safety lamp shortly after the explosion at a point 115 feet from the No. 4 room.

Three air samples were collected at the face of No. 4 room off 50 B right about 4 hours after the explosion. The samples contained 0.27, 0.30, and 0.44 percent methane respectively. The Bureau of Mines recommends in Mine Safety Board Decision No. 33, "That any coal mine wherein methane or other combustible gas can be detected in amounts as much as 0.25 percent or more by frequent systematic searches shall be classified as a gassy mine."

TABLE 1.—ANALYSES OF AIR SAMPLES COLLECTED, SEPT. 5, 1944

Bottle number and location in mine	Percent			
	CO ₂	O ₂	CH ₄	N ₂
585-V, 12 face, 50 B right, No. 4 room in left corner. Air from behind sealed area.....	0.14	20.16	0.27	79.43
586-Q, 12 face, 50 B right, No. 4 room in right corner. Air from sealed area.....	.14	19.98	.44	79.44
683-D, 12 face, 50 B right, No. 4 room in right corner. Air in working place from behind seal.....	.15	20.27	.30	79.28

The mining-machine operator stated that the mining-machine crew had been in the No. 4 room about one hour before the explosion occurred.

At the time of the investigation, September 5, 1944, an air measurement was taken on the 50 B right entry a few feet in by No. 4 room. It was found that 4,800 cubic feet of air a minute was passing this point.

The 50 B right entries had recently been rock-dusted; however, the rooms had not been rock-dusted. It is believed that coal dust did not enter into the explosion. Water is not used on the cutter bars of mining machines in any part of the mine.

The Barton mine was inspected by two Federal coal-mine inspectors July 9 to 17, 1942, and again by the writer May 3 to 9, 1944. The methane content in air samples collected on the original inspection ranged from 0.03 to 3.56 percent. The sample which contained 3.56 percent methane was collected in old works. The methane contents in samples collected on the reinspection of this mine ranged from 0.03 to 0.44 percent. All samples, collected on both inspections, contained some methane. It was recommended that the mine be classed as a gassy mine and be operated as such, on both inspections. Moreover, on page 23 of the reinspection report, the following recommendation is found: "When electrical equipment is used in face regions, tests for methane should be made at least every 30 minutes by a certified official or other competent person." The mining machinemen, or other persons except the section foremen and the mine foreman, are not provided with flame safety lamps. On page 20 of the reinspection report the following recommendation is made: "The quantity of air reaching the last open crosscut on any pair of working entries should be at least 6,000 cubic feet a minute, and that line brattices should be used from the last crosscut to the working faces."

Although this explosion was caused by a nonpermissible mining machine, a careful analysis of the explosion would class the ignition of the gas as a contributory cause, inasmuch as the primary cause was the breaking into the sealed abandoned workings with release of gas. Poor supervision and lack of accurate checks on the advancement of the working places by the engineering departments were largely responsible for this explosion. Accurate maps alone will not prevent such accidents; suitable action must be taken to utilize the information obtainable from maps.

LESSONS TO BE LEARNED

1. This is just another of the large number of supposedly nongassy mines suddenly becoming sufficiently gassy to cause an explosion. Fortunately, no one was killed or seriously injured. This accident again emphasizes the fact that all coal mines are potentially gassy.

2. This accident would not have occurred if drill holes of sufficient depth and on proper angles had been advanced ahead in the No. 4 room face and if other necessary precautions

had been taken when approaching known abandoned workings.

3. If adequate ventilation had been provided in the No. 4 room, the gas that was released may have been diluted below the ignition point.

4. The explosion might have been averted had the machinemen been provided with a flame safety lamp and made frequent tests for methane as recommended in the Federal inspectors' inspection and reinspection reports.

5. This accident illustrates the necessity of care and accuracy in the making of surveys and extending workings on mine maps. The explosion would not have occurred if the closeness of the workings had been known and if proper precautions had been taken.

RECOMMENDATIONS

While this explosion was a minor one, and did not cause loss of life, similar accidents at other mines have caused violent explosions and the death of many men. It is with these things in mind and as a means of preventing accidents of this kind that the following recommendations are made.

1. The mine should be regarded as a gassy mine and operated as such.

2. Deflector curtains or doors should be placed on room entries to deflect the air into rooms.

3. Line brattices should be used to conduct the air from the last crosscut to the working faces to remove gases and explosive fumes.

4. All persons who operate portable electrical equipment in face regions should be provided with a permissible flame safety lamp for gas-testing purposes. They should be required to test for gas at the face immediately before the machine is taken beyond the last crosscut.

5. Examinations for gas should be made every 30 minutes in places where electrical equipment is operated.

6. Regardless of the supposed accuracy of the mine map, drill holes at least 20 feet deep should be drilled ahead of the face of any place when the working places are known or suspected to be close to abandoned, sealed, or other old workings which cannot be examined. Also, 45 degree angle holes at least 25 feet deep and not more than 8 feet apart should be made on each rib. These precautions should be started when a limit of 200 feet is reached from abandoned workings that cannot be inspected.

7. Accurate and frequent check measurements should be made of the distances in workings approaching abandoned or worked-out areas. This should be made in addition to the drill holes advanced ahead of the face.

8. Definite instructions should be issued to the operating mine officials, such as mine foreman, assistant mine foremen, section foreman, and the miners, limiting the distance of the places to be driven, regardless of whether or not the areas being approached can be inspected.

9. Electrically driven equipment that is operated in by the first open crosscut between entries or rooms, or in air that has ventilated one or more working places in mines classed as gassy, should be permissible.

ACKNOWLEDGMENT

The inspector was afforded cooperation by company officials in conducting the investigation, and data requested were given promptly and fully.

Respectfully submitted.

REPORT ON MINE EXPLOSION NO. 3 MINE, ACOSTA-GRAY CO., GRAY, SOMERSET COUNTY, PA., MARCH 24, 1952

(By H. E. Sanford, Chief, Johnstown Section, Accident Prevention and Health Division; C. J. Dalzell, Omar Elkins, Coal-Mine Inspectors)

INTRODUCTION

An explosion occurred in the No. 3 mine of the Acosta-Gray Company at Gray, Somerset County, Pennsylvania, about 7:15 a.m., Monday, March 24, 1952. Seventy men were in the mine at the time of the explosion, but only four were in the affected area. Two of these men, Lawrence Gelsbert and Dwight Knupp, were burned severely, and the others were cut and bruised.

The explosion occurred when methane was ignited in 21 room 4 flat 26 butt off 1 north-west entries. It was local in nature, and the flame was confined to the immediate area. Coal dust was a negligible factor in the explosion.

GENERAL INFORMATION

The No. 3 mine is at Gray, Somerset County, Pennsylvania, about 1/2 mile east of U.S. Highway 219, where it is served by the Western Maryland Railroad. It was opened in 1915 by the Consolidation Coal Company, Incorporated, and was known as the No. 123 mine. In 1946, the name of the company was changed to Pittsburgh Coal Company, and the mine was acquired and renamed No. 3 by the Acosta-Gray Company on January 1, 1951. The main office is at Gray, Pennsylvania, and the officials are as follows:

Albert M. Swank, President, Box 630, Johnstown, Pennsylvania.

Elmer N. Custer, General Manager, Gray, Pennsylvania.

Merrill Holsopple, Mine Superintendent, Gray, Pennsylvania.

The mine is opened by two shafts and a slope into the Upper Freeport coal bed, which is known locally as the E bed. It is 38 inches thick at the place where the explosion occurred and averages 36 inches in thickness throughout the mine. The shafts are about 300 feet deep, and the overburden near the explosion area is approximately 450 feet in thickness.

The coal is low-volatile bituminous, generally called "smokeless." A composite moisture-free analysis of several samples of coal from this mine analyzed by the U.S. Bureau of Mines follows:

	Percent
Volatile matter.....	18.2
Fixed carbon.....	73.2
Ash.....	8.6
	100.0
B.t.u.	13,960

Numerous experiments by the Bureau of Mines have proved that coal dust having a volatile ratio in excess of 0.12 is explosive and that its explosibility increases as the volatile ratio increases. The volatile ratio of coal in this mine, based on the foregoing analysis, is 0.20, and the dust, consequently, is capable of entering into and propagating an explosion.

The mine was being operated 2 shifts a day, 5 days a week, and produced an average of 825 tons of coal daily with 140 employees. The coal was loaded onto conveyors by hand, and the total production in 1951 was 184,355 tons. An official estimated the remaining life of the mine to be 20 years. The last Federal inspection was completed on January 5, 1952.

Coal is mined from panels by a room-and-pillar system. Main and cross entries in sets of two, three, or four are about 18 feet wide on 50-foot centers. Room entries are in pairs, and rooms, as they advance, are driven 40 feet wide on 50-foot centers. When rooms reach their projected limits, part of the pillar on the inby side of the room is extracted by cutting a slab from the pillar. The coal is undercut with shortwall mining machines, blasted with permissible explosives, and loaded by hand onto chain-and-flight conveyors. The machine cuttings, because of high ash content, are gobbled in the mine.

Prior to the explosion, the mine was classed nongassy by the Pennsylvania Department of Mines, and methane in excess of 0.03 percent had not been found by personnel of the U.S. Bureau of Mines. The C Prime or Upper Kittanning bed, which lies 90 to 100 feet under the E bed, is gassy in adjacent areas, but it has not been mined beneath the area where the explosion occurred.

Ventilation is induced by a 14-foot electrically driven centrifugal fan installed properly on the surface and blowing about 99,500 cubic feet of air a minute. It is in a brick building, offset about 25 feet from the air shaft, and proper manipulation of doors in the air ducts will reverse the direction of air flow. A fan-speed indicator and a pressure-recording gage are provided. Permanent stoppings and overcasts are constructed of fireproof materials, and doors are erected to form air locks. Line brattices conducted air to the working faces. During the last Federal inspection, except in 3 flat 26 butt, more than 6,000 cubic feet of air a minute was passing through the last open crosscut in each set of entries. On the day following the explosion, 10,200 cubic feet of air a minute was entering the explosion area, and there was no evidence of any recent change in ventilation.

Preshift examinations of the mine were not being made, but onshift and weekly examinations for methane were made. On March 24, 1952, the following entry was made in the assistant mine foreman's record book: "Examined all places working in 1 northwest section, found same in safe working condition, mine law complied with. Except 26 butt 4 flat heading No. 21 room, where an explosion occurred inby No. 2 crosscut when the machine operator started the machine. After explosion, examination showed a liberation of explosive gas coming off fall in No. 22 room at No. 2 crosscut. Four men were involved."

There were four major air splits, but many of the working places were ventilated by air that had first passed through pillar workings and worked-out and abandoned areas. Access to the caved areas was not possible, but samples collected in the air current entering the explosion area and at the edges of falls contained from 0.09 to 5.47 percent methane.

While parts of the mine were dry, most of it ranged from damp to wet. Parts that were not wet were rock-dusted to within 80 feet of the faces, and rock dust had been used in the explosion area.

The underground electric equipment was operated by 275-volt direct-current power and was in good operating condition. About one-half of the equipment used in the face regions was permissible type, but it was not maintained in permissible condition. The mining machine involved in this explosion is the nonpermissible type. Many of the trolley and feeder lines were installed in air returning from abandoned areas and pillar-recovery work. Tralling cables were approved type and in good condition. Tests for gas, except by foremen making their regular visits, were not made in the face areas when electric equipment was operated.

Only permissible-type electric cap lamps are used by the underground employees. Smoking in the mine is prohibited, and there was no evidence that the rule was being violated.

The Johnstown office of the Bureau of Mines learned of the explosion about 4:15 p.m., March 24, 1952, when Elmer Custer, General Manager, telephoned Inspector C. J. Dalzell that there had been a gas explosion. He reported that all the men were out of the mine, that no fatality had resulted, and that no property damage had been done. Messrs. Sanford and Dalzell went to the mine about 7:15 p.m., but an electrician, who was the only available person at the

mine, reported that no one was working in the mine at that time. Arrangements were then made for an investigation the following day.

The investigation was started about 8:00 a.m., Tuesday, March 25, 1952, by representatives of the Pennsylvania Department of Mines, Acosta-Gray Company, and U.S. Bureau of Mines. It was completed on March 26, 1952. The names of the persons in the investigating party are as follows:

PENNSYLVANIA DEPARTMENT OF MINES

C. H. Malze, Inspector, 20th Bituminous District.

W. R. Cunningham, Inspector, 7th Bituminous District.

C. L. May, Inspector, 28th Bituminous District.

ACOSTA-GRAY COMPANY

Merrill Holsopple, Mine Superintendent.
K. C. Stoy, Mine Foreman.

UNITED STATES BUREAU OF MINES

H. E. Sanford, Chief, Johnstown Section, Accident Prevention and Health Division.

C. J. Dalzell, Coal-Mine Inspector.

Omar Elkins, Coal-Mine Inspector.

James Westfield, Chief, Accident Prevention and Health Division, Region VIII, W. Dan Walker, Jr., Chief, Pittsburgh Branch, Accident Prevention and Health Division, and Clyde Brown, Electrical Engineer, arrived at the mine a short time after this investigating party returned to the surface, and they assisted in obtaining and analyzing data concerning the explosion. In all, six Bureau of Mines representatives collaborated in making the investigation and preparing the report.

DESCRIPTION OF THE OCCURRENCE

The mine had been operated on Saturday, was idle on Sunday, and normal operations were resumed on Monday, March 24, 1952. The fan charts show that the fan had been in continuous operation and was operating normally at the time of the explosion.

Assistant Mine Foreman Millard Phillips examined 21 room, 4 flat, 26 butt about noon on Saturday, March 22, 1952, and found the place in safe working condition. The second break-through in 21 room, when driven, had cut into a fall in 22 room, and this break-through was not depended upon in ventilating 21 room; instead a line brattice was maintained from the first break-through. This line brattice was in place when Phillips examined the room, and he did not detect methane with a permissible flame safety lamp. A preshift examination was not made on Monday, and no one had been in the explosion area from about 2:00 p.m., Saturday, when the day shift left until the conveyor crew arrived about 7:00 a.m., Monday.

The 4 flat entries off 26 butt had been cut into 29 butt. The coal between 4 flat and the 1 left entries was being recovered by driving 40-foot rooms, 300 feet long, on 50-foot centers into the panel. (See Appendix 1.) Each room was advanced to its limit and a 5-foot slab taken off the inby rib before the next room was driven. Five rooms had been completed, and the pillar in 21 room had been slabbled about 50 feet back from the face.

Upon arriving at 21 room on Monday morning, Lawrence Geisbert, Dwight Knupp, and Roy Knupp went into the room. On their way to the face, they found that about 50 feet of the line brattice inby the first break-through was down. They continued toward the face where Roy Knupp got an ax and went back to repair the line brattice. Geisbert and Dwight Knupp started oiling the mining machine, and the explosion occurred when Geisbert opened the controller to see whether the power was on. Both men were burned severely above the waist and were knocked unconscious by the blast. When Knupp regained consciousness, he found the place so filled with smoke and dust that breathing was difficult. When Knupp called

to Geisbert, he found that he (Geisbert) was burned so severely he was unable to crawl out of the place. Whereupon, Knupp assisted Geisbert onto the conveyor, crawled to the mouth of the room, and brought Geisbert out by "nipping" the conveyor slowly along.

Roy Knupp met Roy Putman at the first break-through and prepared to replace the line brattice when the explosion occurred. They said the force blew them through the break-through and into 22 room. They lost their caps and were struck by flying particles, but neither man was burned. After picking themselves up, they crawled to the entry through 22 room, talked to Dwight Knupp at the mouth of 21 room, and went to a telephone and called for help.

The superintendent and the mine foreman responded to the telephone call, gave the men first aid, transported them to the surface, and sent three of them to a hospital in Somerset, Pennsylvania. The injured men told the official they had been burned by a blown-up cable; therefore, an examination for fire was made while the victims were being given first aid. As no fire was found, the remainder of the mine continued in operation.

Since two of the men were injured seriously, the district State mine inspector was notified immediately. After his arrival a preliminary investigation was made, and it then was decided that a gas explosion had occurred. Therefore, the second shift was not permitted to enter the mine.

The mine was not damaged by the explosion, but some line brattice was torn down in 21 room. Prior to the investigation, the line brattice in 21 room had been repaired. An air current was perceptible at the end of the line brattice during the investigation, but the velocity was too low to measure with an anemometer. No. 26 room was travelable to the face, but 22, 23, 24, and 25 rooms were travelable only a short distance in by the first break-through. Tests with a smoke tube showed that little if any air was traveling through the caved areas. Tests with a permissible flame safety lamp indicated a small percentage of methane at the face of 26 room, and an explosive mixture of methane and air was detected on a fall in the second crosscut in 21 room. Air samples collected at these places contained 1.52 and 5.47 percent methane, respectively, as indicated in table 1. An air sample collected at the face of 21 room contained 0.31 percent methane. The methane content in other samples collected at the falls in 21, 22, and 23 rooms ranged from 0.12 to 0.23 percent. The air entering 4 flat, which had passed through pillar workings and abandoned areas, contained 0.09 percent methane.

From the foregoing, there is ample reason to believe that the poorly ventilated areas in 22, 23, 24, and 25 rooms contained more than 5.50 percent of methane, that some of this gas entered 21 room and accumulated near the mining machine while a portion of the line brattice was dislodged, and that an arc from the machine controller ignited the gas.

Although the analyses of dust samples, see table 2, indicate that rock-dusting in the area was generally inadequate, the coal dust did not enter into this explosion because of moisture and the lack of violence. Appendix 2 shows details in the vicinity of the explosion.

Definite evidences of flame were present in the immediate vicinity of the mining machine, but the flame did not spread into the second break-through or to the face.

CONCLUSIONS

1. The ventilating system was inadequate, inasmuch as air that had first ventilated abandoned and worked-out areas was used to ventilate active workings.

2. Open-type electric equipment was op-

erating in air returning from abandoned and worked-out areas where gas might be liberated in dangerous amounts.

3. Methane liberated in the worked-out and abandoned area in 4 flat accumulated in 21 room off 4 flat 26 but 1 northwest and was ignited by an electric arc or spark when the controller of an open-type mining machine was opened.

4. The mine was not examined for gas before men, other than the fire boss, were permitted to enter.

RECOMMENDATIONS

Compliance with the following recommendations may prevent a similar occurrence in the future:

1. Air that has passed by or through abandoned areas or pillar workings should not be used to ventilate live workings.

2. Abandoned workings which are not thoroughly examined should be sealed or

ventilated with air which returns to the surface without passing through active workings or over electric equipment.

3. Sufficient air should be directed to all parts of the mine to prevent accumulations of gas.

4. Line brattice should be maintained in good condition and repaired promptly if damaged.

5. Preshift examinations should be made before men, other than the fire bosses, are permitted to enter.

6. Tests for methane should be made with a permissible flame safety lamp before any electric equipment is operated in the face area, after each place has been cut or drilled, and before and after blasting.

7. Rock dust should be maintained on the top, floor, and sides of all open places that are not wet in such quantity that the incombustible content of the mine dust will

be not less than 65 percent, plus 1 percent for each 0.1 percent of methane in any ventilating current.

8. Machine cuttings should be removed from the mine.

9. Trolley and other power wires should not be installed in air returning from pillar-recovery work or old workings.

10. Electric equipment used in the face areas should be of a type approved by the U.S. Bureau of Mines and be maintained in permissible condition.

ACKNOWLEDGMENT

The writers acknowledge the courtesies extended and the help given by officials of the operating company, members of the United Mine Workers of America, and representatives of the Pennsylvania Department of Mines, who gave all information requested in connection with this investigation.

Respectfully submitted.

TABLE 1.—U.S. DEPARTMENT OF THE INTERIOR, BUREAU OF MINES, MINE ATMOSPHERE ANALYSIS REPORT

Mine: Gray No. 3; Operator, Acosta-Gray Co.; Coal Bed "E"; State, Pennsylvania; County, Somerset; Town, Gray; Collector, Messrs. Elkins and Dalzell

Bottle number	861	B-4282	B-4283	B-4352
Laboratory number	219713	219714	219715	219716
Kind of sample	Top of fall	Mine air	Mine air	Mine air
Location in mine	26 butt 4, flat 1 north, last bt. between 21 and 22 rooms.	26 butt 4, flat 1, northwest crosscut between 21 and 22 rooms.	23 room 26 butt, 4 flat 1, northwest inby 1st break-through.	26 butt, 4 flat, 1, northwest, 1st crosscut rt. off 22 room.
Date and hour sampled	Mar. 25, 1952, 9:40 a.m.	Mar. 25, 1952, 10:45 a.m.	Mar. 25, 1952, 11 a.m.	Mar. 25, 1952, 10:50 a.m.
Air quantity				
Carbon dioxide (CO ₂)	0.41	0.21	0.26	0.20
Oxygen (O ₂)	17.75	20.16	20.11	20.07
Hydrogen (H ₂)				
Carbon monoxide (CO)	0.00	0.00	0.00	0.00
Methane (CH ₄)	5.47	0.12	0.16	0.15
Nitrogen (N ₂)	76.37	79.51	79.47	79.58

Mine: Gray No. 3; Operator, Acosta-Gray Co.; Coal Bed "E"; State, Pennsylvania; County, Somerset; Town, Gray; Collector, Messrs. Elkins and Dalzell

Bottle number	B-4469	B-9858
Laboratory number	219717	219718
Kind of sample	Mine air	Mine air
Location in mine	26 butt 4, flat 1 northwest inby 26 room on 4 flat.	26 butt 4, flat 1 northwest face, No. 21 room.
Date and hour sampled	Mar. 25, 1952, 11:15 a.m.	Mar. 25, 1952, 10 a.m.
Air quantity	10,200	
Carbon dioxide (CO ₂)	0.18	0.30
Oxygen (O ₂)	20.26	19.95
Hydrogen (H ₂)		
Carbon monoxide (CO)	0.00	0.00
Methane (CH ₄)	0.09	0.31
Nitrogen (N ₂)	79.47	79.44

Mine No. 3; Operator, Acosta-Gray Co.; Coal bed, Upper Freeport; State, Pennsylvania; County, Somerset; Town, Gray; Collector, O. Elkins.

Bottle number	C-235	C-236	C-2321
Laboratory number	219789	219790	219791
Kind of sample	Mine air	Mine air	Mine air
Location in mine	Face No. 26, room 26, butt, 4 flat	50 ft. inby entrance to No. 21 room, 26 butt, 4 flat.	1,000 outby 21 room, 26 butt, 4 flat.
Date and hour sampled	Mar. 25, 1952, 3:26 p.m.	Mar. 25, 1952, 3:25 p.m.	Mar. 25, 1952, 6:40 p.m.
Air quantity			9,450 cu. ft.
Carbon dioxide (CO ₂)	0.51	0.29	0.20
Oxygen (O ₂)	17.58	20.07	20.18
Hydrogen (H ₂)			
Carbon monoxide (CO)			
Methane (CH ₄)	1.52	0.23	0.15
Nitrogen (N ₂)	80.39	79.41	79.47

TABLE 2.—ANALYSES OF DUST SAMPLES, COLLECTED MARCH 1952 MINE NO. 3; COMPANY, ACOSTA-GRAY CO.; COLLECTED BY OMAR ELKINS

[Lab. Nos. D-83588 to D-83601 inclusive]

Can Number	Sample of dust from	Location in mine	As received basis (percent)			
			Moist	Ash	Comb.	Incomb
F-795	Road	25 ft. from face 21 room, 26 butt, 4 flat	1.2	11.5	87.3	12.7
V-214	Top and ribs	do	1.4	64.0	34.6	65.4
V-141	Road	850 ft. in A.C. outby 21 room, 26 butt, 4 flat	0.8	29.0	70.2	29.8
C-164	do	150 ft. from face 21 room, 26 butt, 4 flat	1.0	28.9	70.1	29.9
R-581	Top and ribs	do	1.1	50.3	48.6	51.4
Q-667	Road	100 ft. outby 21 room, 26 butt, 4 flat	1.9	66.5	31.6	68.4
R-332	do	50 ft. from face 26 room, 26 butt, 4 flat	0.6	53.2	46.2	53.8
C-341	Top and ribs	do	0.6	58.3	41.1	58.9
R-329	Roof and ribs	100 ft. outby 21 room, 26 butt, 4 flat	4.1	29.1	66.8	33.2
C-19	Road	200 ft. from face 26 room, 26 butt, 4 flat	0.9	55.1	44.0	56.0
F-937	Top and ribs	do	2.0	68.7	29.3	70.7
T-564	do	850 ft. in A.C. outby 21 room, 26 butt, 4 flat	0.6	63.5	35.9	64.1
F-276	Road	850 ft. outby 21 room, 26 butt, 4 flat	2.1	33.2	64.7	35.3
A-21	Roof and ribs	do	3.0	37.8	59.2	40.8

FINAL REPORT OF MAJOR EXPLOSION DISASTER O'BRIEN MINE, O'BRIEN COAL CO., LOVILIA, MONROE COUNTY, IOWA, MARCH 30, 1953

(By Rop Capps, coal-mine inspector; W.B. Dalrymple, health and safety engineer; E. W. Felegy, mining engineer; James A. O'Connor, health and safety engineer; R. O. Pynnonen, mining engineer; H. F. Weaver, chief, coal-mine inspection branch)

INTRODUCTION

A coal-dust explosion in the O'Brien mine about 4 p.m., March 30, 1953 killed two shot firers, the only men in the mine at the time. Their bodies were recovered at 6 p.m. that day. Three of five men who entered the mine about 9 p.m., March 30, reportedly to make an investigation of the explosion, collapsed and died of carbon monoxide poisoning. The other two men escaped to the surface; one

was hospitalized but was released from the hospital April 3.

The explosion resulted from two blown-out black blasting powder shots off the solid in No. 4 room, 10 west entry. The force of the explosion spread throughout 9 and 10 west entries, the only active section in the mine, and extended 700 feet in the main entries out by that section.

GENERAL INFORMATION

The O'Brien mine, O'Brien Coal Co., is 3½ miles west of Lovilia, Monroe County, Iowa, and is served by trucks. D. W. O'Brien, 1927 Easton Boulevard, Des Moines, Iowa, is owner and operator of the company. Fifteen men were employed underground, and 4 men were employed on the surface the day of the disaster. Average daily production was 125 tons of coal.

A 300-foot slope and a vertical air shaft 90 feet deep opened the mine in a flat-lying 66-inch bituminous coal bed. The coal bed was not correlated but probably is the Smoky Hollow bed. The roof was shale, usually free from slips and other irregularities, and the floor was fire clay. Analysis of a coal sample collected from the Smoky Hollow bed in the nearby Blackstone mine, now abandoned, was reported in Bureau of Mines Technical Paper 706, Analyses of Iowa Coals, as follows:

	Percent
Moisture	18.3
Volatile matter	34.5
Fixed carbon	38.4
Ash	8.8
	100.0
Sulfur	3.3
B.t.u.	10,400

Numerous tests by the Bureau of Mines have shown that dust from coal having a volatile ratio of 0.12 is explosive and that the explosibility increases with increase in the volatile ratio. The volatile ratio of the coal in the O'Brien mine as determined from the analysis given above was 0.47, indicating that the dust from the coal is highly explosive.

According to available records, no fires or explosions resulting in fatalities occurred previously in this or nearby mines. The last Federal inspection was October 9, 1952.

MINING METHODS, CONDITIONS, AND EQUIPMENT

Mining methods

A room-and-pillar system of mining was employed. Entries were driven in pairs, 12 feet wide on 30-foot centers. Rooms were driven 200 feet deep on 45-foot centers, and crosscuts were 50 to 60 feet apart. Coal was loaded by hand. About 70 percent of the coal was extracted and pillars were not recovered.

A systematic method of timbering was prescribed, but safety posts were not set at the working faces. Timbers knocked out in blasting were reset. Roof in the entries was supported by crossbars and lagging; crossbars generally were set on 4-foot centers throughout the mine.

Explosives

Coal was blasted off the solid by pellet black blasting powder fired by fuse. Occasional opener shots of permissible explosives were fired by cap and fuse. Holes were charged on shift but were fired off shift by shot firers when all other men were out of the mine. Both wooden and copper-tipped steel bars were used to stem the holes with a mixture of fine coal and fire clay. Explosives were stored underground in wooden and cardboard shipping containers and in miners' wooden explosives boxes.

Ventilation and gases

The mine is classed nongassy. Methane has not been detected by permissible flame safety lamps or other detecting devices in the mine. Analysis of an air sample collected February 3, 1948 at the face of the last crosscut between 1 and 2 west entries, now worked out and abandoned, indicated 0.03 percent meth-

ane. Methane was not found in air samples collected in the mine before or after that date. No gas or oil wells were in the vicinity of the mine.

Ventilation was provided by an electrically driven 2- by 4-foot centrifugal fan operated blowing and situated directly over the air shaft. Provisions were not made to reverse the direction of air flow. The fan was not equipped with a pressure-recording gage or water gage, or any device to give warning when the fan slows down or stops. More than 6,000 cubic feet of air a minute was passing through each of the last open entry crosscuts during the last Federal inspection, and 26,000 cubic feet of air a minute was measured at the foot of the slope. Rock stoppings, wooden doors, and brattice-cloth check curtains were used underground to direct air flow.

Preshift and weekly examinations were made for gas and other hazards. Weekly air measurements were made and a record of the measurements was kept by the mine foreman.

Results of analyses of air samples collected during the investigation are shown in table 1.

TABLE 1.—RESULTS OF ANALYSES OF AIR SAMPLES COLLECTED IN THE O'BRIEN MINE, O'BRIEN COAL CO., LOVILIA, MONROE COUNTY, IOWA, MAR. 31 AND APR. 1, 1953

Bottle No.	Date	Location in mine	Carbon dioxide	Oxygen	Methane	Carbon monoxide	Nitrogen	Cubic feet air per minute
D2876	Mar. 31	Return air 50 feet outby slope bottom	0.17	20.76	0.00	(1)	79.07	23'600
E3631	do	Face of No. 5 room, 10 west entry	.26	20.59	.00	0.00	79.15	(2)
D8438	do	Face of 8 east entry	.15	20.75	.00	(2)	79.10	(2)
D2874	do	Return air outby 7 west entry	.07	20.76	.00	.00	79.17	6,000
E5887	Apr. 1	Face of 10 west entry	.09	20.81	.00	(2)	79.10	(2)
E5879	do	Face of 9 west entry	.08	20.76	.00	.00	79.16	(2)

¹ Trace, less than 0.005.

² Negligible.

³ Possible trace, less than 0.0025.

TABLE 2.—ANALYSES OF DUST SAMPLES COLLECTED IN THE O'BRIEN MINE, O'BRIEN COAL CO., LOVILIA, MONROE COUNTY, IOWA, APR. 1-3, 1953

Can No.	Sample of dust from—	Location in mine	Incombustible content	Coke
E358	Rib, roof, gob, timbers	9 West entry between rooms 3 and 4	31.3	None.
E353	Floor	do	46.5	Do.
J863	Rib, roof, gob, timbers	10 West entry outby room 1	36.9	Do.
L637	Floor	do	44.3	Do.
E853	Rib, roof, gob, timbers	10 West entry outby room 4	31.6	Do.
V739	Floor	do	39.2	Do.
E316	Rib, roof, gob, timbers	10 West entry inby room 5	33.3	Do.
F439	Floor	do	29.1	Do.
F431	Rib, roof, gob, timbers	Main entry 25 feet inby 7 east	32.8	Do.
K597	Floor	do	44.5	Do.
B828	Rib, roof, gob, timbers	Main entry 200 feet inby wrecked door at 7 west	54.2	Do.
R209	Floor	do	43.1	Do.
R491	Rib, roof, gob, timbers	Main entry 130 feet outby wrecked door at 7 west	46.9	Do.
C919	Floor	do	37.7	Do.
C900	Rib, roof, gob, timbers	Back entry 20 feet outby 7 east	35.1	Do.
R812	Floor	do	44.2	Do.
T452	Rib, roof, gob, timbers	Back entry midway 6 east and 7 east	63.6	Do.
K574	do	Back entry midway 4 east and 5 east		

Illumination and smoking

Electric lights were used on the slope bottom and for a limited distance along the main haulage way. All underground employees used open-flame lights. Smoking was permitted and practiced underground.

Mine rescue

None of the employees of the O'Brien mine or nearby mines was trained in mine rescue. The only rescue equipment available was that owned by the fire department in Albion, Iowa, 14 miles from the mine; personnel of that department were not familiar with mine rescue procedures and requirements. Water in barrels, fire buckets, and carbon tetrachloride fire extinguishers were available for fire fighting on the surface and underground, but a firefighting organization was not maintained at the mine.

Legal procedures on notices

On October 9, 1952, upon completion of a Federal inspection of the O'Brien mine and in accordance with provisions of the Federal

Dust

The mine was dry and dusty and was not rock dusted. Dust samples were not collected prior to the explosion. Results of analyses of dust samples collected during the investigation are shown in table 2.

Haulage

Single cars were hauled by animals from the face to the main side-track, and six-car trips were hauled to the slope bottom by one 5-ton storage battery locomotive. Single cars were hauled up the slope by a geared hoist powered by an internal-combustion engine on the surface. Crosscuts and room necks served as shelter holes along the haulage ways. Man-trips were not provided.

Electricity

Power purchased as 220 volts alternating current was used to operate the fan motor and the mine pumps, and was reduced to 110 volts for lighting on the surface and underground. Power wires underground were insulated and were not in contact with timbers. Electricity was not used in the working areas.

Coal Mine Safety Act, a Notice was issued to the operator of the O'Brien mine stating that black blasting powder was used to blast coal in the mine. The notice required that this violation of Section 209(h) (5) of the Federal Coal Mine Safety Act be totally abated by January 16, 1953.

A second Notice issued October 9, 1952 stated that the mine was dry and rock dust had not been applied, and required that this violation of Section 209(e) (3) of the Act be totally abated by April 9, 1953.

A third Notice issued October 9, 1952 stated that preshift examinations of the mine were not made, and required that this violation of Section 209(d) (8) of the Act be totally abated by January 26, 1953.

Copies of the three Notices are shown as appendixes D, E, and F.

Similar Notices concerning the use of black blasting powder and lack of rock dust had been issued October 2, 1952 at the No. 2 mine of the Lovilia Coal Company and October 3, 1952 at the No. 3 mine of the Lovilia Coal

Company upon completion of Federal inspections of those mines.

On December 14, 1952, the operator of the O'Brien Coal Company notified the Director of the Bureau of Mines by telegram that he would reduce the number of men employed underground to 14 on January 16, 1953, and requested advice as to whether under these circumstances the mine would be considered subject only to the provisions of Title I of the Federal Coal Mine Safety Act. The Director replied by night letter dated December 15, 1952 and advised in part that if the employment was such after January 16, 1953 that this mine is not covered by the Federal Coal Mine Safety Act, the Bureau of Mines could not require the operator to comply with Sec. 209(h) (5) of the Act pertaining to black blasting powder.

On January 9, 1953, the company requested the Director by telegram for interpretation of the language "fourteen individuals regularly employed underground" as used in Section 201(b) of the Act. The Director replied by air mail letter asking for further information to enable him to answer correctly the telegram of January 9; the Director received no reply to this request.

On January 19, 1953, the judge of the District Court of the State of Iowa in and for Monroe County granted a restraining order in the case entitled *Lovilia Coal Company and D. W. O'Brien, doing business as O'Brien Coal Company, Plaintiffs, vs W.B. Dalrymple and Roy Capps, Defendants*, enjoining the defendants from enforcing or attempting to enforce compliance by plaintiffs with the provisions of Section 209(h) (5) of the Federal Coal Mine Safety Act. The temporary injunction was served on Dalrymple the same day and on Capps the following day, and prevented reinspection of the Lovilia Coal Company and O'Brien Coal Company mines. The office of the United States Attorney for the district of Iowa involved cautioned Federal inspectors Dalrymple and Capps not to enter the premises of these mines pending further disposition of the case.

On February 4, 1953, United States Attorneys in Des Moines, Iowa, filed a petition for removal of the case from the State Court to the United States District Court, Southern District of Iowa, Ottumwa Division. The case was docketed as Civil No. 1-36. On February 20, 1953, a motion to dismiss and a brief on the motion to dismiss were filed by United States Attorneys in the United States District Court, and the case was argued orally before the court on March 20, 1953. On March 27, 1953, the Judge of the United States District Court sustained the motion to dismiss and dissolved the restraining order. Copies of this action were forwarded from Des Moines, Iowa, on March 30, 1953—the day of the explosion—to the Department of Justice, Washington, D.C., and to Region V of the Bureau of Mines. Notice of such action was received by the Bureau of Mines, Duluth office, at 2:00 p.m. March 31, 1953, and was the first official written knowledge the Bureau had that the injunction had been dissolved. However, about noon on March 31 the Chief Counsel, Bureau of Mines, Washington, D.C., called the Asst. U.S. Attorney in Iowa about the Bureau's right in view of the injunction to have Federal inspectors enter the premises of the O'Brien mine to investigate the disaster. During the conversation, the Chief Counsel of the Bureau of Mines was advised that the injunction had been dissolved on March 27, 1953.

STORY OF EXPLOSION AND RECOVERY OPERATIONS

Activities of Bureau of Mines personnel

Roy Capps, coal-mine inspector, and W. B. Dalrymple, health and safety engineer, Accident Prevention and Health Division, Region V, Bureau of Mines, Duluth, Minnesota, heard about the explosion at 7:30 p.m., March 30, from members of a first-aid class they were teaching at Centerville, Iowa, 31 miles from Lovilia. Dalrymple started for the mine. Capps called the local radio station to

verify the news, called the Assistant United States Attorney at Des Moines, Iowa to ascertain if the restraining order (see above this report) permitted Bureau of Mines' personnel to assist in recovery operations and investigation of the explosion at the O'Brien mine, and notified the Duluth office of the Bureau of Mines before leaving Centerville. Dalrymple met T. C. Chapman, Iowa State mine inspector, at Albia, Iowa, between Centerville and Lovilia. Dalrymple was advised by Chapman, who had returned from the mine, that the bodies of the shot firers had been recovered, that no further activities were in progress at the mine, and that the State would conduct an investigation at 10 a.m. the following day. Dalrymple returned to Centerville and telephoned the Duluth office. Capps in the meantime had started for the mine and learned from miners in Lovilia that the bodies of the shot firers had been recovered, but decided to continue to the mine.

Capps arrived at the mine at 10 p.m., just as 2 of the 5 men who entered the mine at 9 p.m. returned to the surface. He supervised rescue and recovery operations that night, and notified Dalrymple and the Duluth office at 6 a.m. of the latest developments. Dalrymple arrived at the mine at 8:30 a.m., March 31, and supervised recovery operations that day. Rescue work was completed before the arrival of additional Bureau personnel.

James A. O'Connor, health and safety engineer, Accident Prevention and Health Division, Region VIII, Bureau of Mines, Vincennes, Indiana, was notified by the Washington office through the Regional Director, Region VIII to report to the mine, and arrived there at 9 p.m., March 31. H. F. Weaver, Chief, Coal Mine Inspection Branch, Health and Safety Division, Bureau of Mines, Washington, D.C., arrived at the mine at 9:30 p.m., March 31.

E. W. Felegy and R. O. Pynnonen, mining engineers, Accident Prevention and Health Division, Region V, Bureau of Mines, Duluth, Minnesota, arrived at the mine at 12:30 a.m., April 1. Two other men from the Duluth office started for the mine March 31 with the mine rescue truck and equipment but returned to Duluth when they were advised enroute that the equipment was no longer required at the mine. All the above-named Bureau of Mines' personnel participated in the investigation of the explosion.

Mine conditions immediately prior to explosion

The mine operated the usual single shift the day of the disaster. No unusual conditions were reported by the fire boss or any underground employees, and so far as is known, the fan had been operating continuously from 4 a.m. All men except the shot firers left the mine before 4 p.m.

Story of explosion

Holes were drilled and charged with pellet black blasting powder on shift in the faces of 13 rooms off 9 and 10 west entries off the main entry and in the face of 7 east entry off the back entry. Two shot firers, one of whom was the mine foreman, remained underground to fire the shots after the end of the shift. Both men were killed in the explosion, and their activities prior to the explosion can only be deduced from observed evidence.

Normal procedure required the shot firers to begin igniting fuses in No. 1 room off 9 west entry and to continue through the six rooms off that entry, cross over into No. 7 room off 10 west entry and work their way back to the main entry, then cross into the back entry to fire the shots in the face of 7 east entry before leaving the mine. That procedure kept them advancing into the air current and apparently was being followed the day of the explosion. All holes except the two in the face of No. 1 room off 10 west entry and three in the face of 7 east entry had been fired when the explosion occurred and killed the shot firers.

The force of the explosion spread throughout the 9 and 10 west entries and rooms and extended 700 feet along the main entries outby that section. Only minor damage resulted in the 9 and 10 west entries. A brattice-cloth check curtain in the main entry between 9 and 10 west entries was destroyed by the explosion, short circuiting the air past those entries. The four gob stoppings between the main and back entries immediately outby 9 west entry were partly or completely blown out into the main entry. A wooden door in the main entry between 7 and 8 west entries was demolished. Ten empty mine cars in the main entry were tumbled about and piled so as to block the entry almost completely. A number of timbers were knocked out at different points in the main and back entries. Roof falls partly blocked the main entry just outby 9 west entry and the back entry near 3 east entry. A roof fall blocked the back entry completely at 6 east entry, and other minor roof falls occurred throughout the affected area.

No definite evidence of the explosion was reported to have been observed on the surface. Three underground employees, X. Lennie, James Love, and Mike Hasso, were waiting on the surface for the shot firers to return. The shot firers usually returned to surface ahead of the main body of smoke from the blasts. The men on the surface observed what they assumed to be smoke from the blast coming up the slope and decided to go down the air shaft to find out why the shot firers had not returned. They entered the air shaft at 4:15 p.m. and found the back entry partly blocked by a roof fall and dislodged timbers near 3 east entry, and completely blocked near 6 east entry. They entered the main entry through a small door near 6 east entry, found additional roof falls and other property damage in the main entry and noticed that the air was contaminated. The men traveled outby on the main entry to a small door near 3 east entry, where they returned to the back entry and left the mine through the air shaft. Lennie called the central telephone operator and told her to summon help because of trouble at the mine.

Recovery operations

Pliny Samuels and Marion Brawdy, chief and asst. chief of the Albia Fire Department, Dr. N. F. Bay, Monroe County coroner, several members of Iowa Highway Patrol, and numerous miners and other persons arrived at the mine shortly after the telephone requests for assistance were made.

Smoke no longer was visible in the return air coming up the slope, and X. Lennie, James Love, and about 15 others entered the mine through the slope at 5:15 p.m. The party stopped at the first blow-out stopping, about 200 feet outby 9 west entry, and one man advanced a short additional distance until he saw the bodies of the two shot firers lying outby 9 west entry. Four more men helped carry the shot firers back to the point where the main party stopped. Lennie returned to the surface and lowered Dr. Bay and Fire Chiefs Samuels and Brawdy, with a resuscitator, down the slope in a mine car. Men underground were giving artificial respiration to one of the shot firers when Dr. Bay arrived and, after examination, pronounced both men dead. The entire party returned to the surface with the bodies of the victims shortly before 6 p.m. Lennie left the mine about 6:30 p.m.; only a few persons were still at the mine at that time.

Tom Wignall, managing partner, Lovilia Coal Company, and Thomas Little and Gerald Lane, partners and mine foremen, Lovilia Coal Company, arrived at the O'Brien mine shortly after 8 p.m., March 30, and after some discussion decided to enter the mine to see what they might determine about the cause and effect of the explosion. They went down the slope and along the main entry as far as the destroyed door between 7 and 8 west

entries, then returned to the surface to obtain a flame safety lamp. D. W. O'Brien, owner and operator of the O'Brien Coal Company, and James Love and A. B. Overturf, motorman and miner respectively at the O'Brien mine, arrived at the mine before Wignall, Little, and Lane reentered. Love previously had helped recover the bodies of the shot firers, and he and Overturf also decided to enter the mine. Wignall and Lane entered the air shaft and Little, Love, and Overturf went down the slope, and the five men met underground.

According to Wignall's testimony at the coroner's inquest, the men were under the impression that flame safety lamps provide adequate warning of all noxious gases encountered in coal mines. The party allegedly split up again, then rejoined at 10 west entry and examined a blown-out shot hole in No. 4 room off that entry. Two men had been there "5 or 10 minutes" when Overturf mentioned he "didn't think the air was too good" and suggested leaving the mine. Wignall and Overturf started toward the main entry, but Lane, Little, and Love started toward the face of 10 west entry. Wignall looked back, saw a light below No. 4 room, and returned to find Little lying on the floor. Wignall attempted to help Little, then realized that he too was losing consciousness, and crawled back to the main entry. Lane and Love could not be seen. Overturf helped Wignall reach the locomotive outby the last obstruction in the main entry, and both men rode the motor to the slope bottom and returned up the slope to the surface.

Wignall told Federal Inspector Capps, who had just arrived at the mine, that three men had been overcome by gas and were still in the mine. Capps requested Wignall to check the operation of the fan and to telephone for help and notify the State mine inspector and W. B. Dalrymple at Centerville. Dalrymple was not notified, but other help began to arrive at 10:35 p.m. and Capps attempted to organize recovery operations. Despite his attempts to explain the hazards involved and the safe procedure to be followed, numerous persons continued to go in and out of the slope until Ray Cooley, sheriff of Monroe County, posted a guard at the slope mouth.

A mine map was obtained and at 11:45 p.m. a rescue crew comprised of Capps, 2 miners, and 3 firemen from the Albia Fire Department equipped with 2 Chemox apparatus entered the air shaft and advanced on intake air toward the working section. Temporary brattice-cloth stoppings were erected across the entrances to 4, 5, and 6 east entries, a roof fell at 6 east entry was partly removed and the roof was retimbered, and four stoppings were repaired between the back and main entries in by 5 and 6 east entries. A check curtain in the main entry between 9 and 10 west entries was found to be destroyed when the party reached that point at 2:25 a.m. A test with a Hoolamite carbon monoxide detector indicated 0.3 percent carbon monoxide at a point 20 feet inside the 9 west entry. James Love's body was visible in 9 west entry at the junction with No. 2 room, and two firemen wearing Chemox apparatus carried the victim to fresh air in the main entry at 2:45 a.m. Difficult traveling and fatigue of crew members made it necessary to leave the body at 5 east entry when the rescue crew left the mine.

Experienced help was not available in the few people who were at the mine when the rescue party returned to the surface, and recovery work was suspended until Dalrymple arrived at the mine at 8:30 a.m., March 31.

Dalrymple organized a crew of 10 men and obtained additional repair supplies, stationed guards at the mine entrances, and entered the mine through the air shaft. The crew advanced in fresh air, removed obstructions in the entries, repaired temporary brattice-cloth stoppings erected by the first crew, and erected additional brattices to ventilate

rooms and dead ends. T. C. Chapman and William Jervis, Iowa State mine inspectors, joined the party at 11 a.m. Ventilation was reestablished in 9 and 10 west entries by 12 noon. Gerald Lane's body was found in 9 west entry 20 feet outby No. 5 room, and Thomas Little's body was found in 10 west entry at the entrance to No. 6 room. The recovery crew returned to the surface with the three bodies at 1:10 p.m. No further work was done in the mine until the investigation on April 1.

INVESTIGATION OF CAUSE OF EXPLOSION

An investigation of the disaster was conducted April 1, 1953, by representatives of the Bureau of Mines, the Iowa State Department of Mine Inspectors, and an employee of the O'Brien Coal Company. The following persons were in the investigating party:

U.S. Bureau of Mines

Roy Capps, Coal-Mine Inspector.
W. B. Dalrymple, Health and Safety Engineer.
E. W. Felegy, Mining Engineer.
James A. O'Connor, Health and Safety Engineer.
R. O. Pynnonen, Mining Engineer.
H. F. Weaver, Chief, Coal Mine Inspection Branch.

Iowa State Department of Mine Inspectors

T. C. Chapman, Inspector.
William Jervis, Inspector.

O'Brien Coal Co.

X. Lennie, Miner.
W. B. Dalrymple and R. O. Pynnonen attended the Monroe County coroner's jury inquest at Albia, Iowa, April 1, 1953. Additional information was obtained April 2 and 3 by Bureau personnel.

Dust and black blasting powder as factors in the explosion

The last Federal inspection of the mine was made October 9, 1952. The mine was found to be in violation of Section 209(e) (3) of the Federal Coal Mine Safety Act. A Notice of Findings was issued the same day stating that the mine was dry and rock dust was not applied, and requiring that the violation be totally abated by April 9, 1953 (see pp. 6 and 7 and appendix E). Recommendations to rock dust the mine according to provisions of the Federal Mine Safety Code were made in five previous inspection reports, the first of which was dated March 15, 1949.

Coal in this mine has a volatile ratio of 0.47, and the coal dust is highly explosive. Dust samples were not collected prior to the day of the disaster, but samples were collected from the roof, ribs, timbers, and bottom at 18 different points in the mine during the investigation. Results of analysis compiled in table 2, show that the incombustible content of all samples was less than the 65 percent minimum specified in the Federal Coal Mine Safety Act. The incombustible content of the dust was less than 40 percent in 10 samples; only 2 samples contained more than 50 percent incombustible material.

A Notice of Findings also issued October 9, 1952 upon completion of the last Federal inspection of the mine, stated that black blasting powder was used to blast coal in the mine and required that this violation of Section 209(h) (5) of the Federal Coal Mine Safety Act be totally abated by January 16, 1953 (see pp. 6 and 7 and appendix D). In nine previous inspection reports, the first dated March 12, 1947, recommendations were made to discontinue the use of black blasting powder and to use permissible explosives or permissible blasting devices according to provisions of the Federal Mine Safety Code.

Flame

No marked evidence of flame attributable to the explosion was found in 9 and 10 west entries or in the rooms turned off those entries. Paper flags marking the fuses of the

unfired shots in No. 1 room off 10 west entry and in 7 east entry were not charred.

Splinters on timbers, and the edges of waxed-paper liners of empty and partly empty explosives containers at many points throughout the entire explosion area were charred, but no completely burned paper was found anywhere. Variation in the degree of charring and the random locations at which the more severe charring occurred made it impossible to trace the course of the flame. All the timbers and many of the discarded containers had been near advancing working faces when those faces were blasted during working periods before the explosion. Flame from black powder shots at those times charred the timbers and containers, and during the investigation it was impossible to determine what part of the charring was attributable to the explosion and what part was attributable to previous blasts.

Definite evidence of flame from the explosion was found in the main entry between 9 and 10 west entries. The fragments of a brattice-cloth check curtain across the main entry at that point were charred severely. The bodies of the shot firers, however, found 45 feet outby the destroyed check curtain, showed no evidence of either flame or violence.

Neither plastic nor crusted coke was found on dust deposits on rib ledges or at any other points in the mine. Coal dust outside the explosion area exhibited the same metallic gray luster observed on dust in the explosion area, indicating that coked particles were not present in the dust in any part of the mine. The absence of coked particles in the mine dust was verified by results of laboratory analysis of samples collected during the investigation and shown in table 2.

Pellet black blasting powder and a few cartridges of permissible explosives were scattered in the vicinity of several containers at different points, but none of the cartridges were burned or charred and there was no evidence that explosives not confined in shot holes had been detonated.

Forces

Appendix B shows the direction of forces and the approximate area of the mine affected by violence. Forces in 9 and 10 west entries were relatively mild. Only a few timbers were dislodged and the gob stoppings between 9 and 10 west entries were undamaged. Light objects such as empty and partly empty wooden or cardboard explosives containers in 10 west entry were blown outby and inby from No. 4 room. Cars spotted in 10 west entry at the junctions with rooms 4, 3, and 2 before the explosion, were moved outby toward the main entry and one car was derailed. Forces into rooms turned off 10 west entry were not evident except in the outer abandoned portion of No. 1 room, where dislodged props, prevented from falling completely by supporting gob material, were canted toward the room face. Evidence of forces in 9 west entry was limited to movement of light objects toward the main entry.

Shot holes had been charged heavily in all working places. Timbers dislodged by the heavy solid shots had fallen toward the room necks; blasted coal in the shorter rooms was thrown into the room necks and through some room necks into the entries. The strong outward force of the face blasts in rooms off both 9 and 10 west entries obscured any indication of lighter forces from the coal-dust explosion moving into the rooms.

The intensity of the force wave increased suddenly when it reached the main entries. Crossbars at the junction of 9 west and the main entry were dislodged, resulting in a fall of roof at that point. A trip of 10 empty mine cars on the sidetrack immediately outby 9 west entry was hurled outby and wrecked. The cars were not heavily damaged but they were tumbled about and piled so as to block the main entry almost completely.

The forces moved outby in the back entry, and the four gob stoppings between the main and back entries immediately outby 9 west entry were partly or completely blown out into the main entry. Forces continued outby in both main entries, dislodging timbers intermittently, and violently demolishing a wooden door across the main entry at 7 west entry. The 7 and 8 west entries had been abandoned since the last Federal inspection and were not sealed; the momentary resistance of the door appeared to have deflected the forces into the abandoned workings. No timbers were dislodged in the mouths of 7 and 8 west entries but pieces of boards and an empty oil drum were blown 25 to 50 feet into the entries. No evidence of force was observed in the main entry outby the shattered door. Dislodged timbers and a roof fall completely blocked the back entry at 6 east entry. The last signs of violence in the back entry were dislodged crossbars and a relatively large roof fall near 3 east entry, 170 feet outby the destroyed door in the main entry between 7 and 8 west entries. Forces in the back entry appeared to have been dissipated in the old workings off 3 and 4 east entries.

Evidence of activities

The day shift was completed and all men except the shot firers were out of the mine. The investigation disclosed that shots had been fired in the 6 rooms off 9 west entry and in 6 of the 7 rooms off 10 west entry. Two holes in the face of No. 1 room off 10 west entry and three holes in the face of 7 east entry were charged but had not been fired.

Probable point of origin

All evidence observed in the investigation indicates that the explosion originated in No. 4 room off 10 west entry. Two blown-out shot holes were found in the solid face of that room, one along the left rib and one along the right rib, and evidence observed in 10 west entry showed that the force of the explosion radiated from the mouth of No. 4 room.

Factors preventing spread of explosion

Analysis of a coal sample collected in the nearby Blackstone mine from the same coal bed mined in the O'Brien mine shows a high ash and moisture content in the coal. The quantity of coal dust observed in the mine passageways was limited, and the coal bed was underlain by a soft fire-clay bottom. The main entry haulageway was wet outby 7 and 8 west entries, and old workings off both the main and back entries permitted expansion of the force of the explosion. All the above-mentioned factors contributed to limiting the spread of the explosion.

Summary of evidence

Appendix B shows the portion of the mine affected by the explosion, the positions of the slope and the air shaft, the normal course of the ventilating current, the probable point of origin of the explosion, the approximate area traversed by flame, the direction of forces and the approximate area affected by violence, the points at which the victims were found.

Explosion forces radiated outward from the mouth of No. 4 room off 10 west entry, and were relatively mild in 9 and 10 west entries. No evidence of violence was observed in the short distances to the faces of the main entries inby 9 and 10 west entries, but the intensity of the forces increased rapidly in the main entries outby 9 and 10 west entries. Maximum violence occurred outby 9 west entry in the main entry where a trip of 10 empty mine cars was wrecked and piled up in the entry. Explosion forces were dissipated in old workings off the main entries outby 9 and 10 west entries, and the farthest limit of violence was 700 feet outby those entries.

Some evidence of flame was observed throughout the area of the mine affected by

the explosion, but variation in the degree of charring and the random locations at which the more severe charring occurred made it impossible to trace the course of the flame. Little evidence of flame attributable to the explosion appeared in 9 and 10 west entries and the rooms turned off those entries and little or no evidence of flame appeared in the main entries inby 9 and 10 west entries. Paper flags marking the fuses of unfired shots in No. 1 room off 10 west entry and in 7 east entry were not charred. Maximum flame intensity was observed between 9 and 10 west entries where a brattice-cloth check curtain across the main entry was destroyed and the curtain fragments were severely charred. Plastic or crusted coke was not found anywhere in the mine, and coal dust in the explosion contained no granular coke particles.

Shots had been fired in the 6 rooms off 9 west entry and in 6 of the 7 rooms off 10 west entry. Two shot holes charged with pellet black blasting powder and fuse, but not fired, were found in the face of No. 1 room off 10 west entry, and 3 similarly charged but unfired shots were found in the face of 7 east entry.

The bodies of the shot firers were found in the main entry 45 feet outby the destroyed check curtain across the main entry between 9 and 10 west entries. The shot firers' unopened self rescuers were lying along the rib in the main entry at the junction with 9 west entry. No burns or evidence of violence appeared on the bodies of the shot firers, although they were found between the point of maximum flame intensity and the point of maximum violence. Apparently the shot firers were in a place protected from flame and violence when the explosion occurred, but whether they were protected by design or chance is purely conjectural. Their movements after lighting the last shots they fired cannot be determined. It is not known whether they took refuge because they expected a shot to blow out in No. 4 room or whether the blown-out shots and the resultant explosion caught them unawares but accidentally in a protected place, whether they started to leave the mine by the back entry intake air course and entered the return air main entry after they found the back entry blocked at 6 east entry, or whether they blindly and by instinct started to leave the mine by their usual route through the return air course and up the slope.

All discharged shots except those in No. 4 room off 10 west entry were effective in moving burden. Two holes in that room blew out.

Appendix C is a large scale sketch of No. 4 room off 10 west entry. One hole was drilled in the solid face along the left rib and one hole was drilled in the solid face along the right rib. Both holes were drilled essentially normal to the face and parallel to the ribs; both the face and ribs were irregular. Opener shots had been prepared at any point in the face between the two rib holes, and all investigators agreed that the two shots in No. 4 room were what locally are termed "impractical" shots. Both holes were heavily overburdened and probably heavily charged. Widely scattered broken coal and extensive timber dislodgment in other rooms blasted the day of the explosion indicated that all holes were charged heavily. Under the conditions of impossibly heavy burden and heavy explosives charges, it was almost certain that the two holes in No. 4 room would blow out, and in fact they did blow out.

Stubs of blasted holes in No. 4 room and in other working places in the mine were examined closely. Short sections of the bottoms of holes blasted with black powder were identifiable in every instance by characteristic cracks or crevices parallel to the long axis of the hole. Holes shot with higher explosives, probably permissible explosives, the only other type found in the mine, were identified by the shattering effect at the bottom of the hole or by the concave recess

remaining when the shattered material was removed.

Four feet of the hole along the left rib in No. 4 room remained intact and the "collar" was coned out to approximately a 12-inch diameter. The hole along the right rib was 5½ feet deep and 1 foot of coal or less had been blown from the "collar" of the hole toward the center of the room. Although little or no burden was moved by the blown-out shots, the hole along the right rib was covered by a quantity of broken coal in the right front corner of the room. It was discovered by Bureau of Mines' investigators only after repeated careful examinations of the room face and ribs. Both holes exhibited the cracks or crevices parallel to the long axis, identified as characteristic of black powder shots.

Analysis of coal samples collected in a nearby mine from the same coal bed mined in the O'Brien mine indicates that the coal in the O'Brien mine has a volatile ratio of 0.47 and that therefore the coal dust is highly explosive.

Heavily charged shots in all rooms off 9 and 10 west entries suspended high concentrations of coal dust in the air throughout the working section before the shots in No. 4 room were ignited. The two blown-out shots in No. 4 room aggravated the dust concentration and greatly increased the air turbulence creating an ideal condition for ignition of the dust cloud by the hot and long enduring flame from the black blasting powder.

High ash and moisture content of the coal, relatively limited dust accumulations in the haulageways, pulverized fire-clay dust from the soft bottom mixed with coal dust in the haulageways, water in the main entry outby 7 and 8 west entries, and pressure release into old workings off both main entries with resultant reduced pressures and temperatures, all contributed to confining the coal-dust explosion to the original dust cloud and preventing propagation of the explosion throughout the rest of the mine.

A test of the atmosphere 20 feet inby the mouth of 9 west entry off the main entry, at 2:25 a.m., March 31, 10½ hours after the explosion occurred, indicated a carbon monoxide concentration of 0.3 percent. The absence of burns or signs of violence on the bodies of the shot firers or on the bodies of the three men who died in the mine about 5½ hours after the explosion indicate that the five fatalities were caused by carbon monoxide poisoning.

The shot firers' unopened self rescuers were found lying along the rib of the main entry at the junction with 9 west entry. It is possible that had they used the self rescuers they might have escaped from the mine.

Statements of 1 of the 2 men who escaped from the mine when 3 other men were overcome by carbon monoxide about 5½ hours after the explosion showed that those men did not know that flame safety lamps cannot be used to detect the presence of dangerous concentrations of carbon monoxide.

Cause of explosion

The explosion was caused by ignition of a cloud of coal dust by two blown-out pellet black blasting powder shots off the solid in the face of No. 4 room off 10 west entry off the main entry.

RECOMMENDATIONS

Recommendations concerning the safe operation of this mine were made in reports of previous Federal inspections, the last inspection having been made October 9, 1952. Recommendations in this report, therefore, are limited to conditions related to this disaster.

Rock dust

1. The mine should be rock-dusted to within 40 feet of all faces, including open

crosscuts less than 40 feet from the faces. The incombustible content of the combined coal dust, rock dust, and other dust should not be less than 65 percent.

Explosives and blasting

2. Black blasting powder in any form should not be used underground. Permissible explosives or permissible blasting devices should be used, in a permissible manner.

3. Shooting off the solid should be discontinued. Solid coal should be cut so as to provide at least two free faces before blasting.

Miscellaneous

4. Mine officials and employees in this area should be trained in accident prevention and in mine rescue and recovery operations. The Bureau of Mines training courses include instruction on the occurrence, composition, and detection of mine gases. A central mine rescue station should be maintained to serve the area.

5. The use of open flame lights in this mine should be discontinued; only permissible electric lamps should be used for portable illumination underground.

ACKNOWLEDGEMENT

Valuable assistance was rendered in recovery operations by members of the Iowa Highway Patrol, the Albia Fire Department, the Monroe County coroner, and sheriff, and mining company employees. Acknowledgement is made to the Iowa State Department of Mine Inspectors, to the mining company, and particularly to X. Lennie, miner at the O'Brien mine, for their cooperation in conducting the investigation.

APPENDIX A.—VICTIMS OF EXPLOSION, O'BRIEN MINE: O'BRIEN COAL CO., LOVILIA, MONROE COUNTY, IOWA, MAR. 30, 1953

Name	Age	Occupation	Years' experience	Dependents
Harold Barnes.....	37	Mine foreman and shot firer	17	1
Ben Nichols.....	47	Shot firer	30	1
Gerald Lane.....	59	Mine foreman	40	2
Thomas Little.....	48	do	25	1
James Love.....	55	Motorman	35	1

[Form B]

NOTICE OF FINDINGS: FOR GRANTING REASONABLE TIME

U.S. DEPARTMENT OF THE INTERIOR,
BUREAU OF MINES,
October 9, 1952.

To the operator of the O'Brien mine, O'Brien Coal Company, Lovilia, Monroe County, Iowa.

Notice is hereby given that the undersigned Federal coal mine inspector finds that the following provision of Sec. 209 of the Federal Coal Mine Safety Act is being violated in the above-named mine. Violation: Sec. 209(d) (8).

In nongassy mines, a preshift examination, as prescribed in the Act shall be made at least once each calendar day during which coal is produced. Such examination shall be made within 4 hours immediately preceding the beginning of the first coal-producing shift on such day.

Description of conditions: A preshift examination, as prescribed in the Act, was not made of this mine on the days that coal was produced, within 4 hours immediately preceding the beginning of the first coal producing shift on such day.

The undersigned inspector finds that a reasonable time within which the foregoing violation of Sec. 209 should be totally abated is by January 16, 1953.

W. B. DALRYMPLE,
Federal Coal Mine Inspector.
DULUTH, MINN.

NOTICE OF FINDINGS: FOR GRANTING REASONABLE TIME

U.S. DEPARTMENT OF THE INTERIOR,
BUREAU OF MINES,
October 9, 1952.

To the operator of the O'Brien mine, O'Brien Coal Company, Lovilia, Monroe County, Iowa.

Notice is hereby given that the undersigned Federal coal mine inspector finds that the following provision of Sec. 209 of the Federal Coal Mine Safety Act is being violated in the above-named mine.

Violation Sec. 209(h) (5).

Black blasting powder shall not be stored, handled or used underground in a mine.

Description of conditions: Black blasting powder was used in this mine to blast coal.

The undersigned inspector finds that a reasonable time within which the foregoing violation of Sec. 209 should be totally abated is by January 16, 1953.

W. B. DALRYMPLE,
Federal Coal Mine Inspector.
DULUTH, MINN.

NOTICE OF FINDINGS: FOR GRANTING REASONABLE TIME

U.S. DEPARTMENT OF THE INTERIOR,
BUREAU OF MINES,
October 9, 1952.

To the operator of the O'Brien mine, O'Brien Coal Company, Lovilia, Monroe County, Iowa.

Notice is hereby given that the undersigned Federal coal mine inspector finds that the following provision of Sec. 209 of the Federal Coal Mine Safety Act is being violated in the above-named mine.

Violation Sec. 209(e) (3).

All underground mines, except those mines or areas of mines in which the dust is too wet or too high in incombustible content to propagate an explosion, shall be rock-dusted to within 40 feet of all faces, and, if open crosscuts near such faces are less than 40 feet therefrom, such crosscuts shall be rock-dusted.

Description of conditions: The mine was dry and rock dust had not been applied.

The undersigned inspector finds that a reasonable time within which the foregoing violation of Sec. 209 should be totally abated is by April 9, 1953.

W. B. DALRYMPLE,
Federal Coal Mine Inspector.
DULUTH, MINN.

FINAL REPORT OF MAJOR MINE-EXPLOSION DISASTER, MINE NO. 2, BLUE BLAZE COAL COMPANY, HERRIN, WILLIAMSON COUNTY, ILLINOIS, JANUARY 10, 1962

(By F. J. Smith, District Supervisor; J. R. Summary, Federal Coal-Mine Inspector; C. M. Dovidas, Federal Coal-Mine Inspector; S. J. Douglas, Federal Coal-Mine Inspector, Electrical)

INTRODUCTION

A gas and dust explosion occurred in Mine No. 2 of the Blue Blaze Coal Company, 2 miles northwest of Herrin, Illinois, about 6:30 p.m., Wednesday, January 10, 1962, and caused the death of 11 men. These eleven were the only persons in the mine and all died from suffocation, burns and/or forces.

The names of the victims, their ages, marital status, occupations, and the number of dependents are listed in Appendix "A" of this report.

Bureau of Mines investigators believe the explosion originated in room 2 off 3 north entry at the neck of the second north crosscut when an explosive mixture of methane-air was ignited by an electric arc or spark from a piece of electrical equipment. The explosion was propagated by methane and coal dust.

Forces of the explosion radiated from room 2 off the 3 north entry and spread west and north, south and west towards the main

shaft, and west and south into the holed-through abandoned sealed north working section at room 1 off the 1 north entry. All of the forces converged at the bottom of the main shaft, traveled up the shaft and dispersed upon reaching the surface.

GENERAL INFORMATION

Mine No. 2 is located 2 miles northwest of Herrin, Williamson County, Illinois. Coal was transported from the mine in autotrucks.

The operating officials of the company were as follows: Claud Gentry, Owner, Route 2, Carterville, Illinois; Virgil E. Woodburn, Mine Manager and Day Shift Leader, Cambria, Illinois; Ray Woodis, Night Shift Leader, Herrin, Illinois.

On January 10, 1962, a total of 30 men was employed; 6 on the surface and 24 underground on two coal-producing shifts. The average daily production was reported to be 280 tons of coal. The mine is opened by a concrete-lined shaft 168 feet deep and a 16-inch cased pilot hole which was primarily used as a refuse hole for the blasted strata for the enlargement of the air shaft. The workings are in the Illinois No. 6 coal bed, which averages 106 inches in the present mining area and dips very slightly to the north and east.

In 1956 a 7- by 10-foot concrete-lined slope was driven near the present side of the cased pilot hole for the proposed 6-foot circular air shaft. The slope was driven to a depth of 210 feet and collapsed unexpectedly, due to caving ground and an inrush of what is locally referred to as quicksand. Plans for opening the mine were suspended until April 23, 1959, when ground was broken for the present hoisting shaft. The hoist or main shaft was completed November 24, 1960; however, the further development of the mine was temporarily halted until the surface structures were erected. Coal on one shift was first produced July 30, 1961, and continued to be produced intermittently until the day of the explosion. A full crew on the second shift started to produce coal nine working shifts prior to the disaster.

The partly completed air shaft, located 520 feet east of the main shaft, was started November 7, 1961. The 6-foot circular steel-lined air shaft had been driven periodically to a depth of 70 feet below the surface soil and to within 74 feet of the coal bed at the time of the explosion.

The immediate roof is a medium-firm gray shale which is about 12 inches in thickness, overlaid by 12 feet of hard shale, 3 to 5 feet of limestone, and by 49 feet of sandstone, successively. The immediate roof disintegrates after it is exposed to the mine atmosphere, and to protect it from weathering approximately 12 to 18 inches of top coal is left. The floor is a smooth soft fire clay that also disintegrates when exposed to the mine atmosphere.

The analysis of a coal sample from the Illinois No. 6 coal seam obtained from a coal company located in the immediate vicinity is as follows: Moisture, 7.2 percent; volatile matter, 34.8 percent; fixed carbon, 51.0 percent; ash, 7.0 percent.

Numerous tests conducted by the Bureau of Mines have shown that coal dust having a volatile ratio of 0.12 is explosive and that the explosibility increases with an increase in the volatile ratio. The volatile ratio of coal in this mine as determined from the aforementioned analysis is 0.40, indicating that the dust is explosive.

A Federal inspection had not been made of this mine prior to the disaster. A Bureau of Mines roof-bolt representative visited the mine and issued a roof-bolt plan on July 31, 1961, but the mine was idle on several occasions when a Federal inspector visited it or contacted some of the employees to determine if the mine were in operation. The mine did not come under the provisions of Title II of the Federal Coal Mine Safety Act

until January 1962, by virtue of the fact that less than 15 men were employed underground until that time.

MINING METHODS, CONDITIONS, AND EQUIPMENT

Mining Methods: The mine was being developed by a panel, room-and-pillar method and pillars were not extracted. Main entries were driven in sets of seven, 16 feet wide on 50-foot centers. Room-panel entries were being driven 16 feet wide on 50-foot centers in sets of 2 and 3 at various intervals. The first room crosscuts were used as shuttle-car roadways and were referred to as entries by the management. Rooms were driven 18 to 22 feet wide on 50-foot centers to various depths, and crosscuts were generally 18 feet wide and 60 feet apart.

The mine is surrounded by worked-out mines and provisions had been made in the projected development to allow 200 feet of coal for a barrier pillar between the mine and abandoned properties.

Bolts were used exclusively for roof support throughout the mine, and with one exception, were being installed according to the recommendations of the Bureau's roof-control representative.

A loading-machine unit was operated on each of the two coal-producing shifts.

Blasting: All coal in the mine was undercut by a rubber-mounted cutting machine and was broken down on shift by means of compressed air. Explosives were not used underground.

Ventilation and Mine Gases: Ventilation was induced by a 24-inch, electrically driven, centrifugal fan operated blowing and circulating approximately 7,500 cubic feet of air a minute. The fan was operated continuously and was installed on the surface, offset a few feet from the main shaft and was attended constantly. Room-panel and temporary stoppings were normally constructed of lumber covered with wood fiber; however, brattice cloth was used occasionally for temporary stoppings until replaced by lumber. No doors were used in the mine; however, two double-thickness brattice cloth curtains were suspended from a wooden frame near the shaft bottom. Permanent stoppings were built of concrete blocks.

The air was directed into the mine through a 22½-inch metal air duct which extended from the fan down the hoist shaft and through a circular hole in the poured concrete lining of the shaft. The air duct was constructed of a series of empty 55-gallon capacity oil drums that were joined by welding after the ends were removed from the barrels.

A split system of ventilation was used in this mine. A small split of air ventilated the temporarily idle main west section and a larger split was ventilating the active working area which included the 1, 2 and 3 north room-panel entries and the main east entries. The air entering the mine through the cased pilot hole of the air shaft combined with the air returning from the north entries and returned out the main east haulage and parallel entries and up the hoist shaft. No air readings were recorded in the mine examiner's book.

The mine was not classified gassy by the Illinois Department of Mines and Minerals. Preshift examinations were made of the entire mine for gas and other hazards by the mine manager and night shift leader for their respective shifts. On-shift examinations were made by the mine manager for gas and other hazards during the day shift; however, an on-shift examination apparently was made only for other hazards on the night of the explosion, since a flame safety lamp was not found in the mine during the investigation. The mine manager did state that he thought he detected gas in a roof cavity about three months prior to the day of the disaster; however, it was not noted

in the record book. The analysis of air samples collected during State inspections of the mine showed a maximum methane content of 0.08 percent. There were no known oil or gas wells penetrating the coal bed in the area being worked.

Dust: The mine in general was dry, but water was present on the floor in the main east entries in by the north working section and in 6 and 7 east air course entries out by the north working section. The entire north working section was dry and dusty. Loose coal and coal-dust accumulations were present along the main east haulage road, at the hopper near the main shaft and throughout the north working section. Rock dust was applied daily by hand and the main entries had been rock-dusted by machine.

During the investigation, 20 mine-dust samples were collected in the main east and north entries and all of them contained less than 65 percent incombustible (see Table 2). A sample for coke was collected in room 2 off 3 north entry at the second north crosscut where the explosion was believed to have originated and at the junction of main east track entry and 2 north. The mine-dust samples collected were not representative of mine conditions prior to the explosion, as coal dust thrown into suspension and deposited on the rock-dusted surfaces increased the combustible content.

Transportation: Eight-ton Jeffrey trolley locomotives were used to haul the 8-ton, all-steel, drop-bottom-type coal cars from the north working section to the coal hopper located south of the main shaft. The coal was then loaded into a 5-ton skip and hoisted to the surface where it was prepared for domestic trade and for resale to another coal company.

Electricity: Power was purchased at 4,160 volts, three phase, and was transformed to 440, 220, and 110 volts for use on the surface and underground, with the exception of the surface motor generator, which operated at 4,160 volts on the primary side. Alternating current equipment underground consisted of a coal conveyor at the shaft bottom, and two water pumps, all 440-volt type. Direct-current power was generated at 250 volts by a 400 kilowatt conversion unit located in the hoist house. Direct current was transmitted into the mine by two plastic pipe-enclosures 1,000,000 circular mil copper cables installed in an 8-inch cased borehole. Power was transmitted along the motor roads and face region by 320,000 circular mil (6/0) trolley wire and 750,000 circular mil feeder lines, all well installed on insulators.

Face equipment consisted of a Joy 11BU loader, Joy 10SC shuttle car, Joy 10RU cutting machine, Joy CD41 coal drill, and a Jeffrey 56 RDR roof-bolting machine, all operated from the direct-current system. Face equipment was permissible with the exception of the roof-bolting machine, which lacked only an approval plate. Face equipment was fairly new and maintained in a permissible condition. The 10SC shuttle car contactor enclosure cover had been removed by the second shift which exposed a considerable array of electrical arcing devices, and repair work was in progress at the time of the explosion. Upon inspection it was discovered that a main contact on one of the tram reversing contactors would not close, therefore, the shuttle car could have only trammed towards the face on one motor at high speed and tramping would have been possible at low speed in the same direction. The 10SC shuttle car is a four-wheel drive type with a tram motor mounted on each side and each tram motor driving the two wheels on its respective side. Jockeying the shuttle car near the loader with the described fault would have been difficult as the car would have jumped on forward tram and probably frequently outed the overloaded relay. The regular mechanic was not working on the night of the explosion and repair work on

the shuttle car was being done by members of the face crew, who apparently were not experienced in such work. This fact was self-evident when it was discovered that they had started to disassemble the wrong contactor. Under such conditions it was customary at this mine to try the equipment with the power on, with one person observing the contactors. The removal of the enclosure cover would provide several gas ignition sources which could have and probably did provide the primary ignition, as there was evidence that gas had burned in the enclosure.

Face equipment controller positions were checked after the ignition and all equipment was in an "off" position, except the coal drill which was apparently drilling at the time. Trailing cables were not provided with short-circuit protection at the nip ends, except the loader which had a 300-ampere fuse type nip. Temporary splices in trailing cables ranged in number from none to eight; all were fairly well made with the exception of one splice in the shuttle car cable which was bare. Trailing cables were listed as fire resistant, with the exception of some 75 feet of cable on the roof-bolting machine.

Illumination and Smoking: Permissible electric cap lamps were used for portable illumination underground, and fixed electric lights were installed at the underground shop, at the hopper and at frequent intervals along the haulage roads. Smoking was prohibited underground; however, smokers' articles were listed among the personal effects of one of the explosion victims. A damaged and corroded cigarette lighter was also found on the main east haulage road near the coal hopper but apparently it had been discarded sometime before the explosion.

Mine Rescue: A mine rescue team was not maintained at the mine and none of the mine personnel had been trained in mine rescue work in recent years. The nearest State-maintained mine rescue station and mine rescue teams were at Benton, Illinois, about 17 miles from the mine. Other State-maintained teams were from 20 to 178 miles away and were available. Each rescue station is equipped with the necessary gas-detection devices, McCaa 2-hour self-contained oxygen breathing apparatus, Chemox ¾-hour oxygen-generating breathing apparatus, and all-service gas masks. A box containing 6 self rescuers was kept underground in the shop near the shaft bottom. The underground employees were not searched for smokers' articles before entering the mine.

Two travelways, one of which was in intake air, were provided from the working section to the main shaft bottom; however, the main shaft was the only way out of the mine to the surface. A check-in and check-out system was in effect, and the men used assigned numbered electric cap lamps as a means of identification while underground.

Several fire extinguishers and rock dust were available on the surface and underground for fire-fighting purposes. Water furnished by the city of Herrin was also available on the surface for fire-fighting purposes.

STORY OF EXPLOSION AND RECOVERY OPERATIONS

Participating Organizations: These include the Blue Blaze Coal Company, the Illinois Department of Mines and Minerals, United Mine Workers of America and U.S. Bureau of Mines.

The following Illinois State mine rescue teams assisted with the recovery operations: Benton No. 1 and No. 2, DuQuoin and Eldorado.

Activities of Bureau of Mines Personnel: A representative of Mine Safety Appliances Company, Benton, Illinois, notified J. R. Summary, Federal coal-mine inspector, Benton, Illinois, of the explosion about 8:25 p.m., Wednesday, January 10, 1962. Mr. Summary immediately notified F. J. Smith, District

Health and Safety Supervisor, District E, who with Harry Schrecengost, Technical Assistant, U.S. Bureau of Mines, Washington, D.C., was on a special assignment in Benton, Illinois, at the time of the occurrence. Mr. Smith then relayed the information to other Bureau of Mines personnel. F. J. Smith, Harry Schrecengost and J. R. Sumary left Benton, Illinois, at about 8:45 p.m., and arrived at the mine about 9:20 p.m. Federal Inspectors B. J. Dona, M. R. Messersmith, C. M. Dovidas, S. J. Douglas, J. A. McCune, J. P. Sheridan and Louis Lorenzo arrived at various times between 10:30 p.m., January 10 and 2:15 a.m., January 11. James Westfield, Assistant Director—Health and Safety, and R. W. Whitaker, Federal coal-mine inspector, arrived about 2:30 p.m., January 11. Federal inspectors H. E. Basinger, Brank Beck, J. R. Laird and J. A. Mower, stationed at Madisonville, Kentucky, arrived Sunday afternoon, January 13, and assisted in restoring ventilation in the mine to permit an investigation of the disaster the following day.

The bodies of the 11 victims were recovered at various times during the night of January 11 by rescue teams using oxygen-breathing apparatus, and by 12:40 a.m., January 12, all bodies were removed from the mine.

Mining Conditions Immediately prior to the Explosion: The weather on January 10, 1962, from 7:00 a.m., until noon consisted of scattered clouds and from 1:00 p.m., to 4:00 p.m., it was clear. The temperature at Herrin, Illinois, airport during this period ranged from 4 degrees below zero at 6:00 a.m., to 6 degrees above zero.

Records of barometric pressure on January 10, 1962, are as follows:

BAROMETER READINGS, JAN. 10, 1962

[The accepted standard barometer reading at the mine is 29.80]

Time	Barometric pressure	Time	Barometric pressure
1:00 a.m.	30.15	1:00 p.m.	30.30
2:00 a.m.	30.17	2:00 p.m.	30.30
3:00 a.m.	30.19	3:00 p.m.	30.30
4:00 a.m.	30.20	4:00 p.m.	30.30
5:00 a.m.	30.20	5:00 p.m.	30.30
6:00 a.m.	30.20	6:00 p.m.	30.30
7:00 a.m.	30.20	6:30 p.m.	(¹)
8:00 a.m.	30.20	7:00 p.m.	30.30
9:00 a.m.	30.25	8:00 p.m.	30.30
10:00 a.m.	30.30	9:00 p.m.	30.30
11:00 a.m.	30.30	10:00 p.m.	30.30
Noon	30.30	11:00 p.m.	30.30
		Midnight	30.30

¹ Time of explosion.

At noon on January 9, 30½ hours prior to the time of the explosion, the recorded barometric pressure was 30.00 and it continued on a gradual rise until a high of 30.30 was recorded at 10:00 a.m., January 10, 1962, after which it leveled off and remained steady until midnight. The atmospheric pressure was not a contributing factor in the explosion. The mine was in operation at the time of the explosion and had been on an 8:00 a.m., and 4:00 p.m., operation since Monday, January 8, 1962. The fan was operating and the mine examiners did not record any unusual conditions in the mine.

Evidence of Activities and Story of Explosion: At the beginning of the 4:00 p.m., to midnight shift on January 10, eleven men entered the mine and all the men except the cager and two motormen walked to the working section. The underground employees reached the working section presumably without mishap, and all the coal-producing workmen had been in face of regions approximately 2½ hours when the explosion occurred. Conditions found after the explosion indicated that coal was being produced as usual. The mine examiner's record book at the mine showed a preshift examination of the entire mine had been made for the oncoming shift. Methane was not reported and

the air was traveling in its normal course and quantity.

Normal operating procedure at this mine required all the day shift crew to be on the surface, except the mine manager, before the afternoon crew was permitted underground. The hoisting engineer on the afternoon shift stated that on January 10, 1962, at about 3:30 p.m., after all the crew was lowered, normal operation of the mine followed.

A trip of coal was being hoisted out of the mine and at approximately 6:25 p.m., the skip was lowered to the bottom and was stopped for about a minute when he heard a whirring and hissing sound similar to a short-circuit in high voltage power cable, followed by a terrific vibrating sound. The generator set was only a few feet from the hoist controls and, being concerned about the high voltage power, he pulled the power cut-off switch on the generator, stopping the set. Upon turning around he observed the hoisting cables vibrating, followed by a jet black column of smoke or dust pouring out of the shaft accompanied by a deafening whirring and vibrating sound. After waiting a few minutes he walked outside and around the corner of the hoist house and disconnected the 440-volt power to the mine. He walked back into the building housing the hoist, bath room, supplies and air compressor. The Airdox compressor was still in operation, and he then tried to call underground by telephone but could not get an answer. Realizing then that an explosion had occurred, he shouted from the hoist room door to the topman who was in the mine office to call the owner of the mine and tell him there had been an explosion in the mine. The owner-operator returned to the mine immediately and assisted in the recovery operations.

During the development of the main east entries toward the proposed air shaft, a set of north entries was driven to a depth of about 312 feet, with 5 rooms driven off to the west approximately 165 feet in depth and 4 rooms driven off to the east to a depth of about 87 feet. This was to provide storage room for rock and refuse that was dropped down the 16-inch pilot hole when sinking the 6-foot diameter air shaft. The panel was abandoned because of the distance and time it took to haul refuse from the shaft to unload in the panel, and because the panel would have to be ventilated and inspected it was closed January 7, 1962, by concrete-block stoppings. To facilitate the sinking of the air shaft and to offset the operating cost, the 1, 2 and 3 north room-panel entries off 7 main east were driven to increase production and to provide a closer area for storing the refuse from the shaft sinking operation.

All coal was mined with conventional mobile electric equipment, and the coal drill was the only piece of face equipment in operation when the explosion occurred. The roof-bolting machine was parked in No. 2 room off the 1 north while the face of the place was being broken down by compressed air by the shooter and the roof-bolt drill operator who occasionally helped the shooter. The explosion forced the drill boom of the roof-bolting machine about 8 inches into the partly broken down fall of coal, and the shooting shear strip was perforated in the shooting shell found in the bottom hole on the left side of the face. The bodies of the shooter and roof-bolt operator were found alongside of the roof-bolting machine. The mining machine was parked about 25 feet from the undercut face of No. 2 room off 3 north and had many new bits set in the cutter chain. The idle loading machine waiting for the shuttle car under the boom of the loader to be repaired was in the second crosscut north off No. 2 room off 3 north. The coal-drill operator was drilling the first hole in the last crosscut being driven east off 3 north, and the loading

machine used to load rock and material from the air shaft sinking operations was parked on 3 north entry between 4 and 5 main east entries. All the controls of the face equipment were in the "off" position, except the coal-drilling machine. The 8 bodies of the victims in the 1, 2, and 3 north working section were found near their working places, except the shift leader whose body was found on 2 north entry about 25 feet from the end of the track and near the nipping station. One of the mining machine men was found near the spare rock and material loading machine, one motorman was found near the east end of the coal hopper at the hoisting shaft, the other motorman was in an empty coal car next to the motor on the 3 east haulage road about 80 feet from the coal hopper, and the bottom man or cager was found near his station at the skip hopper loading conveyor on the south side of the hoisting shaft. The victims died from one of the following causes: Burns, inhaling hot gases, lack of oxygen, or violence.

The day shift mine manager and shift leader stated that on January 10, he knew the No. 1 room off 1 north was near the closed abandoned north workings. He instructed the afternoon shift leader not to cut the face but did not take further action to assure that his oral instruction was followed. Sometime after the 4:00 p.m. shift started to work the closed abandoned north workings were penetrated by an opening of about 90 square feet by cutting and breaking down the coal in No. 1 room off 1 north permitting methane to enter into the air current ventilating the 1, 2, and 3 north working section. The gas then was apparently ignited by an electric arc or spark while repairs were being made in the control panel of the shuttle car. The cover was removed from the control box, the repairman's tools were nearby, and there was evidence of burning in the control compartment. The shuttle car was positioned behind the loading machine in the second crosscut left in room 2 off 3 north and extended part way into the intersection.

From the written report made in the mine examiner's record book, dated January 10, 1962, a preshift examination of the mine was made for the day and afternoon shifts and indicated the mine to be in safe condition. Testimony of day shift workmen was to the effect that tests for methane were frequently made on shift by the mine manager. The day shift mine manager stated he handed a flame safety lamp to the afternoon foreman, but no lamp was found underground.

The explosion destroyed all the stoppings underground. Only minor damage was done to the trolley, power feeder wires, telephone lines and the 3 locomotives near the hoisting shaft. The face equipment appeared to be in good condition, except for the burnt seats on the shuttle car and a seared tire on the mining machine. The major damage was done in the immediate vicinity of the shaft bottom, shaft, and to the coal skip which was at the shaft bottom.

The explosion resulted in the loss of production from the entire mine. The Closure Order on the entire mine issued January 11, 1962, remains in effect.

Recovery Operations: Claud Gentry, owner, after informing Ray McCluskey, district State mine inspector, of the explosion proceeded to the mine. Immediately after arriving at the mine, Gentry and McCluskey viewed the damage and discussed what was to be done to get underground as quickly as possible. While calls were being made for State mine rescue teams and other emergency units, work on installing a temporary auxiliary fan operating exhausting at the 16-inch pilot hole at the proposed air shaft was started to establish temporary ventila-

tion underground, because the metal tubing from the main fan installed in the hoisting shaft was destroyed by the explosion. Considerable delay was encountered in hoisting and removing the coal skip from the damaged shaft and arranging for other temporary hoisting equipment. A truck-mounted winch was obtained and a small cage with enclosed sides that could accommodate two men was fastened to the winch rope and swung into the shaft. The fan at the air shaft was exhausting about 2,500 cubic feet of air a minute, and to increase the ventilation another auxiliary fan operating exhausting was set in parallel, increasing the quantity of air to about 3,500 cubic feet a minute. Numerous difficulties were encountered in getting on and off the 2-man cage at the surface and shaft bottom. At approximately 11:45 p.m., the lowering of rescue team members wearing oxygen-breathing apparatus began, and about 4:00 a.m., January 11, all bodies were accounted for. There were no survivors. In the meantime, an auxiliary blower fan with 18-inch tubing was obtained and the tubing was extended down to the shaft bottom landing to ventilate the immediate area around the bottom. This fan was capable of producing about 4,000 cubic feet of air a minute.

At about 11:10 p.m., January 11, the first body was brought to the surface and by 12:40 a.m., January 12, all bodies were hoisted out of the mine. On January 13, to facilitate the transportation of men and material into the mine, a triple deck construction cage that had been used when sinking the shaft was put into operation, utilizing the main hoist. On January 14, a voluntary crew of 13 men wearing gas masks, when the occasion required, constructed semi-permanent stoppings so that the small quantity of air available would clear the mine enough to conduct an investigation.

INVESTIGATION OF CAUSE OF EXPLOSION

Investigation Committee: The underground investigation of the cause of the explosion was begun on January 15, 1962. Members of the official investigation committee were:

Illinois Department of Mines and Minerals: William J. Orlandi, Director; Harold V. Richmond, Inspector At Large.

Illinois Mining Board: H. E. Mauck, Member.

Blue Blaze Coal Company: Claud Gentry, Operator and Owner.

United Mine Workers of America: Floyd Morris, Special Representative, District No. 12.

United States Bureau of Mines: James Westfield, Assistant Director, Health and Safety; F. J. Smith, District E. Supervisor.

Other representatives of the aforementioned organizations participated in different phases of the underground investigation of the disaster. Bureau of Mines representatives included: Messrs. B. J. Dona, M. R. Messersmith, J. A. McCune, J. P. Sheridan and Louis Lorenzo.

William J. Orlandi, Director of the Illinois Department of Mines and Minerals, conducted an official hearing on the investigation of the explosion by interrogating the owner-operator, day shift mine manager and employees of the company at the Mines Rescue Station, Benton, Illinois, January 18, 1962. The purpose of the hearing was to hear and record all testimony relevant to conditions and practices in the mine prior to and on January 10, and to determine therefrom, if possible, the cause of the explosion. Some of the information thus obtained is included in this report. Representatives of the United Mine Workers of America, Illinois Department of Mines and Minerals, U.S. Bureau of Mines, and the mine owner-operator participated in the questioning of witnesses.

Methane as a Factor in the Explosion: The mine was not classed gassy by the Illinois Department of Mines and Minerals. Report-

edly, methane was never detected in the mine with a permissible flame safety lamp, except for the one time that the mine manager thought he might have found a very small amount in a roof cavity. This trace of methane was detected in one of the east entries just after breaking away from the shaft bottom about 150 feet. The analyses of air samples collected during State inspections of the day shift mine manager and employees was that gas had not been detected during recovery operations. The analyses of 9 air samples collected at various locations underground after recovery operations had been completed and during the investigation showed the maximum amount of methane to be 0.40 percent. The maximum quantity of air the fan was producing was estimated to be approximately 7,500 cubic feet a minute. No written record of air measurements taken underground was available at the mine.

Fragile, globular coke droplets adhering to the roof and ribs, indicative of burning gas, were found on the south rib of the second crosscut from the face of No. 2 room off 3 north, the west rib of 3 north entry between the last open crosscut and the crosscut being driven between 2 and 3 north entries, the north rib of the last open crosscut between 2 and 3 north entries and the east rib of the last open crosscut between Nos. 2 and 3 rooms west of the closed abandoned north workings. Soot streamers were found about 100 feet east of the main hoisting shaft, in the abandoned north entries, 1, 2 and 3 north working section and to within about 200 feet of the faces of the main east entries.

Obviously, methane that was released by cutting into the closed abandoned north workings entered the ventilating current and was ignited by an electrical arc or spark while repairs were being made in the shuttle car control panel in No. 2 room off the 3 north.

Flame: Evidence of heat and flame, in the form of coke, soot or partly burned paper, canvas and wood, was observed in the north working section, in the abandoned north entry panel, in the main east entries about 100 feet inby and about 350 feet outby the north working section. (See Appendix B).

A total of 22 mine-dust samples, including two for coke only, was collected after the explosion, starting at a line across the 7 east entries about 100 feet inby the shaft bottom and continuing along the east entries at various intervals and into the main north working section to within about 100 feet of the north entry working faces. (See Tables 2 and 3 and Appendix B). The presence of coke in the mine-dust samples is one of the criteria by which extent of the flame was fixed, even though it is possible that such coke in the main east entries may have been blown there. All of the samples collected contained coke ranging in quantities from small to very large, and the two samples collected specifically for coke contained large and very large amounts. Coke was plastered on the roof and ribs at and near the intersection of the 3 east and 2 north haulage roads. Extremely heavy coke was evident in the 3 north entry inby the last open crosscut to within 50 feet of the face and in the last open crosscut between Nos. 2 and 3 north entries. A small amount of coke was observed on the east rib in the last open crosscut between rooms 2 and 3 which were driven west of the abandoned closed north entries.

Forces: Difficulty was not experienced in discerning the direction of forces. Coking and evidence of slow burning gas were on the roof, ribs and equipment at and near the intersection of room 2 and the blind crosscut in room 2 being driven towards room 3. The emanation of forces was from this area outward and extended throughout the entire mine, converged at the main shaft bottom, continued up the shaft and upon reaching the surface dispersed into the atmosphere. The only evidence underground of extreme

violence was observed at and near the bottom of the main shaft. All of the stoppings were blown out. The stoppings in the north entries were driven in a westerly direction and with the exception of one, all concrete-block stoppings were blown in a southerly direction.

Probable Point of Origin: The consensus of the Bureau of Mines investigators is that the explosion originated at the last crosscut turned north off No. 2 room off 3 north where the shuttle car was being repaired.

Factors Preventing Spread of Explosion: The explosion spread throughout the mine and out the shaft, dissipating into the atmosphere.

Summary of Evidence: Conditions observed in the mine during recovery operations and the investigation following the disaster, together with information obtained from company officials, State mine inspector, workmen, and mine records, provided evidence as to the cause and the point of origin of the explosion. The evidence from which the conclusions of the Federal investigators are drawn is summarized as follows:

1. Records of the preshift examinations of the mine indicated no unusual conditions.

2. The Illinois No. 6 coal bed in the area is "gassy." All abandoned mines surrounding this mine were classed gassy.

3. The roof bolter was apparently assisting the shooter prepare coal in room 2 off 1 north since this was common practice. The shearing strip in the Airdox shell indicated that the shell was discharged prior to the explosion.

4. The roof bolt machine was apparently parked in the 1 north entry at room 2 and the forces of the explosion rammed it into the loose coal at the face of room 2. The chuck of the roof bolt drill was imbedded about 8 inches into the partially blasted coal face. The shooter and roof bolter were the only persons working in the rooms off the 1 north entry.

5. The coal drill was the only piece of electrical face equipment in operation at the time of the explosion and had drilled a top hole about 4 feet in depth in the right corner of room 4 off the 3 north entry.

6. The mining machine was not in operation. It had been pulled back about 25 feet from the recently cut face of room 2 off 3 north and apparently the operator and his helper had just changed bits and were waiting to undercut the crosscut after the coal was loaded out.

7. The loading machine operator had loaded about 2 shuttle cars of coal out of the crosscut in room 2 and repositioned his loading machine and loaded about 500 pounds of coal into the shuttle car when he stopped loading to assist in repairing the disabled car.

8. The shuttle car was being repaired. The control panel cover had been removed, exposing contactors which readily would provide a source of ignition with the trailing cable connected to the source of power.

9. The workmen trying to repair the shuttle car apparently deenergized the power before work was done on the machine. The shift leader found near the nipping station may have energized the power to the shuttle car for test purposes, which in turn may have created the arc or spark within the open control panel.

10. On-shift examinations for gas were apparently not always made, since a flame safety lamp was not found in the slightly damaged north working section after the explosion.

11. Methane probably entered the ventilating current from the abandoned closed north panel which was holed-through shortly after the start of the 4:00 p.m., shift and was carried by the ventilating current to where repairs were being made on the shuttle car.

12. Boreholes were not drilled in advance

of the face when No. 1 room off the 1 north entry was being driven by the second shift crew within 50 feet of the abandoned north panel.

13. All forces emanated from room 2 off the 3 north entry.

14. Face equipment was fairly new, and with the exception of the roof-bolting machine which lacked only an approval plate, all the equipment was in permissible condition.

15. The coal is highly volatile, and the mine surfaces were dry, except at a few locations.

16. Coal dust in the immediate area entered into the explosion, which then picked up all the fuel necessary for propagation from the accumulations of coal throughout the north working section.

17. Smokers' articles were listed among the personal effects found on one of the victims of the explosion and an old discarded cigarette lighter found near the coal hopper indicated that smoking was practiced to some extent underground. Management did not have a searching program to assure that smokers' articles were not carried into the mine.

18. Fragile, globular particles of coke that would be indicative of slow burning gas were found adhering to the roof and ribs in No. 2 room off 3 north entry, in the 3 north entry, in the last open crosscut between Nos. 2 and 3 north entries, and in the last open crosscut between rooms 2 and 3 driven west in the abandoned north panel.

19. Plastered coke was observed on the roof and ribs at and near the intersection of the 3 east and 2 north haulage roads. Soot streamers were observed 100 feet in by the main shaft, in the abandoned north panel, in the entire north working section and to within 200 feet of the faces of the main east entries.

Cause of Explosion: The Federal inspectors are of the opinion that the disaster was caused by the ignition of methane in the air current in room 2 off 3 north entry at the entrance to the second north crosscut. Methane apparently entered the ventilating current from the abandoned north panel that had been penetrated. The gas was ignited by an arc or spark from the open control panel while repairs were being made on the shuttle car. Coal dust in the immediate area entered into the explosion, which then picked up all the fuel necessary for propagation from the accumulations of coal throughout the north working section.

RECOMMENDATIONS

1. Officials whose regular duties require them to inspect working places should have in their possession, and should use, when underground, a suitable permissible device

capable of detecting methane and oxygen deficiency.

2. In all underground face workings in a gassy mine where electrically driven equipment is operated, examinations for methane should be made with a permissible flame safety lamp by a person trained in the use of such lamp before such equipment is taken into or operated in face regions, and frequent examinations for methane should be made during the operation of the equipment.

3. Whenever any working place in an underground mine approaches within 50 feet of abandoned workings in such mine, as shown by surveys made and certified by a competent engineer or surveyor, which cannot be inspected and which may contain dangerous accumulations of water or gas a borehole or boreholes should be drilled to a distance of at least 20 feet in advance of the working face of such working place. Such boreholes should be drilled sufficiently close to each other to insure that the advancing face will not accidentally hole through into such workings. Boreholes should also be drilled not more than eight feet apart in the rib of such working place to a distance of at least 20 feet and at an angle of forty-five degrees. Such rib holes should be drilled in one or both ribs of such working place as may be necessary for adequate protection of persons working in such place.

4. Coal dust and loose coal should not be permitted to accumulate in dangerous quantities in active underground workings of a mine.

5. Where rock dust is applied, it should be distributed by such methods to insure application to the top, floor, and sides of all open places and maintained in such quantity that the incombustible content of the combined coal dust, rock dust and other dust will not be less than 65 percent plus 1 percent for each 0.1 percent methane in the ventilating current.

6. The effectiveness of rock-dust applications should be determined as necessary.

7. The quantity of air reaching the last open crosscut in any pair or set of entries should not be less than 6,000 cubic feet a minute.

8. At least once each week, a properly certified or competent person should measure the volume of air entering the main intakes and leaving the main returns, the volume passing through the last open crosscut in each active entry, and the volume at the intake and return of each split. A record of such measurements should be kept in a book on the surface, and the record should be open for inspection by interested persons.

9. Tests for methane with a permissible flame safety lamp, a permissible methane detector, or by chemical analysis should be

made at least once a week by the mine manager or other properly certified person designated by him in the return of each split where it enters in the main return, at seals and in the main return. A record of these examinations and tests should be kept at the mine.

10. Each day, the mine manager and each assistant should enter plainly and sign with ink or indelible pencil in a book provided for that purpose a report of the condition of the mine or portion thereof under his supervision, which report should state clearly the location and nature of any danger observed by them or reported to them during the day, and the report should state what action, if any, was taken to remedy such danger.

11. Permissible junction or distribution boxes should be used for making multiple-power connections in working places where dangerous quantities of methane may be present or may enter the air current.

12. Only flame-resistant trailing cables should be used underground.

13. Trailing cables should be provided with short-circuit protection.

14. Temporary splices in trailing cables should be made in workmanlike manner, mechanically strong, and well insulated.

15. A program should be established to insure that trailing cables containing as many as five temporary splices will be removed from the equipment and service until such splices have been vulcanized.

16. The practice of smoking, carrying matches, lighters, and smoking materials underground should be prohibited, and management should initiate a search program to assure that smoker's articles are not carried into the mine.

17. The intentional creation of any arc, spark, or open flame should be prohibited, except as provided in Section 209(g) (6) of the Act.

18. Only development work necessary to connect the main opening with the air shaft should be done when opening a new mine.

19. A second means for men to escape from the mine in an emergency should be provided before the mine resumes operation.

20. Mine explosions, mine fires and fatal accidents should be reported immediately and by the quickest available means to the nearest office of the Federal coal-mine inspector or other representative of the Health and Safety Activity, United States Bureau of Mines.

ACKNOWLEDGMENT

The cooperation of the owner and employees, Illinois Department of Mines and Minerals, United Mine Workers of America and various coal companies in the area during this investigation is gratefully acknowledged.

Respectfully submitted.

ANALYSES OF AIR SAMPLES, MINE NO. 2, BLUE BLAZE COAL CO.

[Date collected: Jan. 13, 1962]

Location in mine	Bottle No.	Laboratory No.	Percent in volume				Nitrogen	Cubic feet of air per minute	Cubic feet in methane in 24 hours
			Carbon dioxide	Oxygen	Methane	Carbon monoxide			
SE air-course entry due north of power and sand borehole.	A3787	14972	0.16	20.50	0.37	0.033	78.94		
4th haulage road 1 crosscut west of hoisting shaft.	A3788	14973	.78	19.83	.19	0.12	79.08		
Return upcast shaft from small fan.	A3799	14974	.06	20.80	.10	Present less than 0.01	79.04	2,000	
Return upcast shaft from large fan.	A3800	14975	.10	20.73	.21	do	78.96	3,000	
3 E haulage road 5 feet east of power and sand borehole.	A3858	14976	.06	20.75	.09	do	79.10	9,100	
4 E haulage road 5 feet east of power and sand borehole.	A3859	14977	.10	20.75	.18	0.012	78.96		

[Date collected: Jan. 16, 1962]

Near face crosscut north off No. 2 room off 3 north off 7 east.	S239	15079	.11	20.54	.40	None	78.95	
Near face of No. 4 room west off abandoned north panels off 7 east.	A625	15080	.04	20.76	.20	do	79.00	
Last open crosscut between abandoned north panels off 7 east.	A626	15081	.15	20.74	.11	do	79.00	

ANALYSES OF DUST SAMPLES, MINE NO. 2, BLUE BLAZE COAL CO.

TABLE 2.—LAB. NOS. 28260-28261

[Date collected: Jan. 16, 1962]

Sample No.	Sample of dust from	Location in mine	Alcohol coke test	As received percent incombustible	Sample No.	Sample of dust from	Location in mine	Alcohol coke test	As received percent incombustible
EXPLOSION SAMPLES					EXPLOSION SAMPLES—Cont.				
1	Area.....	Track entry 1 and 2 northeast intersection.	Very large.....	30.4	2	Area.....	No. 2 room off 4 north, 50 feet inby room neck.	Large.....	29.8

ANALYSES OF DUST SAMPLES, MINE NO. 2, BLUE BLAZE COAL CO.

TABLE 3.—LAB. NOS. 28262-28281

[Date collected: Jan. 16, 1962]

Sample No.	Sample of dust from	Location in mine	Alcohol coke test	As received percent incombustible	Sample No.	Sample of dust from	Location in mine	Alcohol coke test	As received percent incombustible
Samples collected on main north entries, 15 feet inby A entry on main east at 50-foot intervals:					Samples collected in main east entries, 100 feet inby main shaft bottom:				
A-1	.....	Entry not developed.....	.....	.....	A-1	Band.....	.....	Small.....	30.8
B-1	Floor.....	.....	Very large.....	44.8	B-1	do.....	.....	Large.....	48.4
C-1	Band.....	.....	Large.....	42.5	C-1	Rib and floor.....	.....	Small.....	43.9
D-1	.....	Too wet to sample.....	.....	.....	D-1	Band.....	.....	Large.....	50.3
A-2	.....	Entry not developed.....	.....	.....	E-1	do.....	.....	Small.....	54.7
B-2	Band.....	.....	Large.....	36.7	F-1	do.....	.....	do.....	38.8
C-2	do.....	.....	Small.....	29.2	G-1	do.....	.....	do.....	36.1
D-2	do.....	.....	do.....	42.5	Samples collected in main east entries, 325 feet inby main shaft bottom:				
A-3	.....	Entry not developed.....	.....	.....	A-2	.....	Too wet to sample.....	.....	.....
B-3	Band.....	.....	Large.....	33.2	B-2	do.....	.....	.....	.....
C-3	do.....	.....	do.....	35.4	C-2	Band.....	.....	Large.....	39.9
D-3	do.....	.....	do.....	37.6	D-2	do.....	.....	do.....	37.1
E-3	do.....	.....	Small.....	36.4	E-2	do.....	.....	Very large.....	41.1
					F-2	do.....	.....	do.....	42.2
					G-2	do.....	Too wet to sample.....	.....	.....

APPENDIX A.—VICTIMS OF EXPLOSION, MINE NO. 2, BLUE BLAZE COAL CO., JAN 10, 1962

Name	Age	Occupation	Marital status	Number of dependents	Total years' experience in mines
1. John Barkus.....	54	Shuttle-car operator.....	Married.....	1	30
2. Ralph Brandon.....	50	Shooter.....	do.....	3	17
3. William Gartner.....	55	Loading-machine operator.....	do.....	1	30
4. Willie Gulley.....	43	Cager.....	do.....	2	15
5. George A. Horsley.....	55	Driller.....	do.....	3	30
6. Joseph H. Kimmel.....	44	Roof bolter.....	do.....	1	20
7. Melvin G. Ramsey.....	42	Cutting-machine man.....	do.....	2	20
8. Virgil Tanner.....	55	Motorman.....	do.....	3	30
9. Ira Williams.....	60	do.....	do.....	1	35
10. Roy Woodis.....	47	Shift leader.....	do.....	3	25
11. Ira Yewell.....	65	Cutting-machine man.....	do.....	1	40

REPORT OF COAL-MINE EXPLOSION, KEYSTONE NO. 3-B MINE, EASTERN ASSOCIATED COAL CORP., HERNDON, WYOMING COUNTY, W. VA., JUNE 10, 1969

(By Thomas Allamon, Coal-Mine Inspection Supervisor; Fred H. Ryan, Federal Coal-Mine Inspector; Joseph O. Vallina, Jr., Electrical Engineering Technician)

INTRODUCTION

This report is based on an investigation made in accordance with the provisions of the Federal Coal Mine Safety Act (66 Stat. 692; 30 U.S.C. Secs. 451-483) as amended.

A gas explosion occurred in the Keystone No. 3-B mine about 5:20 p.m., Tuesday, June 10, 1969, near the face of No. 2 entry 9 left section. Five of the eight men working in the section received first, second, and third degree burns and were hospitalized. Fifteen men working in other parts of the mine were not affected. These men heard the explosion and immediately traveled unassisted to the surface. The names of the injured men and their occupations are listed in Appendix A of this report.

The explosion occurred when an explosive mixture of methane air was ignited by an electric arc or spark created while work was being performed on a loading machine. Forces of the explosion dissipated rapidly and extended through only a small area, 9 left section.

GENERAL INFORMATION

The Keystone No. 3-B mine, at Herndon, West Virginia, off highway route No. 10, is served by autotrucks and the Norfolk and Western Railway.

The names and addresses of the operating officials are:

A. P. Boxley, President, Pittsburgh, Pennsylvania.

R. H. Freeman, Vice President, Production, Pittsburgh, Pennsylvania.

J. E. Wells, Assistant to Vice President, Herndon, West Virginia.

Joshua Smith, Safety Director, Beckley, West Virginia.

John J. Kodak, Superintendent, Herndon, West Virginia.

William Mabe, Safety Inspector, Herndon, West Virginia.

John D. Williams, Mine Foreman, Herndon, West Virginia.

A total of 77 men, 64 underground and 13 on the surface, is employed on 1 maintenance and 2 coal-producing shifts a day, 5 days a week. The daily production averages 1,000 tons of coal, all loaded mechanically.

The mine is opened through 3 drifts into the Pocahontas No. 6 coalbed, which averages 44 inches in thickness in the areas being mined.

Since the last Federal inspection, completed December 9, 1968, John D. Williams has been

appointed mine foreman. A check-spot inspection of the 9 right section was made March 18, 1969.

MINING METHODS, CONDITIONS, AND EQUIPMENT

Mining Methods: The mine was being developed by a room-and-pillar method. Main and panel entries, on 75-foot centers and 18 to 20 feet wide, were driven in sets of 3 to 5. Connecting crosscuts were turned at intervals of 75 and 100 feet.

The 9 left section started producing coal June 2, 1969. Four entries had been developed left off No. 1 main entry, a distance of approximately 250 feet. Mining in the section was being done with conventional loading equipment.

The immediate roof is shale (drawn rock) varying in thickness from 6 to 12 inches, and the main roof is firm shale. Generally, roof bolts were used as a sole means of roof support in advance mining. Wooden timbers supplemented the roof bolts at several locations along the belt conveyors and shuttle-car haulage roads.

Ventilation and Gases: Ventilation in the mine was inducted by a propeller-type fan, which was operated continuously and exhausted 40,960 cubic feet of air a minute. The fan was suitably installed on the surface and equipped with the necessary safety devices. The main air current was divided into splits that were directed through the mine by means of incombustible stoppings and overcasts and temporary (canvas) stoppings. Generally, line brattice was not used; however, line brattice was installed at times to course the air current to the face of the place that the continuous miner was working. Doors were not used.

The 9 left section was ventilated by a current of air intaking through the Nos. 3 and 4 entries and returning through No. 1 entry. Check curtains were used to direct the air through the last open crosscuts. Approximately 9,600 cubic feet of air a minute was passing through the last open crosscut between Nos. 2 and 3 entries; however, line brattices were not used to course the air

current to the faces, except for a short distance in No. 3 entry. An inspection of other parts of the mine revealed that less than 6,000 cubic feet of air a minute was reaching the last open crosscuts in the 7 right and south mains sections.

The mine was classed nongassy prior to the explosion. The highest methane content in any one of the air samples collected in open workings during the last Federal inspection was 0.05 percent. Preshift examinations for gas and other hazards were made each day by a certified fire boss before the first coal-producing crews entered the mine, and reportedly certified officials made tests for methane during their on-shift examinations. During the investigation, it was apparent that unsafe conditions were not being recorded by the preshift examiner in the book kept on the surface for that purpose. Weekly examinations for methane and other hazards were not being made during the last Federal inspection. Gas or oil wells were not known to have penetrated the coalbed on this property.

Permissible flame safety lamps, serviced by a lamp-house attendant, were provided for the section foremen to make tests for methane.

Harlan Kees, section foreman, stated that he carried a permissible flame safety lamp underground the greater part of the time; however, examinations of the face areas for methane were not deemed to be of great importance as the mine was classed nongassy and methane had not been found in the mine.

Dust: The mine surfaces ranged from wet to dry. Coal dust and loose coal were not accumulated in dangerous quantities at the close of the last Federal inspection, and rock dust was applied to within 40 feet of all working faces. The haulageways, open parallel entries, and back entries appeared to be rock-dusted adequately. However, at the time of the explosion, coal dust and loose coal were present in dangerous quantities along the shuttle-car roadways from the dumping points to the active faces in the 9 left and 7 right sections and at various locations along 7 right belt conveyor. Rock dust had not been applied, and where applied in 7 right, the applications were inadequate at several locations. Also, the rock-dust applications were inadequate at several locations along the parallel entry floors in the mains and at occasional locations along the belt conveyors.

Transportation: Coal is transported from the faces in shuttle cars and discharged onto belt conveyors which convey the coal to the surface. Men are transported underground on belt conveyors under the supervision of certified foremen.

Electricity: Electric power at 4,160 volts alternating current is supplied to the mine from a substation at Keystone No. 3 mine. A rotary converter on the surface and a rectifier underground provide 250 volts direct-current power for use underground. Disconnection switches and lightning arresters were provided in the circuits near the points where the circuits entered the mine. The underground power wires were installed on insulated hangers and cutout switches were provided at suitable intervals.

The tralling cables were of the flame-resistant type, and they were protected against short circuits. The ground conductors in the type G tralling cables were not connected in the temporary splices; therefore, the frames of the equipment were not grounded. Tests for methane were not made with a permissible flame safety lamp before electric equipment was taken into the face areas or while the equipment was being operated.

The electric face equipment was of the permissible type. In the 9 left section, the equipment in use at the time of the explosion consisted of a Joy 14BU10 loading machine, a Joy 16RB cutting machine, two Joy 8SC shuttle cars, and a Galls 310 roof-bolting machine.

An examination of this equipment during the underground investigation revealed numerous permissible discrepancies. Major discrepancies on the loading machine were as follows: Openings were in excess of 0.004-inch around the controller compartment and the inspection plate covers of the right and left head motors and in excess of 0.006-inch at the end-bell housing of the left head motor; the junction box for the right head motor was improperly assembled and the flame path along the end-bell housing was damaged; entrance gland assemblies were improperly packed on the pump motor, left resistor, controller, tralling cable, left head motor, and left head motor junction box; the power tree and conduit hose for the right traction motor were damaged; and the tralling cable contained more than five temporary splices.

Illumination and Smoking: Permissible electric cap lamps were used for portable illumination underground. Foremen and employees stated that smoking was not a practice in the mine; however, a program to prohibit carrying smoking materials, matches, or lighters underground was not in effect. During the investigation, a box of matches was found near the face of No. 2 entry 9 left section (ignition area).

Mine Rescue and Firefighting Facilities: A State-trained and fully equipped mine rescue team was maintained at the company's Keystone No. 1 mine and was present at the mine after the explosion; however, services of the team were not necessary for recovery operations. A kit containing sufficient self-rescuers was provided in each section; however, self-rescuers were not carried on the person of officials or employees. Self-rescuers were used by the south mains crew to travel outby the dust and/or smoke following the explosion.

Fire extinguishers, waterlines, a rock-dusting machine, and an ample supply of rock dust were readily available underground.

STORY OF EXPLOSION AND RECOVERY OPERATIONS

Activities of Bureau of Mines Personnel: Federal Coal-Mine Inspector Ernest Sheppard was notified by a company official about 7:25 p.m., June 10, 1969, that gas had been ignited in the 9 left section. Notification of the occurrence was relayed immediately to W. R. Park, district manager, who instructed Inspectors Thomas Allamon, Ernest Sheppard, John Weekly, and Fred Ryan to proceed to the mine. The inspectors arrived at the mine about 9 p.m., and after they were briefed by company officials, they proceeded underground to examine the areas of the mine involved.

A Withdrawal Order, explosion danger, was issued under Section 203(a)(1) of the Federal Coal Mine Safety Act, requiring all persons, except those persons referred to in Section 203(a)(2) of the Act, to be withdrawn from and debarred from entering the entire mine. Before the Order was issued, management had withdrawn all persons from the mine.

An Order (Form 203(f)) was issued June 12, 1969, requiring the operator to comply with the provisions of Section 209 of the Act which pertain to gassy mines.

Mine Conditions Immediately Prior to the Explosion: Harlan Kees, section foreman, and his crew, consisting of seven men, arrived on the 9 left section about 4:30 p.m. The loading machine, cutting machine, and roof-bolting machine had been parked in the intersections out by the faces of Nos. 2 and 3 entries by the dayshift crew. At the start of the afternoon shift, the roof-bolting machine was trammed to the face of the right crosscut in No. 3 entry, the loading machine was trammed to the face of No. 2 entry, the cutting machine was trammed to the face of No. 1 entry, and mining operations were started.

The face of the No. 2 entry was 115 feet inby the last open crosscut, and a crosscut

to the left had been started. In No. 3 entry, the face was 150 feet inby the last open crosscut, and the face was being advanced while driving crosscuts right and left off the entry. A line curtain in No. 3 entry, the only entry containing line curtain, was installed to a point immediately outby the rib of the crosscuts. The section foremen on both shifts reported that it was customary to continue advancing the entry faces while crosscuts were being driven.

Charles Adkins, dayshift foreman, examined the face of No. 2 entry for methane about 2 p.m., prior to blasting the cut, and reported the section "clear" to the on-coming shift foreman.

Evidence of Activities and Story of Explosion: Harlan Kees, section foreman, entered the No. 3 entry just prior to the explosion where James Grant was installing roof bolts in the right crosscut. Kees stated that he examined the entry and crosscut faces for methane with a permissible flame safety lamp and did not detect gas. Kees then proceeded to No. 2 entry where he was informed by Thomas Gambrell, loading machine operator, that only the right head motor of the loading machine was operating. Approximately six shuttle cars had been loaded from the cut, and the loading machine was parked about 15 feet outby the face.

Virion Milam, electrician, was operating a shuttle car and was returning with the empty car to the No. 2 entry when he was informed of the condition of the loading machine. Milam stopped the shuttle car, parked it about 20 feet outby the loading machine, and proceeded to the right side of the loader. At this time, Gambrell and Kees were on the left side of the loader, and Gambrell was checking the motor lead wires. Milam was handing Gambrell a wrench when he observed fire roll out from under and around the loader head and then the place was engulfed in flame. Milam, Gambrell, and Kees were either knocked or fell to the floor.

Immediately prior to the explosion, Virgil Sargent, shuttle-car operator, was delivering rock dust when his shuttle car "hung up" in a swag in No. 4 entry. Sargent went to the No. 3 entry where Robert Thorn was working at the tailpiece of the belt conveyor and informed him that he would need the other shuttle car to help free his shuttle car. Sargent and Thorn secured a "hook" and were waiting at the tailpiece for Milam to return when the blast occurred. Sargent said that he heard a noise similar to noise made by a roof fall, felt a rush of air, and observed a "ball of fire" rolling through the crosscut from No. 2 entry toward them.

James Grant was installing roof bolts near the face of No. 3 entry when the explosion occurred. He saw a red glow at the mouth of the entry and started outby at once. Grant encountered "heat" and traveled behind the line curtain and to fresh air in the crosscut between Nos. 3 and 4 entries. Hubert Winebarger and Dave Jenkins, cutting machine crew, had finished cutting the face in No. 1 entry and were tamping the shot holes when they heard the noise. They stated that fire came through the crosscut from No. 2 entry to the intersection in No. 1 entry and rolled back.

Winebarger, Jenkins, and Grant were not injured, and they met with the burned victims shortly after the explosion occurred. Although five of the crew members were burned, all traveled from the area unassisted to the main belt conveyor at the mouth of 9 left section, where they boarded the belt conveyor and rode to the surface.

Recovery Operations: The men working in the south mains and 7 right sections heard the explosion and immediately traveled to the surface.

Representatives of the West Virginia Department of Mines and the Bureau of Mines proceeded to the explosion area, 9 left section, promptly after their arrival at the mine

June 10. They were met by company employees and officials and advised that ventilation had been partially restored, that the face areas had been examined, and that no fires were found. An investigation of the areas involved by Federal and State inspectors verified these statements.

The investigation revealed that the occurrence had been primarily a gas explosion, that coal dust had entered into propagation of the explosion only to a minor degree, and that damage in the area was confined to several blown out stoppings and a regulator and injuries to the crew members. It was apparent during the investigation that sufficient air was not being delivered to the active working faces. The No. 2 entry had been driven approximately 115 feet in by the last open crosscut, and a crosscut was started left and advanced approximately 27 feet. The No. 3 entry had been driven in by the last open crosscut for a distance of 150 feet and crosscuts were turned right and left.

A partially filled box of safety matches was found by a Federal investigator near the left gathering head of the loading machine in No. 2 room, but burned matches were not found. In addition, a careful search of the entire section failed to disclose whole or partially used cigarettes or other smokers' materials.

Normal mining operations were resumed on 7 right section June 27, 1969, after the Closure Order of June 10, 1969, had been revised by the Director. The Closure Order remains in effect in other parts of the mine, including 9 left and south mains sections.

INVESTIGATION OF CAUSE OF EXPLOSION

Investigating Committee: The underground investigation of the explosion was started the day of the occurrence and continued the following day. Persons taking part in the investigation were:

Eastern Associated Coal Corp.

R. H. Freeman, Vice President—Production.
J. E. Wells, Assistant to Vice President.
Joshua Smith, Safety Director.
John J. Kodak, Superintendent.
Chester A. Webb, Assistant Safety Director.
William Mabe, Safety Inspector.
John Williams, Mine Foreman.

United Mine Workers of America

James Leeber, Safety Director, District 29.
Earl Stamper, Safety Representative, District 29.
Eugene Mills, Member, Mine Safety Committee.
Frazier Cordle, Member, Mine Safety Committee.
Alvin Lusk, Member, Mine Safety Committee.

West Virginia Department of Mines

Jay Philpott, Inspector-at-Large.
J. W. Hatfield, Assistant Inspector-at-Large.
Charles Cook, District Mine Inspector.
Joseph Withrow, District Mine Inspector.

United States Bureau of Mines

W. R. Park, District Manager.
Thomas Allamon, Federal Coal-Mine Inspection Supervisor.
Fred H. Ryan, Federal Coal-Mine Inspector.
John E. Weekly, Federal Coal-Mine Inspector.
Ernest Sheppard, Federal Coal-Mine Inspector.
Joseph O. Vallina, Jr., Electrical Engineering Technician.

The flame safety lamp assigned to Harlan Kees, section foreman, was reportedly brought to the surface by a company employee after the explosion. The lamp was examined and found to be well maintained and in permissible condition.

The five injured men were confined to area hospitals, and an official hearing on the occurrence was delayed until two of the injured men were released from the hospital. Harlan Kees and Viron Milam were questioned in the Beckley Appalachian Regional

Hospital. Thomas Gambrell is confined to the Beckley Hospital, Beckley, West Virginia, and an interview could not be arranged at this time. The official inquiry was conducted at the company's main office June 25, 1969.

Methane as a Factor in the Explosion: During the underground investigation, tests for methane were made with methane detectors and permissible flame safety lamps. Tests in each of the active working faces in the 9 left section (Nos. 1 to 4 entries), including the crosscuts, indicated the presence of methane in amounts ranging from 0.18 to 3.55 percent. Analyses of air samples collected at each face are shown in Table 1. The quantity of air being coursed through the last open crosscut between Nos. 2 and 3 entries 9 left was about 9,600 cubic feet a minute following the explosion, and check curtains and line brattices were installed in each entry and the methane was removed. Unquestionably, an undetected body of methane had accumulated at the face of the No. 2 entry.

Following the explosion, emission of methane from cracks in the mine floor was apparent in Nos. 2 and 3 entries in 9 left section. Further examinations also disclosed cracks in the mine floor in the main entries out by the mouth of 9 left section. The gassy Keystone No. 3 mine, which is operating in the Pocahontas No. 3 coalbed, is approximately 150 feet underneath the excavations of the Keystone No. 3-B mine. The map of Keystone No. 3 mine indicated pillared out areas near the 9 left section of the Keystone No. 3-B mine. Prior to and during the investigation of the explosion, audible sounds indicated subsidence underneath the 9 left section were heard often.

Rock-dust surveys were made in the main entries and 9 left section following the explosion. Dust samples were collected on pattern in each entry as indicated in Table 2 of this report. The incombustible content of 13 of the 20 dust samples collected in the main entries and 13 of the 14 dust samples collected in the 9 left section was less than 65 percent.

During the investigation, it was evident that coal dust had not entered extensively into the explosion. Dust samples collected following the explosion contained small to trace coke particles only in the area within the workings of 9 left section.

Flame: Flame extended out by the face of No. 2 entry for a distance of approximately 150 feet, penetrating the crosscuts right and left and extended into Nos. 1, 3, and 4 entries.

Forces: The forces of the explosion traveled out by the face of No. 2 entry for a distance of 215 feet. There was no evidence that strong forces or pressures developed, and damage to stoppings and equipment was minor.

Point of Origin: The explosion originated near the face of No. 2 entry, 9 left section.

Factors Preventing Spread of Explosion: All evidence indicated that the explosion was relatively weak and nothing in the explosion area showed that high pressures and/or excessive speeds developed during the explosion.

Summary of Evidence: Conditions observed in the mine during the investigation following the explosion, together with information available from previous Federal coal-mine inspection reports and from company officials, workmen, and mine records, provided evidence as to the cause and origin of the explosion. The evidence from which the conclusions of the Federal investigators are drawn is summarized as follows:

1. This was a gas explosion, and coal dust did not enter extensively into propagation.
2. Five of the eight men on the section received first, second, and third degree burns.
3. Mining operations in the 9 left section were started June 2, 1969. During this investigation, four air samples collected near the faces in 9 left contained methane ranging from 0.18 to 3.55 percent.
4. Following the explosion, methane was being emitted from cracks in the mine floor in Nos. 2 and 3 entries 9 left.

5. Line brattice was used only for a short distance in No. 3 entry, and sufficient air was not being delivered to the faces to prevent methane accumulations.

6. The No. 2 entry was advanced a distance of 115 feet and No. 3 entry a distance of 150 feet in by the last open crosscut.

7. On-shift tests for methane at the working faces were not made with regularity.

8. Loose coal and coal dust were accumulated in dangerous quantities along the shuttle-car roadways in by the belt conveyor tallpiece in 9 left.

9. The loading machine had not been operating satisfactorily prior to the explosion, and the loading machine operator was examining the leads on a head motor when the ignition occurred.

10. A box of matches was found near the face of No. 2 entry.

11. The power leads were disconnected from the brushes, and the brushes were raised inside the left gathering head motor on the loading machine.

12. Numerous temporary splices in the trailing cables were poorly insulated, and the grounding conductors of the trailing cables were not connected when the splices were made.

13. All of the electric face equipment in the 9 left section was in nonpermissible condition at the time of the explosion.

14. Unsafe conditions were not being recorded by the preshift examiner in the book provided for that purpose.

Cause of the Explosion: The explosion was caused when a body of methane accumulated near the face of No. 2 entry 9 left section because of inadequate ventilation. It is believed that the methane was ignited by an electric arc created inside the left gathering head motor on the loading machine when a loose power lead contacted and welded itself to the frame.

RECOMMENDATIONS

The following recommendations are made to prevent a similar occurrence:

1. Line brattice shall be used to conduct air to the working faces, and the volume and velocity of the air current ventilating such faces shall be sufficient to dilute and carry away flammable gases.
2. The on-shift examinations shall include tests for methane and these examinations shall be made often enough to insure the safety of the men. Equipment operators, trained in the use of a flame safety lamp, shall make an examination for methane before such equipment is taken into or operated in face regions and at least every 20 minutes during such operations.
3. A program shall be put into effect to assure that necessary repairs are made to maintain the equipment in a safe operating condition.
4. Crosscuts should be made between entries at intervals in accordance with the applicable State law.
5. Coal dust and loose coal shall not be permitted to accumulate in dangerous quantities in any active underground workings.
6. Where rock dust is applied, it shall be distributed upon the top, floor, and sides of all open places and maintained in such quantity that the incombustible content of the combined coal dust, rock dust, and other dust will not be less than 65 percent.
7. The permissible-type electric face equipment shall be maintained in permissible condition.
8. Frames of electric equipment should be grounded effectively.
9. Temporary splices in training cables shall be limited to five in number, and the splices shall be well insulated.
10. Management shall establish a suitable search program to assure that smoking materials, matches, or lighters are not taken underground.
11. The mine examiner shall record all unsafe conditions observed during his ex-

amination in the book provided for that purpose on the surface.

West Virginia Department of Mines during this investigation is gratefully acknowledged.

Section Foreman, Loader Operator, Electrician, Beltman, Shuttle-Car Operator.

ACKNOWLEDGMENT

The cooperation of mine officials and employees, members of the United Mine Workers of America, and representatives of the

APPENDIX A—NAMES AND OCCUPATIONS OF PERSONS INJURED

Harlan Kees, Thomas Gambrell, Virlon Milam, Robert Thorn, Virgil Sargent.

APPENDIX B

[Not printed in RECORD]

APPENDIX C

[Not printed in RECORD]

TABLE 1.—ANALYSIS OF AIR SAMPLES, KEYSTONE NO. 3-B MINE EASTERN ASSOCIATED COAL CORP.

[Date collected: June 10, 1969]

Location in mine	Bottle No.	Laboratory No.	Percent in volume					Cubic feet air per minute	Cubic feet methane per 24 hours
			Carbon dioxide	Oxygen	Methane	Carbon monoxide	Nitrogen		
Face No. 1 entry 9 left (critical sample)	J6022	101293	0.21	20.65	1.0.93	0	78.21		
Face No. 2 entry 9 left	J5754	101294	.12	20.76	.18	0	78.94		
Face 2 left crosscut 9 butt left (critical sample)	J5755	101295	.09	20.71	1.32	0	78.88		
Face No. 3 entry 9 left section (critical sample)	J6042	101296	.13	19.22	13.55	0.001	77.10		
Main return south mains at regulator out by 11 left	J6043	101297	.03	20.90	.02	0	79.05	8,500	

¹ This sample was analyzed by the gas chromatograph process and that analysis was checked by the Haldane process.

TABLE 2.—ANALYSES OF DUST SAMPLES, KEYSTONE NO. 3-B MINE, EASTERN ASSOCIATED COAL CORP.

[Date collected: June 12, 1969]

Laboratory No.	Can No.	Sample of dust from	Location in mine	Alcohol coke test	As-received percent in-combustible
Survey No. 1, main entries (zero=8 right overcast -40 feet No. 3 entry)					
No. 1 entry					
307374	1A1	Band	0+00'	None	19.8
	1A2		0+300'	Wet, no sample	
307375	1A3	Band	0+600'	None	22.5
307376	1A3CC	do	0+600'	do	17.0
	1A4		0+900'	Wet, no sample	
	1A5		0+1,200'	Same	
No. 2 entry					
307377	1B1	Band	0+00'	None	54.5
	1B2		0+300'	Wet, no sample	
307378	1B3	Band	0+600'	None	28.5
307379	1B3CC	do	0+600'	do	46.0
	1B4		0+900'	Wet, no sample	
	1B5		0+1,200'	Same	
No. 3 entry					
307380	1C1	Band	0+00'	do	90.0
307381	1C2	do	0+300'	do	91.5
307382	1C3	do	0+600'	do	88.0
307383	1C3CC	do	0+600'	do	47.0
307384	1C4	do	0+900'	do	76.5
307385	1C5	do	0+1,200'	do	95.5
No. 4 entry					
307386	1D1	do	0+00'	do	55.4
307387	1D2	do	0+300'	do	50.0
307388	1D3	do	0+600'	do	39.5
307389	1D3CC	do	0+600'	do	55.1
307390	1D4	do	0+900'	do	33.5
	1D5		0+1,200'	Wet, no sample	
No. 5 entry					
307391	1E1	Band	0+00'	do	90.5
307392	1E2	do	0+300'	do	87.5
	1E3		0+600'	Wet, no sample	
307393	1E4	Band	0+900'	None	40.5
	1E5		0+1,200'	Wet, no sample	
Survey No. 2, 9 left section (zero=No. 3 main entry +30 feet)					
No. 1 entry					
	2A1		0+00'	Wet, no sample	
	2A2		0+100'	Same	
307394	2A3	Band	0+200'	Small	37.9
307395	2A3CC	do	0+200'	do	26.8
307396	2A4	do	0+300'	None	20.5
No. 2 entry					
	2B1		0+00'	Wet, no sample	
307397	2B2	Band	0+100'	do	43.5
307398	2B3	do	0+200'	Small	27.0
307399	2B3CC	do	0+200'	do	38.0
307400	2B4	do	0+300'	do	24.8
No. 3 entry					
307401	2C1	do	0+00'	None	72.0
307402	2C2	do	0+100'	do	21.5
307403	2C3	do	0+200'	Trace	31.0
307404	2C3CC	do	0+200'	Small	30.3
307405	2C4	do	0+300'	None	20.1
No. 4 entry					
	2D1		0+00'	Wet, no sample	
	2D2		0+100'	Same	
307406	2D3	Band	0+200'	Trace	15.5
307407	2D4	do	0+300'	do	14.7

ESTIMATES OF THE COST OF CHANGING NON-PERMISSIBLE ELECTRIC FACE EQUIPMENT TO PERMISSIBLE CONDITION, BY THE DEPARTMENT OF THE INTERIOR

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., August 2, 1969.

HON. HARRISON A. WILLIAMS, JR.,
Chairman, Senate Labor Subcommittee,
U.S. Senate, Washington, D.C.

DEAR SENATOR WILLIAMS: Enclosed are two attachments (A & B) in response to your letter of July 5, 1969, requesting further information on the cost of changing non-permissible electric face equipment in underground coal mines to permissible condition under the procedures (Schedule 2-G) of the Bureau of Mines. These procedures are primarily designed to assure that such equipment, if maintained in permissible condition, will not emit a spark or arc and cause a mine fire or explosion.

The first of these attachments is an updating and correction of estimates previously prepared and supplied to your subcommittee in relation to the cost of changing non-permissible equipment to permissible and the time needed to accomplish it.

The other attachment is the results of a survey of underground coal mines conducted, at your request, by the Bureau of Mines in each of the 9 major coal producing States. The survey was undertaken through the Bureau's district offices and compiled here. While it included some contact with the industry, repair shops, and equipment manufacturers, it is largely a paper survey based on records and data of the Bureau, including inspection reports, etc. We have discussed informally the results of the survey with your staff.

At the request of your staff, we checked, after completing the survey, on whether a bias had been introduced inadvertently due to the small number of mines sampled in the 9 States. Time did not permit a greater sampling. We have concluded that the samples for at least 3 of the States, Virginia, Kentucky, and West Virginia, are not truly typical of the small mines in those States. Thus, a bias was, in fact, inadvertently introduced.

From the survey we have, at your request, estimated the cost of making this equipment permissible either by conversion or rebuilding it. The estimates are as follows:

SMALL NON-GASSY MINES

Estimated costs

Cost of "conversion" ¹ of all equipment:	
Nine States only.....	\$37,000,000
County-wide basis (by extrapolation from data).....	63,000,000
Cost of upgrading or using rebuilt equipment:	
Nine States only.....	54,882,580
County-wide basis (by extrapolation from data).....	63,000,000

LARGE NON-GASSY MINES

Cost of upgrading or using rebuilt equipment: ²	
Seven States only.....	13,475,650
County-wide basis.....	18,100,000

¹Assumes field permissibility approval will be feasible even for equipment that had never had permissible approval.

²Assumes that all equipment could be upgraded and none would be converted.

You also requested that we provide an estimate, based on the survey, of the costs of making this equipment permissible, through conversion, upgrading, purchasing rebuilt or purchasing new, in the case of those gassy mines with "grandfathered" equipment is still permitted under the 1952 Act. The estimates are as follows:

Grandfathered equipment, all Gassy Mines:

Cost to upgrade, \$3,591,350.
Cost to rebuild, \$14,158,060.

Cost new, \$36,951,170.

Because of the bias mentioned above, you also asked if we could use the survey and make some estimates taking the bias into account. Probably the most appropriate way to make such an estimate is to use an average of the capital cost per yearly ton of coal produced. For these larger and more efficient mines covered by the survey a mine producing 20,000 tons per year would require an investment of about \$16,000. If the equipment were used for 20 years this would represent a cost of 4 cents per ton of coal mined. There is, however, some tonnage produced in hand loaded mines where permissible equipment would not be required. On the other hand, smaller mechanized mines, also not included in the survey, would be expected to have a higher investment per daily ton than those included in the survey. In our estimate, we have assumed that these two factors to be in balance.

Using this method then, the cost for the small non-gassy mines for the country as a whole to convert or rebuild the equipment would be \$30 million.

If all the equipment could be converted rather than using a combination of conversion and rebuilt equipment, the cost would be about \$21 million.

The total cost can thus be estimated at \$51.7 million, broken down as follows:

Grandfathered equipment (all upgraded), \$3.6 million.

Cost of upgrading or using rebuilt equipment in large non-gassy mines, \$18.1 million.

Cost for converting or using rebuilt equipment in small non-gassy mines, \$30 million.

These figures are lower than those in Attachment A because we have assumed that the new concept of conversion which we have discussed with your staff using field approval for permissibility will be possible and because the size of the sample in the latest survey introduced a bias. Since, in fact, the upgrading of non-permissible equipment would be expected to be a mixture of field conversion and purchase of rebuilt or new equipment a more realistic cost estimate would be between \$50 and \$60 million. It is probable, however, that some portion of this sum would be expended anyway due to normal replacement needs.

Another cost is that of the Government which would be appreciably higher if all the equipment were converted, since it would involve a large increase in the man-hours required for field inspections of field converted and approved equipment.

Sincerely yours,

HOLLIS M. DOLE,
Assistant Secretary of the Interior.

GENERAL COMMENT ON ELECTRIC FACE EQUIPMENT

COST OF BRINGING EQUIPMENT TO PERMISSIBLE CONDITION

Any attempt to estimate the cost of replacing and/or overhauling electric face equipment to meet the permissibility requirements, particularly that over 25 h.p., is difficult to make. The Bureau of Mines has not had the advantage of obtaining such estimates from the industry, although we have had some discussions along this line. Despite this shortcoming, we believe it is possible, by using two different methods of making the estimates, to provide a range of costs that are most probable. The details of making these estimates are attached as Appendix A.

Using method 1, the costs would range from about \$110 to \$219 million. Using method 2, they would range from about \$69 to \$330 million with a "reasonable" estimate by this method being about \$155 million.

Typical sizes and costs of electrical equipment used underground are shown in Table 7 and published costs of new large equipment are shown in Table 8.

TIME REQUIRED

Data on which to base estimates of the time required to replace nonpermissible equipment are also difficult to obtain. In Appendix B, an attempt has been made to determine what the time parameters might be. Although the data are limited, it appears that a minimum of eight years might be required if the manufacturers could triple their sales capacity. It may, however, be as much as ten years if an adjustment is made for the fact that some of the equipment now sold is nonpermissible. On the other hand, these estimates are biased on the high side since there is no allowance for those pieces of equipment that are converted or those that might be bought new.

It is also important to recognize that manufacturers will probably give preference to their present customers and will prefer to use their capacity to produce new equipment rather than provide parts for replacement purposes. Also, the mine operator will have to consider whether he should replace, or, if the equipment can be made permissible, whether he should overhaul it for this purpose.

In summary, these are conservative estimates based on the best knowledge available. We believe it is possible, given the legislative directives in the bill and the incentives to the coal mining industry, that this period could be shortened considerably. But this possibility must be tempered by the knowledge that the equipment manufacturers may not gear up to provide the necessary capacity. Certainly ten years to complete this transition is too long a period, although we believe anything less than four years would not be realistic from the standpoint of available equipment and the potential costs involved.

APPENDIX A

METHOD 1

Large mines

In West Virginia (District B), a recent survey was made of nonpermissible equipment in mines. It was found that there was 182 nonpermissible machines in 84 large mines. The survey did not show whether the equipment was ever permissible or whether it could be made permissible. Extrapolating the data to the 400 large mines in the State showed that there would be about 840 nonpermissible machines in operation in large mines. Table 1 shows the cost of new equipment for a continuous miner section and for a conventional miner section. The average large mine in West Virginia has one conventional section and one continuous miner section so that for large mines the cost of new equipment would be: 840 times 43,900, or \$36,600,000.

Table 2 shows the cost of rebuilt permissible equipment for both a conventional and continuous miner section. If all mines used rebuilt equipment, the replacement cost would be: 840 times \$17,800, or \$14,600,000.

Small mines

In the West Virginia survey, it was found that there were 85 nonpermissible face machines in operation in the 22 mines surveyed. Again the survey did not show whether the equipment was ever permissible or whether it could be made permissible. Extrapolating the data to 800 small mines in the State showed there would be 3100 nonpermissible machines in operation. Table 3 shows the costs of rebuilt equipment, if available, that might be used in these typical mines (this type of mine could not afford new equipment). The total cost of converting to rebuilt equipment would be: 3,100 times \$2,700, or \$8,400,000.

Similar calculations were made for the other Health and Safety districts of the Bureau of Mines using these approximate equipment costs but with modifications to reflect local conditions. For example, in District D no costs were included for continuous miners since all continuous miners in the

District were permissible. Using this method, the estimates in the following table were calculated.

COSTS TO BRING NONPERMISSIBLE EQUIPMENT TO PERMISSIBLE CONDITION

[In millions of dollars]

District	Number of non-permissible units	Large mines		Small mines, rebuilt	Range
		New	Rebuilt		
A.....	880	18.0	7.0	1.5	-----
B.....	3,940	36.0	14.6	8.4	-----
C.....	10,375	120.0	48.0	22.5	-----
D.....	485	20.0	6.5	()	-----
E.....	230	2.4	0.6	0.8	-----
Total..	15,910	196.4	76.7	33.2	229.6-109.9

† Included in large mine figures.

METHOD 2

Small mines

The number of mines and amount of production classified by gassy or nongassy and by large and small are shown in Tables 4 and 5. Table 6 gives the costs of bringing an average sized small one shift nongassy coal mine to meet gassy mine standards for three conditions—upgrading the equipment, assuming it had once been permissible, purchasing used equipment, and purchasing new permissible equipment. The information in Table 6 represents a cost per ton of \$1.00, \$1.40, and \$5.60 for upgrading, purchasing used, and purchasing new equipment. Using this data and that in Table 5, the following can be calculated:

Upgrading, \$1 per ton times 39,000,000 tons, equals \$39 million.

Used, \$1.40 per ton times 39,000,000 tons, equals \$55 million.

New, \$5.60 per ton times 39,000,000 tons, equals \$220 million.

Large mines

Using the data in Tables 1 and 2, extrapolating the "upgrading cost", and combining that with the data in Table 5, the following costs were calculated:

[In millions]

Upgrading, \$0.30 ton.....	\$30
Purchasing used permissible equipment:	
Continuous miner \$0.40 ton.....	40
Conventional miner \$0.40 ton.....	40
Purchasing new permissible equipment:	
Continuous miner \$0.80 ton.....	80
Conventional miner \$1.10 ton.....	110

Assuming that all mines could be "upgraded", would give the lowest estimate of \$69 million. Assuming all mines would purchase new equipment, would give the highest estimate of \$330 million. A "reasonable" estimate would have the large mines purchasing about one half of their needs in new equipment and about one fourth upgrading and one fourth purchasing used equipment for a total cost of about \$110 million. The small mines would upgrade when they could and purchase used equipment, if available, for the balance of their needs so that total costs might be about \$45 million for small mines with an overall cost of \$155 million.

APPENDIX B

1. Amount of equipment now in use:

The total amount of equipment now in use underground and the amount purchased in 1968 are shown in Table 9. The data were obtained from the Minerals Yearbook of the Bureau of Mines, the annual article published by Coal Age on equipment purchased and from the Department of Commerce publication on Mining Machinery and Equipment of Current Industrial Reports. It is not known how much of the equipment sold is nonpermissible and how much is permissible, although most coal cutting large equip-

ment is probably manufactured so that it meets permissibility tests.

Assuming that the manufacturers were able to triple their selling rate, it would take a minimum of eight years to replace existing nonpermissible equipment in coal mines, if all the equipment being manufactured were of the permissible type and all the nonpermissible equipment were replaced with new equipment. The available data is based on sales, thus we cannot estimate what the production capacity is. Since some of the equipment sold is nonpermissible and it would take new manufacturers some time to design equipment and obtain permissibility approval of the Bureau of Mines, the total replacement time could be even greater again assuming that all of the nonpermissible equipment is replaced rather than repaired.

TABLE 1.—New equipment

CONTINUOUS MINER SECTION	
CM 35Y Miner (1)	\$121,000
16SC Shuttle Cars (2)	80,000
Galls 300 Roof-bolter (1)	16,000
CONVENTIONAL SECTION	
14BU10 Loader (1)	60,000
18SC Shuttle Cars (2)	76,000
Galls 300 Roof-bolter (1)	16,000
Joy Coal Drill (1)	20,000
16RB Cutting Machine (1)	84,000
Supply Tractor	10,000
Total price of face equipment	483,000
Total pieces of equipment: 11.	
Average price of one permissible machine: \$43,900 (\$483,000 divided by 11).	

TABLE 2.—Rebuilt equipment

CM 35Y (1)	\$75,000
6SC Shuttle Cars (2)	20,000
Galls 300 Roof-bolter (1)	9,000
14BU9 Loader (1)	22,500
Galls 300 Roof-bolter (1)	9,000
10SC Shuttle Cars (2)	12,500
Joy Coal Drill (1)	12,500
11RU Cutting Machine	30,000
Supply Tractor (1)	6,000
Total price of face equipment..	196,500
Total pieces of equipment: 11.	
Average price per rebuilt permissible machine: \$17,800 (\$196,500 divided by 11).	

TABLE 3.—Rebuilt equipment

Bottom Cutting Machines (2)	\$5,000
T-2 Utility Truck (1)	3,000
Permissible Battery Tractors and Trailers (2)	13,000
Hand-held Drills (3)	450
Total	21,450
Average price of replacement machine: \$2,700 (\$21,450 divided by 8).	

TABLE 4.—Number of underground bituminous and anthracite mines (1967 and 1968 data)

Large:	
Gassy	300
Nongassy	573
Total	873
Small:	
Gassy	150
Nongassy	2,755
Total	2,905

TABLE 5.—Production of underground bituminous and anthracite mines [In millions of tons]

Large:	
Gassy	208
Nongassy	101
Total	309
Small:	
Gassy	2
Nongassy	39
Total	41

ESTIMATED COSTS OF CONVERTING ONE SECTION OF AN AVERAGE SIZE SMALL ONE-SHIFT NON-GASSY COAL MINE TO MEET GASSY MINE STANDARDS

A. Average number of men employed at the mine. 6. Average number of men employed in the section. 5. Average annual production, 15,000 tons.

B. The average section in a small mine now uses two bottom cutting machines, one T-2 truck for tramping the cutting machines, three drag cable shuttle cars, and three hand-held drills. All of these pieces of equipment are nonpermissible-type.

C. The total cost of converting these pieces of nonpermissible-type equipment to permissible-type is: \$15,950.

Bottom cutting machine, 2 at \$1,000 each, \$2,000. T-2 truck, 1 at \$500.

Drag cable shuttle car: Not practicable to convert, must purchase 2 battery tractors (used) at \$6,500 each, \$13,000.

Hand-held drill, 3 at \$150 each, \$450.

D. The total cost of purchasing used permissible-type equipment is \$21,450.

Bottom cutting machine, 2 at \$2,500 each, \$5,000. T-2 truck, 1 at \$3,000.

Battery tractor, 2 at \$6,500 each, \$13,000. Hand-held drills, 3 at \$150 each, \$450.

E. The total cost of purchasing new permissible-type equipment is \$84,300.

Modern rubber tired cutting machine, 1 at \$60,000.

Battery tractor, 2 at \$12,000, \$24,000. Hydraulic drill, 1 at \$300.

F. The cost of maintaining permissible-type electric face equipment in permissible condition is 16½ cents per ton.

G. Other costs of converting from nongassy to gassy status: \$2,500 initial outlay for improvements in ventilation, purchase of a recording pressure gage, and methane detectors.

ESTIMATED SIZE AND COST OF NEW ELECTRICAL EQUIPMENT USED IN COAL MINES MAY 27, 1969

Coal drill, ¾ hp to 50 hp, \$300 to \$25,000 (Maximum horsepower of hand-held drills, 3).

Loader, 20 hp to 140 hp, \$30,000 to \$80,000. Shuttle car, 3 hp to 160 hp, \$5,000 to \$50,000.

Tractor (battery), 5 hp to 35 hp, \$3,000 to \$20,000.

Telephone, \$20 to \$800.

Longwall equipment, 175 hp to 400 hp, \$750,000 to \$2,000,000.

Rectifier, 40 kw to 1,000 kw, \$1,000 to \$40,000.

Transformer, 5 kva to 1,000 kva, \$500 to \$45,000.

Rock duster, 3 hp to 100 hp, \$1,300 to \$80,000.

Car spotter and car hoist, 5 hp to 20 hp, \$5,000 to \$25,000.

Roof bolter, 3 hp to 40 hp, \$2,500 to \$35,000.

Cutting machine, 35 hp to 425 hp, \$2,500 to \$125,000.

Continuous miner, 50 hp to 600 hp, \$50,000 to \$200,000.

Methane detector with charging equipment, \$273.

Methane detector, \$2,000 to \$2,500.

Mine lamp and charging equipment, \$55.

Mine fan, 10 hp to 500 hp, \$300 to \$100,000.

Hoist, 20 hp to 500 hp, \$40,000 to \$100,000.

Pump, 1 hp to 500 hp, \$100 to \$25,000.

Electric locomotive, 40 hp to 400 hp, \$12,000 to \$150,000.

Personnel carrier, 10 hp to 25 hp, \$6,500 to \$20,000.

Belt drive, 25 hp to 600 hp, \$2,000 to \$35,000.

Belt feeder, 7½ hp to 50 hp, \$2,000 to \$25,000.

Battery charger, 5 kw to 50 kw, \$1,000 to \$8,000.

Air compressor, 1 hp to 100 hp, \$300 to \$50,000.

Auxiliary fan, 5 hp to 15 hp, \$1,500 to \$2,500.

Cap lamp with battery, \$32.50.

COST OF NEW EQUIPMENT

Joy Manufacturing Co.

- 14 BU loading machine, \$53,000.
- 15 RU cutting machine, \$76,000.
- RBD-15 roof bolter, \$14,500.
- 10 SC shuttle car, \$43,000.
- 16 SC shuttle car, \$40,000.
- 18 SC shuttle car, \$40,000.
- CB-71A coal drill, \$37,000.
- 8 CM continuous miner, \$129,000.
- 1 CM continuous miner, \$159,000.
- 6 CM continuous miner, \$150,000.
- 9 CM continuous miner, \$123,000.

Jeffrey Manufacturing Co.

- 70 URB cutting machine, \$75,000.
- 202 loading machine, \$65,000.
- 203 loading machine, \$85,000.
- RAM car, \$55,000.
- Helminner continuous miner, \$200,000.
- 120 Helminner miner, \$180,000.
- 100 L miner, \$65,000.
- Bridge conveyor, \$22,000.

Cost of rebuilt equipment

- Lee Norse miner, \$75,000.
- Joy NSC shuttle car, \$20,000.
- Galis roof drill, \$9,000.
- Joy 14 BU loader, \$22,500.
- Joy CD-71A coal liner, \$12,500.
- Joy RU cutting machine, \$30,000.

TABLE 9.—NEW EQUIPMENT PURCHASED AND EQUIPMENT IN USE IN UNDERGROUND BITUMINOUS MINES 1968

	Col. 1, in use	Col. 2, purchased	Expected life col. 1/col. 2, years
Drills.....	9,600	1,540	18
Shuttle cars.....	5,100	380	13
Continuous mining machine.....	1,410	240	2 6
Mobile loading machine.....	2,520	1,650	1 4
Coal-cutting machine.....	4,780	115	2 42
Total.....	23,410	1,925	12

¹ All mining—must be corrected for metal mines.
² The trend toward the use of continuous miners with a decrease in conventional coal cutting machine is reflected by these figures.

ATTACHMENT B.—COST OF UPGRADING ELECTRIC FACE EQUIPMENT IN SMALL NONGASSY MINES TO PERMISSIBLE STATUS OR TO PURCHASE USED REBUILT PERMISSIBLE EQUIPMENT IF UPGRADING IS NOT FEASIBLE¹

State	Cost per small nongassy mine	Number of small nongassy mines	Total cost
West Virginia.....	\$16,430	719	\$11,813,170
Tennessee.....	13,740	99	1,360,260
Virginia.....	26,460	522	13,812,120
Alabama.....	9,600	67	643,200
Pennsylvania.....	17,345	121	2,098,745
Ohio.....	10,550	32	337,600
Colorado.....	2,485	29	72,065
Utah.....	8,470	10	84,700
Kentucky.....	31,455	784	24,660,720
Total.....		2,388	54,882,580

¹ Basic data were developed by selecting at random 10 small nongassy mines in each State, getting the number of pieces of electric face equipment in use by type of equipment, and whether permissible or nonpermissible type, then finally getting from local shops the cost of upgrading the equipment to permissible status or to purchase used rebuilt permissible equipment if upgrading is not feasible.
² Most of the equipment is maintained in permissible condition and upgrading is not required.

INFORMATION ON ELECTRIC FACE EQUIPMENT USED AT SMALL NONGASSY COAL MINES, JULY 1, 1969

Type of equipment	Permissible type	Non-permissible type	Cost to convert to permissible condition	Cost of similar used rebuilt permissible equipment
COLORADO				
1 Joy 8 BU loading machine.....	X		(¹)	\$6,500
1 Sullivan CE7 cutting machine.....		X	\$2,000	2,500
1 Joy 6 SC shuttle car.....		X	2,000	10,000
1 Chicago pneumatic hand held drill.....		X	150	150
(Underground employment, 6; daily production (tons), 100.)				
1 Joy JCM continuous miner.....	X		(¹)	80,000
1 Joy 8 BU loading machine.....	X		(¹)	5,000
2 Joy 6 SC shuttle cars.....	X		(¹)	20,000
1 Ingersoll hand roof bolting machine.....		X	1,000	9,000
(Underground employment, 3; daily production (tons), 35.)				
1 Joy 10 RU cutting machine.....	X		(¹)	25,000
1 Joy 10 SC shuttle car.....	X		(¹)	20,000
1 Joy 8 BU loading machine.....	X		(¹)	6,500
1 Joy 6 SC shuttle car.....		X	3,000	10,000
1 Chicago pneumatic hand held drill.....		X	105	150
1 Ingersoll hand roof bolting machine.....		X	1,000	9,000
1 Goodman 212 cutting machine.....		X	1,000	2,500
1 Hand held drill.....		X	150	150
(Underground employment, 3; daily production (tons), 12.)				
1 Lee Norse continuous miner.....	X		(¹)	75,000
1 Joy 8 BU loading machine.....	X		(¹)	6,500
1 Joy 10 SC shuttle car.....	X		(¹)	20,000
(Underground employment, 2; daily production (tons), 50.)				
1 Fletcher roof bolting machine.....	X		(¹)	5,000
1 Joy 8 BU loading machine.....		X	2,500	6,500
2 hand-held drills.....		X	2 150	2 150
1 Sullivan CE7 cutting machine.....		X	2,000	2,500
(Underground employment, 5; daily production (tons), 50.)				
1 Sullivan iron clad cutting machine.....		X	3,000	2,500
1 Hand held drill.....		X	150	150
(Underground employment, 2; daily production (tons), 10.)				
1 Goodman 212 cutting machine.....		X	1,000	2,500
1 Hand held drill.....		X	150	150
(Underground employment, 1; daily production (tons), 10.)				
1 Sullivan CE cutting machine.....		X	2,000	2,500
1 Hand held drill.....		X	150	150
(Underground employment, 3; daily production (tons), 30.)				
1 Goodman 212 cutting machine.....		X	3,000	2,500
1 Hand held drill.....		X	150	150
(Underground employment, 2; daily production (tons), 15.)				
UTAH				
1 Joy 4 JCM continuous miner.....	X		(¹)	60,000
1 Diesel shuttle car.....	X		(¹)	20,000
(Underground employment, 10; daily production (tons), 325.)				
1 Goodman SW cutting machine.....	X		(¹)	4,000
1 Hand held drill.....		X	150	150
(Underground employment, 6; daily production (tons), 50.)				
1 Lee Norse continuous miner.....	X		(¹)	90,000
2 Joy 10 SC shuttle cars.....	X		(¹)	20,000
(Underground employment, 7; daily production (tons), 250.)				
1 Joy 8 BU loading machine.....	X		(¹)	6,500

See footnotes at end of table.

Type of equipment	Permissible type	Non-permissible type	Cost to convert to permissible condition	Cost of similar used rebuilt permissible equipment
UTAH—Continued				
1 Goodman 312 cutting machine.....	X		(¹)	\$2,500
1 Mobile drill.....	X		(¹)	
2 Joy 10 SC shuttle cars.....		X	2 \$3,500 each	2 \$20,000 each
(Underground employment, 6; daily production (tons), 150.)				
1 Lee Norse continuous miner.....		X	(¹)	
1 Homemade conveyor.....		X	4,000	6,000
1 Homemade reel shuttle car.....		X	2,000	10,000
(Underground employment, 11; daily production (tons), 1,000.)				
1 Sullivan 7 B cutting machine.....		X	3,000	4,500
2 Joy 10 SC shuttle cars.....		X	2 3,500	2 20,000
1 hand-held drill.....		X	2,500	6,500
(Underground employment, 4; daily production (tons), 35.)				
1 Joy 8 BU loading machine.....		X	2,500	6,500
1 Goodman 312 cutting machine.....		X	3,000	2,500
1 hand-held drill.....		X	150	150
2 diesel shuttle cars (local make).....		X	2 8,000	20,000
(Underground employment, 6; daily production (tons), 85.)				
1 Joy 8 BU loading machine.....		X	2,500	6,500
1 Goodman B12 cutting machine.....		X	3,000	2,500
1 Chicago pneumatic hand held drill.....		X	150	150
1 diesel shuttle car (local make).....		X	8,000	20,000
(Underground employment, 4; daily production (tons), 30.)				
1 Joy 8 BU loading machine.....		X	2,500	6,500
1 Chicago pneumatic hand held drill.....		X	150	150
1 Joy 6 SC shuttle car.....		X	2,800	10,000
1 Sullivan ironclad cutting machine.....		X	3,000	2,500
(Underground employment, 2; daily production (tons), 12.)				
1 Joy 8 BU loading machine.....		X	2,500	6,500
1 Sullivan ironclad cutting machine.....		X	3,000	2,500
1 Joy 6 SC shuttle car.....		X	2,800	10,000
1 mobile drill.....		X	7,000	12,500
(Underground employment, 3; daily production (tons), 75.)				
KENTUCKY				
1 Joy 12 RB cutting machine.....	X		5,000-6,000	
1 Joy 14 BU loading machine.....	X		5,000-6,000	
1 Galis roof bolting machine.....	X		2,000-3,000	
2 Hand held drills.....		X		2 350
3 Kersey shuttle cars.....		X		20,000
(Underground employment, 13; daily production (tons), 275.)				
1 Goodman 512 cutting machine.....	X		5,000-6,000	
1 Joy 14 BU loading machine.....	X		5,000-6,000	
1 Chicago pneumatic roof bolting machine.....		X	2,000-3,000	
1 Hand held drill.....		X	150-200	
3 Kersey battery tractors.....		X	3 6,000	
1 T-2 utility truck.....		X	1,000-2,000	
(Underground employment, 10; daily production (tons), 300.)				
2 Goodman 512 cutting machines.....	X		2 5,000-6,000	
2 Joy 14 BU loading machines.....	X		2 5,000-6,000	
1 Roof bolting machine.....		X		14,000
2 Hand held drills.....		X		2 350
2 T-2 utility trucks.....		X	2 1,000-2,000	

INFORMATION ON ELECTRIC FACE EQUIPMENT USED AT SMALL NONGASSY COAL MINES, JULY 1, 1969—Continued

Type of equipment	Permissible type	Non-permissible type	Cost to convert to permissible condition	Cost of similar used rebuilt permissible equipment	Type of equipment	Permissible type	Non-permissible type	Cost to convert to permissible condition	Cost of similar used rebuilt permissible equipment
KENTUCKY—Continued					VIRGINIA—Continued				
3 Kersey battery tractors (Underground employment, 12; daily production (tons), 300.)		×	\$1,000-\$2,000		1 Galis roof bolting machine		×	\$2,000-\$3,000	
1 Jeffrey SW 35L cutting machine	×		2,000-3,000		1 Lee-Norse 35Y continuous miner		×	8,000-10,000	
1 Joy 12 BU loading machine	×		3,500-4,000		3 Kersey battery tractors (Underground employment, 10; daily production (tons), 325.)		×	\$2,000-3,000	
3 hand held drills		×		\$400	1 Joy 12 R B cutting machine		×	5,000-6,000	
4 battery tractors (Underground employment, 9; daily production (tons), 90.)		×	\$2,000-3,000		1 Long-Airtox loading machine		×	5,600-6,000	
1 Jeffrey 35L cutting machine	×		2,000-3,000		1 roof bolting machine		×		\$14,000
1 Joy 14 BU loading machine	×		5,000-6,000		1 drill		×		350
3 Hand held drills		×		\$350	3 battery tractors (Underground employment, 7; daily production (tons), 250.)		×	\$2,000-3,000	
2 Drag cable shuttle cars		×		\$20,000	TENNESSEE				
1 T-2 utility truck		×	1,000-1,200		1 Joy 10 RU cutting machine		×	2,500-3,000	
2 Battery tractors		×	\$2,000-3,000		1 Joy 14 BU loading machine		×	2,500-3,000	
1 Wilcox continuous miner (Underground employment, 8; daily production (tons), 200.)	×		5,000-6,000		1 Acme roof bolting machine		×	1,500-2,000	
1 Joy 11 RB cutting machine	×		5,000-6,000		1 Kersey battery tractor (Underground employment, 10; daily production (tons), 200.)		×	2,000-3,000	
2 Joy 14 BU loading machines	×		\$5,000-6,000		1 Sullivan 11 B S.W. cutting machine	×		2,000-3,000	
1 rubber-tired drill (handmade)		×		350	1 Joy 14 BU loading machine	×		2,500-3,000	
6 drag cable shuttle cars (Underground employment, 12; daily production (tons), 100.)		×		\$2,000-3,000	2 Chicago pneumatic drills (hand drill)	×		150-200	
1 Joy 11 RB cutting machine	×		5,000-6,000		1 Joy 32E shuttle car	×		5,000-6,000	
1 Joy 14 BU loading machine	×		5,000-6,000		1 Joy T-2 truck	×		1,000-1,200	
1 Royal roof bolting machine		×		14,000	1 Goodman 512 S.W. cutting machine	×		2,000-3,000	
3 hand held drills		×		\$350	1 Long Airtox loading machine	×		2,500-3,000	
4 S. & S. battery tractors (Underground employment, 13; daily production (tons), 275.)		×	\$2,000-3,000		1 Chicago Pneumatic roof bolter	×		1,500-2,000	
1 Joy 12 RB cutting machine	×		5,000-6,000		1 Cincinnati drill	×			350
1 Joy 14 BU loading machine	×		5,000-6,000		2 Shuttle cars		×		\$15,000
1 Fletcher roof bolting machine	×		2,000-3,000		1 Joy T-2 truck	×		1,000-1,200	
2 Chicago pneumatic hand held drills		×		\$350	(Underground employment, 7; daily production (tons), 150.)				
3 Joy GSC shuttle cars (Underground employment, 6; daily production (tons), 200.)		×	\$5,000-6,000		1 Joy 11 RB cutting machine	×		2,500-3,000	
1 Jeffrey 35 S.W. cutting machine	×		5,000-6,000		1 Joy 14 BU loading machine	×		2,500-3,000	
1 Joy 14 BU loading machine	×		5,000-6,000		1 Cincinnati drill (hand held)		×		350
1 Jeffrey handheld drill	×		150-200		2 drag cable shuttle cars		×		\$15,000
2 S & S battery tractors		×	\$2,000-3,000		1 Joy T-2 truck	×		1,000-1,200	
2 Joy transfer trucks (Underground employment, 6; daily production (tons), 100.)		×	\$2,000-3,000		(Underground employment, 8; daily production (tons), 75.)				
VIRGINIA					1 Jeffrey 35 B cutting machine	×		2,000-3,000	
1 Jeffrey 300 U cutting machine	×		5,000-6,000		1 Joy 11 BU loading machine	×		3,500-4,500	
1 Jeffrey 81C loading machine	×		5,000-6,000		1 Black and Decker hand held drill		×		350
1 Galis roof bolting machine	×		2,000-3,000		1 Joy shuttle car (reel)	×		5,600-6,000	
4 Battery tractors (Underground employment, 12; daily production (tons), 300.)		×	\$2,000-3,000		1 Joy T-2 truck	×		1,000-1,200	
1 Royal cutting machine	×			40,000	(Underground employment, 5; daily production (tons), 100.)				
1 Stacy loading machine	×			14,000	1 Wilcox continuous miner (Underground employment, 8; daily production (tons), 200.)	×		2,500-2,700	
1 Handheld drill		×		350	1 Jeffrey 35 B S.W. cutting machine	×		2,000-3,000	
3 Battery tractors (Underground employment, 6; daily production (tons), 80.)		×	\$2,000-3,000		1 Black & Decker drill		×		350
1 Galis roof bolting machine	×		2,000-3,000		1 Joy T-2 truck	×		1,000-1,200	
1 Jeffrey 100L continuous miner	×		9,000-10,000		1 S. and S. battery tractor (Underground employment, 6; daily production (tons), 60.)		×	500	
2 Battery tractors (Underground employment, 8; daily production (tons), 200.)		×	\$2,000-3,000		1 Joy 11 BU cutting machine	×		2,500-3,000	
1 Stacey Spinner loading machine		×		14,000	1 Cincinnati drill		×		350
1 Hand held drill		×		350	2 Kersey battery tractors (Underground employment, 4; daily production (tons), 40.)		×	\$2,000-3,000	
1 Battery tractor (Underground employment, 5; daily production (tons), 90.)		×	2,000-3,000		1 Jeffrey 35 L cutting machine	×		2,500-3,000	
1 Goodman 212 S.W. cutting machine	×		5,000-6,000		1 Kersey machine truck (Underground employment, 7; daily production (tons), 35.)	×		2,000-3,000	
1 Epling rubber-tired loading machine	×			14,000	1 Jeffrey 35B cutting machine	×		2,000-3,000	
1 Hand held drill		×		350	1 Cincinnati hand held drill		×		350
2 Battery tractors (Underground employment, 6; daily production (tons), 70.)		×	\$2,000-3,000		4 homemade drag cable shuttle cars (Underground employment, 7; daily production (tons), 50.)		×		(*)
1 Joy 12 R B cutting machine	×		5,000-6,000		ALABAMA				
1 Jeffrey loading machine	×		9,000-10,000		1 Joy 10 RU cutting machine	×		5,000-6,000	
1 Galis roof bolting machine	×		2,000-3,000		1 Joy 14 BU loading machine	×		2,500-3,000	
1 Long-Airtox drill		×		350	1 Galis roof bolting machine	×		2,000-3,000	
1 Joy 10 S. C. shuttle car	×		3,000-4,000		1 Joy coal drill (mobile)	×		1,500-1,700	
1 Battery tractor (Underground employment, 4; daily production (tons), 20.)		×	2,000		2 Joy 10 SC shuttle cars (Underground employment, 9; daily production (tons), 180.)	×		\$2,500-3,000	
1 Jeffrey S.W. cutting machine	×		2,000-3,000		2 Goodman 212 short wall cutting machines		×	\$6,000	
1 Joy 12 BU loading machine	×		3,500-4,500	4,800	2 Chicago pneumatic hand held drills (Underground employment, 10; daily production (tons), 90.)		×		\$350
1 Hand held drill		×		350	1 Goodman 212 short wall cutting machine		×	6,000	
2 S. & S. battery tractors (Underground employment, 6; daily production (tons), 100.)		×	\$2,000-3,000		1 Chicago pneumatic hand held drill (Underground employment, 7; daily production (tons), 40.)		×		350
1 Jeffrey S.W. cutting machine	×		2,000-3,000		2 Goodman SW cutting machines		×		\$6,000
1 Joy 12 BU loading machine	×		3,500-4,500	4,800	2 Chicago pneumatic hand held drills (Underground employment, 12; daily production (tons), 60.)		×		\$350
1 Hand held drill		×		350	2 Goodman 212 cutting machines		×		\$6,000
2 S. & S. battery tractors (Underground employment, 6; daily production (tons), 100.)		×	\$2,000-3,000		2 Chicago pneumatic hand held drills (Underground employment, 5; daily production (tons), 25.)		×		\$6,000
1 Royal cutting machine	×			40,000	2 Goodman 212 cutting machines		×		\$6,000
1 Stacy loading machine	×			14,000	2 Chicago pneumatic hand held drills (Underground employment, 7; daily production (tons), 35.)		×		\$350
1 Hand held drill		×		350	1 Goodman 212 SW cutting machine	×			6,000
2 Battery tractors (Underground employment, 7; daily production (tons), 150.)		×	\$2,000-3,000						

See footnotes at end of table.

INFORMATION ON ELECTRIC FACE EQUIPMENT USED AT SMALL NONGASSY COAL MINES, JULY 1, 1969—Continued

Type of equipment	Permissible type	Non-permissible type	Cost to convert to permissible condition	Cost of similar used rebuilt permissible equipment	Type of equipment	Permissible type	Non-permissible type	Cost to convert to permissible condition	Cost of similar used rebuilt permissible equipment
ALABAMA—Continued					PENNSYLVANIA—Continued				
1 Jeffery hand held drill.....	X			\$350	1 35B Jeffrey cutting machine.....	X		\$4,000	\$2,500
(Underground employment, 10; daily production (tons) 40.)					1 drag cable shuttle (homemade).....		X		10,000
1 Goodman 212 SW cutting machine.....	X			6,000	1 handheld drill.....	X			150
1 Chicago pneumatic hand held drill.....	X			350	1 Joy 12BU loading machine.....	X		6,000	8,500
(Underground employment, 6; daily production (tons) 20.)					(Underground employment, 3; daily production (tons) 20.)				
1 Goodman 212 SW cutting machine.....	X			6,000	1 hand-held drill.....		X		150
1 Jeffrey hand held drill.....	X			350	1 Miller auger.....		X		2,500
(Underground employment, 9; daily production (tons) 35.)					(Underground employment, 2; daily production (tons) 5.)				
2 Goodman 212 SW cutting machines.....	X			\$6,000	2 Joy 10 SC shuttle cars.....	X		\$5,000	\$10,000
2 Chicago pneumatic hand held drills.....	X			\$350	1 Joy 10 RU cutting machine.....	X		4,000	25,000
(Underground employment 10; daily production (tons) 60.)					1 Joy 14 BU loading machine.....	X		6,000	15,000
1 Lee-Norse 35Y.....	X		(9)		(Underground employment, 9; daily production (tons) 125.)				
2 Joy 6 SC shuttle cars.....	X		\$5,000	\$10,000	2 Goodman Universal cutting machines.....	X		\$4,000	\$25,000
(Underground employment, 8; daily production (tons) 265.)					1 Joy 12BU loading machine.....	X		6,000	8,500
1 Wilcox continuous miner.....	X		(9)		1 Joy 6SC shuttle car.....	X		5,000	10,000
1 Bridge conveyor.....	X		(9)		2 hand-held drills.....	X		\$300	\$150
1 Conveyor.....	X		(9)		(Underground employment, 4; daily production (tons) 25.)				
(Underground employment, 9; daily production (tons) 400.)					1 Jeffrey 35B cutting machine.....	X		4,000	2,500
1 Wilcox continuous miner.....	X		(9)		1 Joy 14BU loading machine.....	X		6,000	15,000
1 Joy 6 SC shuttle car.....	X		5,000	10,000	1 Joy 6SC shuttle car.....	X		5,000	10,000
(Underground employment, 3; daily production (tons) 40.)					1 hand-held drill.....	X		300	150
1 Joy 14 BU loading machine.....	X		6,000	20,000	1 T-2 truck.....	X		4,000	3,000
1 Goodman 512 SW cutting machine.....	X		4,000	2,500	(Underground employment, 6; daily production (tons) 55.)				
1 Chicago pneumatic handheld drill.....	X		150	150	WEST VIRGINIA				
(Underground employment, 7; daily production (tons) 90.)					2 Joy 8 BU loading machines.....	X		2,500	6,500
1 Jeffrey 35 B SW cutting machine.....	X		4,000	2,500	3 Goodman 12 AA cutting machines.....	X		\$2,500	\$2,500
1 Joy 14 BU loading machine.....	X		6,000	20,000	1 Goodman 512 cutting machine.....	X		1,000	2,500
1 Chicago pneumatic handheld drill.....	X		150	150	2 drag cable shuttle cars.....	X			\$6,000
(Underground employment, 13; daily production (tons) 200.)					1 Black and Decker hand-held drill.....	X			150
2 Jeffrey 29 U cutting machines.....	X		\$4,000	\$37,500	(Underground employment, 10; daily production (tons) 150.)				
1 Meyers Whaley loading machine.....	X		8,000	20,000	1 Lee Norse 35 Y continuous miner.....	X			2,000
3 Chicago pneumatic hand held drills.....	X		\$150	\$150	1 Jeffrey MP shuttle car.....	X		2,800	10,000
(Underground employment, 5; daily production (tons) 75.)					1 Joy 6 SC shuttle car.....	X		2,800	10,000
1 Joy 6 SC shuttle car.....	X		5,000	10,000	(Underground employment, 7; daily production (tons) 300.)				
2 Goodman 512 SW cutting machines.....	X		\$4,000	\$2,500	1 Joy 8 BU loading machine.....	X		2,500	6,500
1 Joy 14 BU loading machine.....	X		6,000	20,000	1 Joy 12 RB cutting machine.....	X		2,500	25,000
2 Chicago pneumatic hand-held drills.....	X		\$150	\$150	1 Goodman 512 cutting machine.....	X		2,800	10,000
(Underground employment, 2; daily production (tons) 40.)					1 Joy 6 SC shuttle car.....	X		2,800	10,000
1 Jeffrey 29 U cutting machine.....	X		4,000	20,000	1 Joy 8 SC shuttle car.....	X		500	9,000
1 Joy 14 BU loading machine.....	X		6,000	20,000	1 Galis 300 roof bolting machine.....	X			
1 Chicago pneumatic hand-held drill.....	X		150	150	(Underground employment, 14; daily production (tons) 200.)				
1 Fletcher mobile drill.....	X		5,000	10,000	1 Joy 14 BU loading machine.....	X		3,500	15,000
1 Joy 7 SC shuttle car.....	X		5,000	10,000	1 Joy 11 RU cutting machine.....	X		2,500	25,000
(Underground employment, 4; daily production (tons) 25.)					4 S&S battery tractors.....	X		\$2,500	\$6,500
1 Jeffrey 35 B cutting machine.....	X		4,000	150	1 Jeffrey A-7 drill (handheld).....	X		150	150
1 Chicago pneumatic hand-held drill.....	X		150	150	(Underground employment, 6; daily production (tons) 150.)				
(Underground employment, 3; daily production (tons) 25.)					1 Joy 8 BU loading machine.....	X		2,500	6,500
1 Joy 14 BU loading machine.....	X		6,000	2,500	2 home made drag cable shuttle cars.....	X		800	2,500
1 Jeffrey 35 B cutting machine.....	X		4,000	2,500	1 Jeffrey 35L cutting machine.....	X			2,500
1 Chicago pneumatic handheld drill.....	X		150	150	1 Goodman 512 cutting machine.....	X		1,000	2,500
(Underground employment, 6; daily production (tons) 22.)					2 Jeffrey 87 hand-held drills.....	X		150	150
PENNSYLVANIA					PENNSYLVANIA				
2 Joy shuttle cars 10 SC.....	X		\$5,000	10,000	(Underground employment, 8; daily production (tons) 125.)				
1 shortwall cutting machine.....	X		4,000	2,500	1 Joy 12 BU loading machine.....	X		2,500	8,500
2 Joy 8 BU loading machines.....	X		\$6,000	\$6,000	1 Joy T-2 utility truck (reel).....	X		1,000	3,000
1 handheld drill.....	X		150	150	2 home made drag cable shuttle cars.....	X		\$150	\$6,500
(Underground employment, 10; daily production (tons) 200.)					2 Chicago pneumatic hand-held drills.....	X			\$150
1 Shortwall cutting machine.....	X		6,000	2,500	(Underground employment, 6; daily production (tons) 100.)				
1 Joy 8 BU loading machine.....	X		6,000	6,500	1 Joy 12 BU loading machine.....	X		2,500	8,500
2 Joy 6 SC shuttle cars.....	X		\$5,000	\$10,000	1 Joy T-2 utility truck.....	X		1,000	3,000
2 Handheld drills.....	X		\$300	\$300	2 homemade drag cable shuttle cars.....	X			\$6,500
(Underground employment, 5; daily production (tons) 100.)					2 Chicago-pneumatic hand-held drills.....	X		\$150	\$150
1 Shortwall cutting machine.....	X		4,000	4,000	(Underground employment, 13; daily production (tons) 200.)				
1 Joy 14 BU loading machine.....	X		6,000	15,000	2 Goodman 12 AA cutting machines.....	X		\$2,500	\$8,500
1 Handheld drill.....	X		7,000	6,000	3 drag cable shuttle cars.....	X			\$6,500
1 Battery tractor.....	X				2 Jeffrey A-7 hand-held drills.....	X		\$150	\$150
(Underground employment, 3; daily production (tons) 40.)					(Underground employment, 4; daily production (tons) 50.)				
1 Wilcox miner.....	X		8,000	75,000	1 Joy 14 BU loading machine.....	X		1,000	42,500
1 Bridge conveyor.....	X		8,000	8,000	1 Joy 12 RB cutting machine.....	X		2,500	25,000
(Underground employment, 5; daily production (tons) 100.)					1 Acme roof bolting machine.....	X		600	5,000
					1 Long-Airdux T-D F10 mobile drill.....	X		500	5,000
					4 Jeffrey MT 66 shuttle cars.....	X		\$2,800	\$10,000
					(Underground employment, 10; daily production (tons) 150.)				

1 Nil. This equipment is maintained in permissible condition.
 2 Each.
 3 Nil.
 4 Each. Replace with 2 battery power tractor.

5 2 battery tractor at \$7,000 each.
 6 Nil in permissible condition.
 7 Each cable reel.

COST OF CONVERTING ELECTRIC FACE EQUIPMENT IN LARGE NONGASSY COAL MINES TO PERMISSIBLE STATUS¹

State and employment group	Number of mines in group	Cost per large representative nongassy mine	Data on representative mine		State and employment group	Number of mines in group	Cost per large representative nongassy mine	Data on representative mine			
			Total cost	Employment				Daily production	Total cost	Employment	Daily production
Virginia:					Kentucky:						
15-49	31	\$56,450	\$1,749,950	22	255	15-24	89	\$42,000	\$3,738,000	28	400
50-99	4	44,000	176,000	93	1,485	50 to 99	14	37,000	518,000	68	2,000
100-149	2	144,000	288,000	130	1,300	100 to 149	6	73,000	438,000	137	2,000
150-199	1	118,500	118,500	150	2,400	150 to 199	5	95,500	477,500	160	3,700
200-249	1	89,500	89,500	211	3,700	200 to 249	3	246,500	339,500	223	3,700
Total			2,421,500			Total			5,911,000		
Pennsylvania:					Ohio:						
15-30	37	7,000	259,000	17	240	15 to 30	1	12,200	12,200	24	200
31-50	5	2,900	14,500	34	500	31 to 50	1	(²)	Nil	41	200
51-70	6	5,800	34,800	65	1,200	51 to 70	3	(²)	Nil	63	2,500
71-90	3	11,600	34,800	81	1,500	71 to 90	1	(²)	Nil	80	3,000
91 and over	2	(²)	(²)	96	3,000	91 and over	2	(²)	Nil	99	4,000
Total			\$ 343,100			Total			\$ 12,200		
Tennessee:					West Virginia:						
15-49	18	18,000	324,000	24	400	15 to 24	80	12,100	968,000	20	800
50-99	1	46,000	46,000	50	1,200	25 to 64	63	22,700	1,430,100	45	1,200
100-149	1	43,500	43,500	106	2,100	65 to 99	24	46,800	1,123,200	81	1,735
200-249	1	62,000	62,000	247	5,000	100 to 130	8	49,200	393,600	125	2,800
Total			475,800			131 to 199	7	40,400	282,800	180	3,750
						200 to 450	4	10,500	42,000	230	5,500
						Total			4,239,700		
Alabama:					Grand total						
15-49	3	12,450	37,350	15	75				13,475,650		
50-99	1	35,000	35,000	96	1,000						
Total			72,350								

¹ Basic data were developed by selecting representative mines by employment groups in each State, getting the actual number of pieces of electric face equipment in use, by type of equipment and whether permissible or nonpermissible type, in the representative mine in each group, then finally getting from the mine management and local mine equipment rebuilding shops the estimated cost of converting the equipment to permissible status.

² Nil.
³ Most of this equipment is maintained in permissible condition and the converting cost is low

INFORMATION ON ELECTRIC FACE EQUIPMENT USED AT LARGE NONGASSY COAL MINES, JULY 1969

Type of equipment	Permissible type	Nonpermissible type	Cost to convert to permissible condition	Cost of similar used rebuilt permissible equipment	Type of equipment	Permissible type	Nonpermissible type	Cost to convert to permissible condition	Cost of similar used rebuilt permissible equipment
1 Joy 14 BU loading machine	X		(¹)	\$25,000	1 Lee Norse continuous miner	X		(¹)	\$30,000
1 Joy 10 RU cutting machine	X		(¹)	30,000	2 Jeffrey ram cars	X		(¹)	\$25,000
1 Joy 6 SC shuttle car	X		(¹)	18,000	1 Fletcher roof bolting machine	X		(¹)	7,500
1 Joy 6 SC shuttle car		X	\$7,000	18,000	(Underground employment, 41; daily production (tons), 200; this is the only mine in a group employing 31 to 50 men.)				
(Underground employment, 17; daily production (tons), 240; this mine represents 37 mines in a group employing 15 to 30 men.)					2 Joy loading machines	X		(¹)	\$25,000
3 Wilcox continuous miners	X		(¹)	\$10,000	2 Joy 10 RU cutting machines	X		(¹)	30,000
2 Kersey battery tractors		X	\$2,900	\$3,700	2 Joy 16 SC shuttle cars	X		(¹)	18,000
(Underground employment, 34; daily production (tons), 500; this mine represents 5 mines in a group employing 31 to 50 men.)					2 Galis roof bolting machines	X		(¹)	6,000
2 Joy 14 BU loading machines	X		(¹)	\$25,000	2 Long mobile drills	X		(¹)	10,000
6 Joy 18 SC shuttle cars	X		(¹)	18,000	(Underground employment, 63; daily production (tons), 2,500; this mine represents 3 mines in a group employing 50 to 70 men.)				
3 Galis roof bolting machines	X		(¹)	9,000	3 Joy loading machines	X		(¹)	(²)
2 Lee Norse 28 E continuous miners	X		(¹)	30,000	3 Joy 10 RU cutting machines	X		(¹)	(²)
2 Joy 12 RB cutting machines	X		(¹)	25,000	3 Joy 16 SC shuttle cars	X		(¹)	(²)
2 Kersey battery tractors		X	\$2,900	\$3,700	3 Galis roof bolting machines	X		(¹)	(²)
(Underground employment, 65; daily production (tons), 1,200; this mine represents 6 mines in a group employing 51 to 70 men.)					3 Long mobile drills	X		(¹)	(²)
4 Jeffrey 100 L continuous miners	X		(¹)	\$32,000	(Underground employment, 80; daily production (tons), 3,000; this is the only mine in a group employing 71 to 90 men.)				
4 Jeffrey 94 D bridge conveyors	X		(¹)	\$4,000	4 Joy loading machines	X		(¹)	\$25,000
2 S. & S. battery tractors	X		(¹)	\$3,000	4 Joy 10 RU cutting machines	X		(¹)	30,000
4 S. & S. battery tractors		X	\$2,900	\$3,600	4 Joy 16 SC shuttle cars	X		(¹)	18,000
(Underground employment, 81; daily production (tons), 1,500; this mine represents 3 mines in a group employing 71 to 90 men.)					4 Galis roof bolting machines	X		(¹)	6,000
4 Joy 14 BU loading machines	X		(¹)	\$25,000	3 Long mobile drills	X		(¹)	\$10,000
8 Joy 18 SC shuttle cars	X		(¹)	18,000	(Underground employment, 99; daily production (tons), 4,000; this mine represents 2 mines in a group employing 91 men or over.)				
4 Fletcher roof bolting machines	X		(¹)	\$7,500	5 West Virginia				
4 Joy 12 RU cutting machines	X		(¹)	\$30,000	1 Joy 10 RU cutting machine	X		\$2,500	25,000
4 Joy mobile drills	X		(¹)	\$20,000	2 Joy 5 SC shuttle cars		X	\$2,800	\$10,000
(Underground employment, 96; daily production (tons), 3,000; this mine represents 2 mines in a group employing 91 men and over.)					1 Joy 14 BU 8 AE loading machine	X		2,000	18,000
					1 Fletcher roof bolting machine		X	2,000	5,000
					(Underground employment, 20; daily production (tons) 800; this mine represents 80 mines in a group employing 15 to 24 men.)				
					1 Joy 14 BU-10 loading machine	X		1,000	32,500
					1 Joy 11 RU cutting machine	X		2,500	32,500
					4 Joy 18 SC shuttle cars	X		\$2,800	\$22,000
					2 Kersey battery tractors		X	\$2,500	\$6,500

Footnotes at end of table.

INFORMATION ON ELECTRIC FACE EQUIPMENT USED AT LARGE NONGASSY COAL MINES, JULY 1969—Continued

Type of equipment	Permissible type	Nonpermissible type	Cost to convert to permissible condition	Cost of similar used rebuilt permissible equipment	Type of equipment	Permissible type	Nonpermissible type	Cost to convert to permissible condition	Cost of similar used rebuilt permissible equipment
WEST VIRGINIA—Continued					VIRGINIA—Continued				
1 Galis 410 mobile drill.....	X		\$500	\$12,500	1 Lee Norse 35 y continuous miner.....	X		\$5,000	\$60,000
1 Galis 300 roof bolting machine.....	X		500	9,000	11 Goodman 670 shuttle cars.....	X		2 4,000	20,000
1 Lee Norse 26 H continuous miner.....	X		2,000	75,000	2 Goodman 680 shuttle cars.....	X		2 4,000	20,000
(Underground employment, 45; daily production (tons), 1,200; this mine represents 63 mines in a group employing 25 to 64 men.)					(Underground employment, 150; daily production (tons), 2,400; this is the only mine in a group employing 150 to 199 men.)				
5 Joy 14 BU-10 loading machines.....	X		21,000	2 32,500	1 Joy 11 RU cutting machine.....		X	5,000	40,000
3 Joy 16 RB cutting machines.....	X		2,500	50,000	2 Jeffrey 300 cutting machines.....	X		1 1,000	2 40,000
2 Joy 12 RB cutting machines.....	X		2,500	25,000	2 Joy 14 BU-8 loading machines.....	X		2 1,500	25,000
6 Joy 18 SC shuttle cars.....	X		2,800	22,000	1 Jeffrey almco loading machine.....	X		1 5,000	35,000
5 Galis 300 roof bolting machines.....	X		2 500	2 9,000	1 Jeffrey A-1Aa loading machine.....	X		8,000	35,000
1 Galis 4100 mobile drill.....	X		500	12,500	3 Fletcher roof bolting machines.....	X		2 1,000	2 8,000
1 Galis 410 mobile drill.....	X		500	12,500	11 Fletcher SDMC roof bolting machines.....	X		2 1,000	2 8,000
3 Long TDF-10 mobile drills.....	X		2 500	2 5,000	6 Lee Norse CM 32 continuous miners.....	X		2 1,500	2 40,000
2 S. & S. battery tractors.....	X		2 2,500	2 6,500	1 Joy CD-25 mobile drill.....	X		1 1,000	10,000
1 Kersey battery tractor.....	X		2,500	6,500	4 Jeffrey A-7 mobile drills.....	X		2 1,000	2 10,000
(Underground employment, 81; daily production (tons), 1,735; this mine represents 24 mines in a group employing 65 to 99 men.)					3 Jeffrey MI-66 shuttle cars.....	X		2 5,000	20,000
3 Joy 14 BU-10 loading machines.....	X		2 1,000	2 32,500	18 Joy 16 SC shuttle cars.....	X		2 1,500	2 20,000
2 Joy 1 JCM continuous miners.....	X		2 2,000	2 75,000	(Underground employment, 211; daily production (tons), 3,700; this is the only mine in a group employing 200 to 249 men.)				
2 Joy 15 RU cutting machines.....	X		2 2,500	2 50,000	KENTUCKY				
7 Joy 10 SC shuttle cars.....	X		2 2,800	2 6,250	1 Joy 16 RB cutting machine.....	X		5,000	40,000
2 Fletcher roof bolting machines.....	X		2 500	2 5,000	1 Joy 14 BU loading machine.....	X		6,000	20,000
2 Long TDF-24 mobile drills.....	X		2 2,500	2 6,500	1 Acme D3C roof bolting machine.....	X		4,000	7,500
4 S. & S. battery tractors.....	X		2 2,800	2 10,000	1 Joy CD 29 mobile coal drill.....	X		6,000	12,000
2 Joy 6 SC shuttle cars.....	X				7 Kersey battery tractors.....	X		2 3,000	2 8,000
(Underground employment, 125; daily production (tons), 2,800; this mine represents 8 mines in a group employing 100 to 130 men.)					(Underground employment, 28; daily production (tons), 400; this mine represents 89 mines in a group employing 15 to 49 men.)				
2 Joy 15 RW cutting machines.....	X		2 2,500	2 50,000	1 Joy 11 RU cutting machine.....		X	5,000	40,000
2 Joy 11 RW cutting machines.....	X		2 1,000	25,000	1 Jeffrey 300 cutting machine.....	X		1 1,000	40,000
4 Joy 14 BU-10 loading machines.....	X		2 1,000	32,500	2 Joy 14 BU-10 loading machines.....	X		2 1,000	2 35,000
8 Joy 10 SC shuttle cars.....	X		2 2,800	6,250	1 Joy 14 BU-8 loading machine.....	X		6,000	25,000
4 Galis 300 roof bolting machines.....	X		2 500	9,000	1 Galis 300 roof bolting machine.....	X		1 1,000	8,000
4 Long TDF-24 mobile drills.....	X		2 500	2 5,000	1 Galis 320 roof bolting machine.....	X		1 1,000	8,000
(Underground employment, 180; daily production (tons), 3,750; this mine represents 7 mines in a group employing 131 to 199 men.)					2 Long TDF mobile drills.....	X		2 1,000	2 10,000
4 Lee Norse CM 48 continuous miners.....	X		2 300	2 75,000	2 Joy 18 SC shuttle cars.....	X		1 1,000	20,000
4 Joy JCM continuous miners.....	X		2 300	2 65,000	2 Joy 6 SC shuttle cars.....	X		4 4,000	15,000
10 Joy 10 SC shuttle cars.....	X		2 300	2 6,250	3 Kersey battery tractors.....	X		2 3,000	2 10,000
6 Jeffrey ram cars.....	X		2 300	2 10,000	(Underground employment, 68; daily production (tons), 2,000; this mine represents 14 mines in a group employing 50 to 99 men.)				
5 Galis 320 roof bolting machines.....	X		2 300	2 15,000	2 Jeffrey 70 UR cutting machines.....	X		2 6,000	2 40,000
4 Acme mobile drills.....	X		2 300	2 7,000	2 Jeffrey 81 a loading machines.....	X		2 7,000	2 40,000
1 Long 88 loading machine.....	X		2 300	12,000	2 Galis 300 roof bolting machines.....	X		2 3,000	2 8,000
1 Long mobile drill.....	X		2 300	5,000	1 Long LAD-7 roof bolting machine.....	X		2 2,000	8,000
(Underground employment, 230; daily production (tons), 5,500; this mine represents 4 mines in a group employing 200 to 450 men.)					2 Lee Norse CM 35 y continuous miners.....	X		2 5,000	2 60,000
VIRGINIA					1 Lee Norse 33 y continuous miner.....	X		5,000	40,000
1 Jeffrey B SW cutting machine.....	X		5,000	20,000	4 Jeffrey MP 66 shuttle cars.....	X		2 4,000	20,000
2 Jeffrey BB SW cutting machines.....	X		2 5,000	20,000	4 Jeffrey battery ram cars.....	X		2 2,000	2 30,000
1 Joy 14 BU loading machine.....	X		2,500	20,000	(Underground employment, 137; daily production (tons), 2,000; this mine represents 6 mines in a group employing 100-149 men.)				
1 Joy 12 BU loading machine.....	X		2,500	20,000	6 Joy 14 BU loading machines.....		X	2 3,000	2 20,000
3 Black and Decker hand held drills.....	X		2 150	2 150	7 Fletcher roof bolting machines.....	X		2 2,500	8,000
6 Osborne battery tractors.....	X		2 6,000	2 6,000	6 Lee Norse 35 y continuous miners.....	X		5,000	60,000
(Underground employment, 22; daily production (tons), 255; this mine represents 31 mines in a group employing 15 to 49 men.)					7 Joy 18 SC shuttle cars.....	X		2 2,000	20,000
3 Joy 16 RB cutting machines.....	X		2 2,000	2 40,000	4 National Mine Service shuttle cars.....	X		2 4,000	2 20,000
4 Goodman 964 loading machines.....	X		2 1,500	2 35,000	(Underground employment, 160; daily production (tons), 3,700; this mine represents 2 mines in a group employing 200 to 249 men.)				
2 Acme D-2 roof bolting machines.....	X		2 1,000	2 8,000	3 Joy 11 RU cutting machines.....		X	2 5,000	2 40,000
2 Acme D-3 roof bolting machines.....	X		2 1,000	2 8,000	3 Joy 16 RB cutting machines.....		X	2 5,000	2 40,000
3 Long mobile drills.....	X		2 4,000	2 10,000	3 Joy 12 RB cutting machines.....		X	2 5,000	2 40,000
3 Goodman shuttle cars.....	X		2 2,000	2 15,000	8 Joy 14 BU loading machines.....		X	2 4,000	2 20,000
2 Joy 8 SC shuttle cars.....	X		2 2,000	2 20,000	2 Joy 14 BU-10 loading machines.....		X	4 4,000	2 35,000
2 Joy 6 SC shuttle cars.....	X		2 2,000	2 15,000	3 Westinghouse loading machines.....		X	2 4,000	2 35,000
(Underground employment, 93; daily production (tons), 1,485; this mine represents 4 mines in a group employing 50 to 99 men.)					11 Galis 300 roof bolting machines.....		X	2 2,000	2 14,000
2 Goodman 512 cutting machines.....	X		2 6,000	2 40,000	8 Galis mobile drills.....		X	2 2,000	2 10,000
3 Joy 10 RU cutting machines.....	X		2 6,000	2 40,000	25 Joy 8 SC shuttle cars.....		X	2 5,000	2 15,000
2 Joy 11 RU cutting machines.....	X		2 6,000	2 40,000	(Underground employment, 223; daily production (tons), 3,700; this mine represents 3 mines in a group employing 200 to 249 men.)				
4 Joy 14 BU-7 loading machines.....	X		2 3,000	2 20,000	9 Joy 11 RU cutting machines.....		X	2 5,000	2 40,000
2 Joy 14 BU-3 loading machines.....	X		2 3,000	2 20,000	4 Joy 10 RU cutting machines.....		X	2 3,000	2 35,000
1 Jeffrey 81 CW loading machine.....	X		6,000	25,000	3 Goodman 967 loading machines.....	X		2 3,000	2 35,000
3 Fletcher roof bolting machines.....	X		2 3,000	2 8,000	8 Galis roof bolting machines.....		X	2 2,000	2 8,000
1 Joy CV-26 mobile drill.....	X		3,000	10,000	8 Joy mobile coal drills.....		X	2 1,700	2 8,000
2 Joy 10 SC shuttle cars.....	X		4 4,000	2 20,000	21 Joy 6 SC shuttle cars.....		X	2 5,000	2 15,000
4 Jeffrey MT 66 shuttle cars.....	X		2 4,000	2 20,000	10 S. and S. battery tractors.....		X	2 2,000	2 6,000
3 Kersey battery tractors.....	X		2 2,000	2 6,000	(Underground employment, 250; daily production (tons), 4,400; this is the only mine in a group employing 250 to 299 men.)				
6 Osborne battery tractors.....	X		2 6,000	2 6,000	ALABAMA				
(Underground employment, 130; daily production (tons), 1,300; this mine represents 2 mines in a group employing 100-149 men.)					2 Goodman 212 cutting machines.....	X		2 6,000	2 40,000
3 Joy 10 RU cutting machines.....	X		2 3,000	2 40,000	3 Chicago pneumatic hand held drills.....	X		2 150	2 150
5 Goodman loading machines.....	X		2 6,000	2 35,000	(Underground employment, 15; daily production (tons), 75; this mine represents 3 mines in a group employing 15 to 49 men.)				
5 Fletcher roof bolting machines.....	X		2 1,000	2 8,000					
1 Galis roof bolting machine.....	X		2 500	8,000					
3 Lee Norse 32 y continuous miners.....	X		2 5,000	2 40,000					

Footnotes at end of table.

INFORMATION ON ELECTRIC FACE EQUIPMENT USED AT LARGE NONGASSY COAL MINES, JULY 1969—Continued

Type of equipment	Permissible type	Nonpermissible type	Cost to convert to permissible condition	Cost of similar used rebuilt permissible equipment	Type of equipment	Permissible type	Nonpermissible type	Cost to convert to permissible condition	Cost of similar used rebuilt permissible equipment
ALABAMA—Continued					TENNESSEE—Continued				
3 Jeffrey cutting machines.....		X	\$ 2,000	\$ 40,000	1 Joy 15 RU cutting machine.....	X		\$ 5,000	\$ 40,000
4 Joy 14 BU loading machines.....		X	\$ 5,000	\$ 20,000	1 Joy 11 RU cutting machine.....	X		5,000	40,000
3 Galis hand held drills.....	X		(¹)	\$ 700	2 Jeffrey loading machines.....	X		\$ 2,000	\$ 35,000
4 Joy 10 SC shuttle cars.....	X		\$ 1,500	\$ 20,000	2 Joy 14 BU loading machines.....		X	\$ 3,000	\$ 20,000
2 Joy 10 SC shuttle cars.....		X	1,500	\$ 20,000	1 Fletcher roof bolting machine.....	X		1,500	7,000
(Underground employment, 96; daily production (tons), 1,000; this is the only mine in a group employing 50 to 99 men.)					1 Galis roof bolting machine.....				
TENNESSEE					1 Joy 9 SC shuttle car.....				
1 Joy 11 RU cutting machine.....		X	5,000	40,000	1 Joy 10 SC shuttle car.....	X		5,000	20,000
1 Joy 14 BU loading machine.....		X	3,000	20,000	2 Joy 6 SC shuttle cars.....	X		\$ 5,000	\$ 15,000
2 Joy 6 SC shuttle cars.....		X	\$ 5,000	\$ 15,000	(Underground employment, 106; daily production (tons), 2,100; this is the only mine in a group employing 100 to 149 men.)				
(Underground employment, 24; daily production (tons), 400; this mine represents 18 mines in a group employing 15 to 49 men.)					6 Joy 15 RU cutting machines.....				
2 Joy 16 RB cutting machines.....		X	\$ 5,000	\$ 30,000	6 Jeffrey loading machines.....	X		\$ 2,500	\$ 40,000
2 Joy 14 BU-10 loading machines.....		X	\$ 3,000	\$ 35,000	5 Fletcher roof bolting machines.....	X		\$ 1,000	\$ 7,000
2 Galis roof bolting machines.....		X	\$ 3,000	\$ 8,000	1 Galis roof bolting machine.....	X		1,000	7,000
8 Kersey battery tractors.....		X	\$ 3,000	\$ 6,000	2 Joy 10 CM continuous miners.....	X		Nil	\$ 40,000
(Underground employment, 50; daily production (tons), 1,200; this is the only mine in a group employing 50 to 99 men.)					14 National Mine Service shuttle cars.....				
					2 Joy 6 SC shuttle cars.....				
					(Underground employment, 247; daily production (tons), 5,000; this is the only mine in a group employing 200,249 men.)				

¹ Nil. Equipment is maintained in permissible condition.

² Each.

GRAND TOTAL COST DATA ON NONPERMISSIBLE (OPEN) TYPE ELECTRIC FACE EQUIPMENT USED IN GASSY COAL MINES

Bureau of Mines Coal Mine Safety District	Number of pieces of equipment	Cost to upgrade to permissible status	Cost to purchase used rebuilt permissible equipment	Cost to purchase new permissible equipment	Bureau of Mines Coal Mine Safety District	Number of pieces of equipment	Cost to upgrade to permissible status	Cost to purchase used rebuilt permissible equipment	Cost to purchase new permissible equipment
A.....	231	\$718,800	\$3,178,500	\$9,058,000	E.....	26	\$61,900	\$305,900	\$839,200
B.....	321	1,135,050	7,742,250	15,352,150	Grand total.....	1,025	3,591,350	14,158,060	36,951,170
C.....	271	915,900	1,580,210	5,655,150					
D.....	176	759,700	1,351,200	6,046,670					

COST DATA ON NONPERMISSIBLE (OPEN) TYPE ELECTRIC FACE EQUIPMENT USED IN GASSY MINES—BUREAU OF MINES COAL MINE SAFETY DISTRICT A, PITTSBURGH, PA.

Type of equipment	Number of pieces	Cost to upgrade to permissible status	Cost to purchase used rebuilt permissible equipment	Cost to purchase new permissible equipment	Type of equipment	Number of pieces	Cost to upgrade to permissible status	Cost to purchase used rebuilt permissible equipment	Cost to purchase new permissible equipment
Small mines:					Large mines:				
Cutting machine.....	5	\$7,000	\$12,500	\$250,000	Battery tractor.....	4	\$24,000	\$24,000	\$40,000
Mobile drill.....	2	10,000	14,000	16,000	Shuttle car.....	218	667,800	3,100,000	8,720,000
Battery tractor.....	2	10,000	28,000	32,000	Total.....	222	691,800	3,124,000	8,760,000
Total.....	9	27,000	54,500	298,000	Grand total.....	231	718,800	3,178,500	9,058,000

COST DATA ON NONPERMISSIBLE (OPEN) TYPE ELECTRIC FACE EQUIPMENT USED IN GASSY COAL MINES—BUREAU OF COAL MINE SAFETY DISTRICT B, MOUNT HOPE, W. VA.

Type of equipment	Number of pieces	Cost to upgrade to permissible status	Cost to purchase used rebuilt permissible equipment	Cost to purchase new permissible equipment	Type of equipment	Number of pieces	Cost to upgrade to permissible status	Cost to purchase used rebuilt permissible equipment	Cost to purchase new permissible equipment
Small mines:					Large mines:				
Loading machine.....	4	\$33,000	\$45,500	\$170,000	Loading machine.....	18	\$58,000	\$227,500	\$850,000
Cutting machine.....	7	13,000	62,500	400,000	Cutting machine.....	27	55,000	382,500	1,700,000
Roof bolting machine.....	2	10,000	28,000	32,000	Roof bolting machine.....	6	30,000	84,000	96,000
Shuttle car.....	16	42,000	180,000	640,000	Longwall planer.....	4	200,000	14,000,000	4,000,000
Battery tractor.....	5	30,000	30,000	50,000	Mobile drill.....	5	23,000	50,000	96,000
T-2 utility truck.....	2	2,000	6,000	30,000	Shuttle car.....	178	594,300	2,580,000	7,120,000
Hand held drill.....	13	1,950	1,950	3,600	Battery tractor.....	5	30,000	30,000	50,000
Total.....	49	131,950	353,950	1,325,600	Face chain conveyor.....	5	7,500	25,000	73,000
					T-2 utility truck.....	2	2,000	6,000	30,000
					Hand held drill.....	22	3,300	3,300	11,550
					Total.....	272	1,003,100	7,388,300	14,026,550
					Grand total.....	321	1,135,050	7,742,250	15,352,150

¹ New.

COST DATA ON NONPERMISSIBLE (OPEN) TYPE ELECTRIC FACE EQUIPMENT USED IN GASSY COAL MINES—BUREAU OF MINES COAL MINE SAFETY DISTRICT C, NORTON, VA.

Type of equipment	Number of pieces	Cost to upgrade to permissible status	Cost to purchase used rebuilt permissible equipment	Cost to purchase new permissible equipment	Type of equipment	Number of pieces	Cost to upgrade to permissible status	Cost to purchase used rebuilt permissible equipment	Cost to purchase new permissible equipment
Small mines:					Large mines:				
Loading machine.....	13	\$83,000	\$158,500	\$575,000	Loading machine.....	11	\$38,500	\$173,000	\$550,000
Cutting machine.....	30	93,500	135,000	1,375,000	Cutting machine.....	14	46,500	180,000	850,000
Roof bolting machine.....	10	71,500	116,000	209,000	Roof bolting machine.....	2	4,000	20,000	24,000
Shuttle car.....	2	5,600	20,000	80,000	Shuttle car.....	27	76,600	270,000	1,080,000
Battery tractor.....	41	246,000	246,000	410,000	Battery tractor.....	39	234,000	234,000	390,000
Face conveyor.....	2	3,000	10,000	29,200	Hand held drill.....	12	1,800	1,800	6,750
Utility truck.....	2	2,000	6,000	30,000					
Hand held drill.....	66	9,900	9,000	46,200					
Total.....	166	514,500	701,410	2,754,400	Total.....	105	401,400	878,800	2,900,750
					Grand total.....	271	915,900	1,580,210	5,655,150

COST DATA ON NONPERMISSIBLE (OPEN) TYPE ELECTRIC FACE EQUIPMENT IN GASSY MINES—BUREAU OF MINES COAL MINE SAFETY, DISTRICT D, VINCENNES, IND.

Type of equipment	Number of pieces	Cost to upgrade to permissible status	Cost to purchase used rebuilt permissible equipment	Cost to purchase new permissible equipment	Type of equipment	Number of pieces	Cost to upgrade to permissible status	Cost to purchase used rebuilt permissible equipment	Cost to purchase new permissible equipment
Small mines:					Large mines:				
Loading machine.....	2	\$5,000	\$13,500	\$80,000	Loading machine.....	5	\$9,100	\$26,500	\$200,000
Cutting machine.....	10	21,000	28,000	90,000	Cutting machine.....	18	40,000	67,500	900,000
Utility truck.....	6	6,000	18,000	520,000	Roof bolting machine.....	16	42,000	157,000	638,000
Post mounted drill.....	3	750	750	2,370	Shuttle car.....	54	528,000	658,000	2,152,000
Hand held drill.....	10	1,500	1,500	7,000	Face conveyor.....	22	33,000	110,000	321,200
					Mobile drill.....	27	72,900	270,000	1,134,000
					Hand held drill.....	3	450	450	2,100
Total.....	31	34,250	61,750	699,370	Total.....	145	725,450	1,289,450	5,347,300
					Grand total.....	176	759,700	1,351,200	6,046,670

COST DATA ON NONPERMISSIBLE (OPEN) TYPE ELECTRIC FACE EQUIPMENT IN GASSY MINES—BUREAU OF MINES COAL MINE SAFETY DISTRICT E, DENVER, COLO.

Type of equipment	Number of pieces	Cost to upgrade to permissible status	Cost to purchase used rebuilt permissible equipment	Cost to purchase new equipment	Type of equipment	Number of pieces	Cost to upgrade to permissible status	Cost to purchase used rebuilt permissible equipment	Cost to purchase new equipment
Small mines:					Large mines:				
Loading machine.....	1	\$2,500	\$6,500	\$40,000	Loading machine.....	1	\$2,500	\$8,500	\$35,000
Cutting machine.....	4	7,000	10,000	200,000	Shuttle car.....	12	42,000	240,000	480,000
Shuttle car.....	2	7,000	40,000	80,000					
Hand held drill.....	6	900	900	4,200	Total.....	13	44,500	248,500	515,000
Total.....	13	17,400	57,400	324,200	Grand total.....	26	61,900	305,900	839,200

NUMBER OF PIECES OF NONPERMISSIBLE (OPEN) TYPE ELECTRIC FACE EQUIPMENT USED IN GASSY COAL MINES (ALL SIZES)

Bureau of Mines coal mine safety district	Loading machine		Cutting machine		Roof bolting machine		Battery tractor		Hand held drill		Face chain conveyor		Shuttle car		T-2 utility truck		Post mounted drill		Mobile drill		Longwall planer		Total		
	L	S	L	S	L	S	L	S	L	S	L	S	L	S	L	S	L	S	L	S	L	S	L	S	
	A.....	0	0	0	5	0	0	4	2	0	0	0	0	218	0	0	0	0	0	0	2	0	0	0	222	49
B.....	18	4	27	7	6	2	5	5	22	13	5	0	178	16	2	2	0	0	5	0	4	0	0	272	9
C.....	11	13	14	30	2	10	39	41	12	66	0	2	27	2	0	2	0	0	0	0	0	0	0	105	166
D.....	5	2	18	10	16	0	0	0	3	10	22	0	54	0	0	6	0	3	27	0	0	0	0	145	31
E.....	1	1	0	4	0	0	0	0	0	6	0	0	12	2	0	0	0	0	0	0	0	0	0	13	13
Total.....	35	20	59	56	24	12	48	48	37	95	27	2	489	20	2	10	0	3	32	2	4	0	757	268	

Note: Grand total of all columns, 1,025.

EXHIBIT 2

[From the U.S. Department of the Interior]
OFFICE OF COAL RESEARCH ANNUAL REPORT,
1969

JANUARY 15, 1969.

HON. STEWART L. UDALL,
Secretary of the Interior,
Washington, D.C.

DEAR MR. SECRETARY: It is my pleasure to forward herewith the Annual Report covering activities of the Office of Coal Research during calendar year 1968. This material is intended for submission by you as your report to the President and to the Congress as required by Section 7 of Public Law 86-599.

Sincerely yours,

GEORGE FUMICH, Jr.,
Director of Coal Research.

JANUARY 17, 1969.

The PRESIDENT,
The White House,
Washington, D.C.

DEAR MR. PRESIDENT: We are pleased to submit herewith the 1969 report of the Office of Coal Research relating to coal research activities undertaken during calendar year 1968 under the authority of Public Law 86-599, which requires that an annual report be submitted by February 15 of each year.

A Copy of the Act is included in the report.

The program of the Office of Coal Research has consistently sought out those projects that will make the most intelligent use of our tremendous coal resources by converting them to the forms needed in our growing economy. The program makes full use of the

rapidly improving technology that is emerging from our national research expenditures in defense and space. Applied properly, the results of the program are expected to have broad social benefits across a wide section of the Nation.

Respectfully yours,

STEWART L. UDALL,
Secretary of the Interior.

GENERAL TECHNICAL ADVISORY COMMITTEE

Public Law 86-599, passed on July 7, 1960, which created the Office of Coal Research, specified that the new Office was to be guided in the examination and evaluation of research progress by an advisory committee composed of recognized experts in various aspects of coal research.

Selection of a "blue ribbon" committee by

the Secretary of the Interior began immediately, even prior to the selection of a Director of Coal Research and staff. Members were sworn in, and the first formal meeting was held on June 6, 1961.

Since its inception, the General Technical Advisory Committee (GTAC) has been composed of nationally known researchers and authorities from the coal industry, the United Mine Workers, the electric utility industry, the coal-carrying railroads, and major coal-consuming industries. Their advice to the OCR relative to program and projects, decisions regarding pilot plant efforts, and avoidance of duplication has been and continues to be invaluable to the Government.

GTAC meetings are scheduled approximately quarterly or more frequently when major programs reach a point of decision. In addition, subcommittee meetings may be called as necessary, and the services of the individual members employed. Members have been generous in their devotion of time and effort to the OCR program. Their contribution to their Government has been a major one. With such guidance the Office of Coal Research program has been assisted in making the kind of progress that is described in this report.

Chairman of the Committee is the Director of Coal Research.

Current members of the Committee are listed below:

Mr. William A. Bear, President, Bear Coal Company, Somerset, Colorado.

Paul P. Boyle, Esq., Attorney, United Mine Workers of America, District 11, 301 North Eight Street Terre Haute, Indiana.

Mr. John Corcoran, President, Consolidation Coal Company, 3300-1 Oliver Plaza, Pittsburgh, Pennsylvania.

Mr. W. Donham Crawford, Administrative Vice-President, Consolidated Edison Company of New York, Inc., 4 Irving Place, New York City, New York.

Mr. Roy Dean, Vice President, The Pittsburg & Midway Coal Mining Co., Ten Main Center, Kansas City, Missouri.

Dr. Martin A. Elliott, Corporate Scientific Advisor, Texas Eastern Transmission Corporation, 912 Main at McKinney, P.O. Box 2521, Houston, Texas.

Mr. Lawrence T. Forbes, Vice President—Coal Traffic, Norfolk and Western Railway Company, Roanoke, Virginia.

Dr. Donald E. Garrett, Garrett Research and Development Company, Inc., 1855 Carrior Road, La Verne, California.

Mr. J. D. Jillson, President, Anthracite Institute, 2115 North Second Street, Harrisburg, Pennsylvania.

Mr. Harry LaViers, President, South-East Coal Company, Paintsville, Kentucky.

Dr. C. J. Potter, President, Rochester & Pittsburgh Coal Company, Indiana, Pennsylvania.

Mr. C. J. Routh, President, The Pittston Company, Inc., 200 Park Avenue, New York City, New York.

Mr. W. H. Rowand, Vice President, The Babcock & Wilcox Company, Boiler Division, Barberton, Ohio.

Mr. Philip Sporn, Consultant, 140 Broadway, Suite 4201, New York City, New York.

Mr. David Swan, Vice President—Technology, Kennecott Copper Corporation, 161 East 42d Street, New York City, New York.

Mr. W. L. Wearly, Chairman, Ingersoll-Rand Company, 11 Broadway, New York City, New York.

Mr. Carlton D. Weaver, Vice President, Ashland Oil & Refining Company, Ashland, Kentucky.

Mr. Michael F. Widman, Jr., Director, Research and Marketing Department, United Mine Workers of America, 900-15th Street, N.W., Washington, D.C.

Mr. Widman was recently named Director of Organization, UMWA.

Following are former members of the Committee, listed by title and address at the time of their service:

Dr. Maurice H. Bigelow, Plastics and Coal Chemicals Division, Allied Chemical Corporation, 40 Rector Street, New York City, New York.

Mr. Jack J. Boyle (deceased), President, Mountain States Mining Co., 928 Custer Avenue, Billings, Montana.

Dr. H. B. Charnbury, Head, Department of Mineral Preparation, College of Mineral Industries, The Pennsylvania State University, University Park, Pennsylvania.

Mr. F. S. Eifred, Vice Chairman of the Board, Peabody Coal Company, 301 North Memorial Drive, St. Louis, Missouri.

Mr. John J. Fitzpatrick, Vice President, Traffic Department, New York, Chicago & St. Louis Railroad Company, P.O. Box 6119, Cleveland, Ohio.

Mr. James L. Hamilton, Chairman of the Board, Island Creek Coal Company, 1501 Euclid Avenue, Cleveland, Ohio.

Mr. Robert H. Hughes, President, Clinchfield Coal Company, Division of The Pittston Company, Dante, Virginia.

Dr. Richard H. Jahns, Dean, College of Mineral Industries, The Pennsylvania State University, University Park, Pennsylvania.

Dr. Samuel Lenher, Vice President, E. I. Dupont de Nemours & Co., Inc., Wilmington, Delaware.

Mr. Herman H. Pevler, President, Norfolk & Western Railway Company, Roanoke, Virginia.

Mr. John S. Routh, Jr., President, The Pittston Company, Inc., 200 Park Avenue, New York City, New York.

Mr. R. E. Salvati, President, Island Creek Coal Company, 700 Chafin Building, Huntington, West Virginia.

Mr. S. T. Saunders, President, Norfolk & Western Railway Company, Roanoke, Virginia.

Mr. Walter K. Scherer, President, Fred Scherer, Incorporated, 424 West Madison Street, Ottawa, Illinois.

Mr. G. A. Shoemaker, President, Consolidation Coal Company, Koppers Building, Pittsburgh, Pennsylvania.

Dr. G. R. Spindler (deceased), Dean, School of Mines, West Virginia University, Morgantown, West Virginia.

Dr. E. J. Workman, New Mexico Institute of Mining and Technology, President, Socorro, New Mexico.

OCR HIGHLIGHTS, 1968

First Quarter

A report was published describing an independent evaluation of the H-Coal Process developed by Hydrocarbon Research, Inc. (HRI) under contract to the Office of Coal Research.

The "H-Coal" Process, an adaptation of HRI's "H-Oil" Process, is aimed at converting coal to synthetic petroleum, and eventually to gasoline and furnace oil. Development work performed over the last three years by HRI indicated high liquid-product yields and a strong possibility of eventual commercial practicability.

The evaluation was made by the Research and Development Department of American Oil Company, Whiting, Indiana, under a contract with OCR.

OCR's General Technical Advisory Committee (GTAC) met January 15, 1968, to review the program. To bring the members up to date on related developments, presentations were made by Dr. John T. Middleton, Director of the National Center for Air Pollution Control of the Department of Health, Education and Welfare, and by Mr. David S. Freeman, Director of the Energy Policy Staff, Office of Science and Technology in the Office of the President.

OCR completed and forwarded to the

President and Congress its 1968 Annual Report.

OCR released a report entitled "Process Design and Cost Estimate for a 258 Billion Btu/Day Pipeline Gas Plant—Hydrogasification Using Synthesis Gas Generated by Electrothermal Gasification of Spent Char." The report was prepared by the Institute of Gas Technology (IGT), Chicago, Illinois, under a continuing development contract with OCR, supported by the American Gas Association.

The hydrogasification process is a method for making pipeline-quality gas (synthetic natural gas) from coal. A pilot plant, representing the final stage of process development, is being designed for construction in the Chicago area. The American Gas Association is sharing the costs.

The report, third in a series prepared by IGT, concludes that electrothermal gasification for hydrogen supply has the potential of being useful in a coal-to-pipeline-quality-gas plant, and that the resulting pipeline gas price should be competitive.

The first continuous run of flyash brick through the hydraulic press was successfully completed by the contractor, West Virginia University.

OCR's contractor, FMC Corporation, produced high-quality crude from Illinois, Indiana, Utah, Colorado, Wyoming, and West Virginia coals in its process development unit at Princeton, New Jersey.

A series of reports, bound in one volume, describing laboratory investigations performed by the University of Utah was issued.

The work on "Project Western Coal," being performed by the University of Utah, is directed toward investigation of the characteristics of Western coals as they may be adapted to liquid and gas conversion processes originally developed for other coals from the areas of the United States.

OCR completed annual budget testimony and justification before appropriations committees of the Senate and House for Fiscal Year 1969.

Second Quarter

The flyash-brick pilot plant began operation at Morgantown, West Virginia, producing in excess of designed rate. Initial runs produced bricks of satisfactory quality with rejection rates at acceptable levels. A short 16-mm sound film describing the plant and process is available from OCR on a loan basis.

The General Technical Advisory Committee met in Washington, D.C., May 21, to review the OCR program in the light of current appropriations limits, and to consider the status of major projects. They endorsed additional work on the Consolidation Coal Company Gasoline Project and Lignite Gasification Project, and recommended proceeding with a sizable effort on an MHD (magnetohydrodynamic) power proposal as soon as funds are available.

West Virginia University conducted tests of the Bureau of Mines Solids Waste Research process for making bricks from copper mill tailings and paper mill wastes in the Morgantown flyash-brick pilot plant.

The coal sewage-treatment pilot plant in Cleveland, Ohio, became operative on June 28, 1968, using coal as the filtration and absorption medium for the treatment of raw sewage. Performance is highly promising. Initial analyses show solids removal in excess of 98 percent and COD (chemical oxygen demand) reduction of more than 80 percent. No major mechanical or hydraulic problems were encountered.

Amendment No. 3 to the Westinghouse Electric Corporation fuel cell contract was executed on June 26, 1968, extending the term 2½ years to June 1970.

OCR staff and Departmental representatives of the Energy Policy Staff met for a

detailed presentation, discussion, and review of MHD power generation. Eventual commercial MHD powerplants will require only minimum quantities of cooling water and, therefore, will minimize any thermal pollution and conserve vast quantities of water in arid areas of the West and elsewhere.

OCR staff participated in an Office of Oil and Gas study published under the title "United States Petroleum Through 1980" relating to future energy needs.

Howard University was authorized by OCR to award a subcontract to Value Engineering Company.

Third Quarter

OCR announced publication of a one-volume report describing the laboratory investigations and process development work recently concluded under a contract with Melpar, Inc., Falls Church, Virginia.

The project was initiated in May 1965 to develop a competitive process for large-scale manufacture of acetylene from anthracite as a raw material for the manufacture of plastics and other products. For this use, acetylene must compete with ethylene, a lower priced material. The results achieved were less encouraging than anticipated, and the work was discontinued.

Pennsylvania State University developed a formula from which the conversion yield of oil from coal in the Coal Oil Energy Device (COED) process can be accurately forecast. The formula is based on the petrographic composition of coal, and its accuracy has been verified on nine different coals.

On a laboratory scale, Pennsylvania State University found that FMC Corporation char equals or exceeds commercial activated charcoal in its ability to collect SO_2 from combustion gases.

During a one-week period, the Cresap, West Virginia, plant produced 150 barrels of extract with an ash content of 0.6 percent.

A one-volume report prepared by Avco Space Systems Division, Lowell, Massachusetts, entitled "Phase 1 Feasibility Report Avco Arc-Coal Process," was published. It describes experimental work and engineering feasibility studies of a process being developed by Avco, under contract to OCR. The report also includes projection of the future acetylene market.

Results to date indicate that the process could produce acetylene at competitive prices and that future improvements reasonably expected in the process could open a large new market for acetylene as a raw material for manufacture of plastic.

OCR authorized the FMC Corporation to award a subcontract to Blaw-Knox Company for a multistage fluidized-bed pyrolysis pilot plant at Princeton, New Jersey.

OCR received its Fiscal Year 1969 appropriation of \$13,700,000.

The Institute of Gas Technology was authorized by OCR to award a subcontract to Procon, Incorporated, for a hydrogasification pilot plant to be located in Chicago, Illinois.

OCR authorized The Pittsburg & Midway Coal Mining Co. to award a subcontract to Washington State University for a research study to examine the feasibility of producing useful and economical materials from residue of the low-ash coal process.

An interim report prepared by Pope, Evans and Robbins was released containing plans, specifications, and design drawings for a coal-fired vertical water tube boiler with a steam capacity of 100,000 pounds per hour.

Fourth Quarter

The General Technical Advisory Committee met in Pittsburgh, Pennsylvania, October 1 and 2, 1968. The Committee reviewed details of projects with particular "in depth" review of all major pilot plant projects, including discussions with contractors' professional and technical personnel. The members visited the facilities of Bituminous Coal Research, Inc.; Westinghouse Electric Cor-

poration; West Virginia University; and the OCR pilot plant operated by Consolidation Coal Company at Cresap, West Virginia.

OCR announced availability of a report containing three independent evaluations of the electrogasdynamic (EGD) development program which had been underway since May 1966 at Gouridine Systems, Inc., Livingston, New Jersey, an OCR contractor.

Evaluation reports were prepared by Dynatech Corporation, Cambridge, Massachusetts, in September 1967 and August 1968; and by IIT Research Institute, Chicago, Illinois, and the Engineering Research Institute of Iowa State University, Ames, Iowa, in August 1968.

The evaluators reviewed the experimental work performed by Gouridine, projections of full-scale feasibility, and the theoretical aspects of EGD phenomena. The reports pointed out the unsolved problems, among which are a number involving considerable difficulty, namely, the required development of duct materials with the necessary electrical resistivity at high temperatures, the practical need for increasing power density, the need to eliminate losses due to radial particle draft in the space-charge field, and the need for better charging and collection systems.

A meeting of OCR contractors was held in Washington, D.C., on October 15, 1968, for the purpose of reviewing technological problems and discussing possible solutions, and providing continuing contacts between contractors.

A report entitled "Commercial Potential for the Kellogg Coal Gasification Process" was released. This is the final report on the work performed by The M. W. Kellogg Company.

The objective of the contract was to develop an economically feasible process for producing pipeline-quality gas (a natural gas substitute) from coal by reacting coal in a bath of molten sodium carbonate.

An extensive laboratory and bench-scale experimental program, together with supporting engineering studies, indicated that this process—if carried through pilot plant development—has potential as a supplier of pipeline gas, hydrogen, and synthesis gas manufactured from coal.

A report prepared for OCR by Stanford Research Institute, entitled "Pyrolysis of Coal in a Fluidized Bed with an Induction Plasma," was made available. The report describes work directed toward exploring the possibilities of producing useful chemicals from coal in a fluidized bed when subjected to a high-frequency induction field. Suitable construction materials were not found to permit the desired operation, nor was it possible to sustain a stable plasma with reasonable coal feed rates.

On November 8, 1968, an ad hoc subcommittee of the General Technical Advisory Committee, chaired by Mr. Paul P. Boyle, met in Washington, D.C., to review the OCR program for Fiscal Year 1970 in the light of current budget constraints. The meeting was attended by Messrs. Boyle, Crawford, Goldston, and Widman. The Director of Coal Research provided information as requested.

The Office of Coal Research announced release of an interim report entitled "Cost Estimate of a 500 Billion Btu/Day Pipeline Gas Plant via Hydrogasification and Electrothermal Gasification of Lignite."

As part of a joint Office of Coal Research and American Gas Association effort, the Institute of Gas Technology studied production costs of synthetic gas concurrently with the laboratory and pilot plant program. For the hypothetical plant studied, the report states that the minimum cost of pipeline gas would have a 20-year average selling price of 32.9 cents per million B.t.u.'s. Such a plant and coal mine combination would be expected to create approximately 1,500 jobs in the area served, and generate a total payroll of \$5 million to \$6 million.

Volume II of the Project Gasoline report, prepared by Consolidation Coal Company, an

OCR contractor, became available. Volumes I, III, and IV, will be published and released in subsequent months.

The pilot plant has been completed and is continuing to undergo shakedown operations. Detailed process data have not been obtained to date, but the vast and growing interest in the project is such that publication of an interim report is advisable.

The Department of the Interior announced the release of the final report on a contract with Hydrocarbon Research, Inc. The report describes a process for producing synthetic petroleum products from coal at a projected price which should be of interest to industry. It includes information on the development of a process to convert coal to synthetic-crude type material, followed by hydrogenation of the synthetic crude to produce fuel oil, jet fuel, and gasoline. The process includes direct hydrogenation of coal at total pressures common in petroleum refining today. The total liquid product yield obtained was about four barrels per ton of coal, although this figure varies with the particular coal fed to the process.

The Natural Resources Research Institute, University of Wyoming, was awarded a research contract to develop a process for the direct reaction of either coal and steam or char and steam to produce liquid hydrocarbons.

A contract report entitled "Chemical By-Products from Coal" was issued by Skelst Laboratories, Newark, New Jersey. It states that "... not only will coal be able to provide much of our future liquid and gas fuel requirements, but it seems certain that it will return to its historical status as the source of most of our organic chemical intermediates." The report includes information regarding a conceptual all-chemical refinery and provides detailed discussion covering ethylene and propylene; aromatics, naphthalene, hydrogen, ammonia, sulfur, and tar acids.

A contract report by Battelle Memorial Institute, Columbus, Ohio, appraises the outlook for residue chars after conversion of coal to liquid and gaseous fuels. It discloses that some of these chars possess heating values almost as high as the original coal, and foresees no trouble in burning the char.

A definite plus factor is evident for the use of char in magnetohydrodynamics (MHD), a developing technology for electric power generation.

Some chars possess adsorptive properties equal or nearly equal to commercial activated carbon. Battelle Memorial Institute states "The availability of relatively low cost 'activated' char should promote the use of tertiary sewage waste water treatment and treatment of waste water in general."

OCR's contract with Rand Development Corporation was extended 14 months to further demonstrate the practicality and economics of the coal filtration and adsorption process by making a series of full-scale runs in the existing pilot plant.

RESEARCH AND TECHNICAL MEETINGS CROSS-FERTILIZATION

The OCR research and development contracts cover a wide range of disciplines and an even wider range of processes. Nevertheless, because all are aimed at improving coal technology, each has something in common with all the others. Also, aside from this common coal interest, the natural course of a project—perhaps from laboratory bench-scale experimentation to a process development unit, and ultimately to pilot plant design, construction, and operation—will develop many common management and administrative situations.

While OCR depends primarily on its contractors to provide their own scientific, technical, and managerial skills, it has been found beneficial to sponsor joint contractors' meetings for the exchange of ideas and in-

formation. In these, all or some part of the group of contractors are brought together for a day or two of discussions. The purpose is to try to avoid duplication of effort, minimize problems, make the best ideas available to all, and generally to stimulate progress through cross-fertilization and indicate that each project is part of a larger overall effort. . . . in essence to maximize the opportunities.

Formal records of meetings are not maintained, but summaries and data tabulations are distributed. Each contractor presents a brief description of progress and problems since the last meeting.

The following was the program at the October 15, 1968, meeting:

I. Process analysis:
Virginia Polytechnic Institute—Computer Simulation of Mining.

West Virginia University—Gasification Optimization.

The Franklin Institute—Ammonia Bottoming Cycle.

Skeist Laboratories—Coal Chemicals.

II. Process development:

Avco Corporation—Arc Processing.

Bituminous Coal Research, Inc.—Two-Stage Gasification.

Howard University—Coal-Fired Diesel.

Iowa State University—Electrofluidic Coal Treatment.

Pennsylvania State University—Development and Preparation of Special Coals.

University of Utah—Western Coals.

Westinghouse Electric Corporation—Coal Energized Fuel Cell.

III. Pilot plant planning:

Consolidation Coal Company—CO₂ Acceptor.

FMC Corporation—Char-Oil-Energy-Device (COED).

Institute of Gas Technology—Hydrogasification.

The Pittsburg & Midway Coal Mining Co.—Low-Ash Coal.

IV. Pilot plant operation:

Consolidation Coal Company—Gasoline.

Pope, Evans and Robbins—Fluidized Combustion.

Rand Development Corporation—Sewage Treatment.

West Virginia University—Flyash Brick.

V. Final project evaluation:

ARCO Chemical Company—Project Seacoal.

The Franklin Institute—Szikla-Rosinek Combustor.

Consolidated Controls Corporation—Thermionic Topper.

Gourdine Systems, Inc.—Electrogasdynamics.

It is the consensus of contractors and OCR alike that these meetings are helpful to progress and beneficial to the program. They have fostered a continuing informal exchange of information between contractors, which is useful to the overall program. The meetings are also useful in maintaining good working relationships established formally under some OCR contracts. These include the ARCO Chemical Company "syncrude" characterization studies made for FMC Corporation and Consolidation Coal Company; the ARCO Chemical Company experimental work done in the FMC Corporation Process Development Unit; the furnishing of gasification optimization process data to West Virginia University; provision of process data to Skeist Laboratories; supplying of char and coal samples and process data to Pennsylvania State University and the feedback of analyses and utilization data from Pennsylvania State University to contractors who provide samples; and the gasification system design furnished to Westinghouse Electric Corporation by IGT.

ADMINISTRATION

During the past year the Office of Coal Research has been monitoring 40 active projects in varying stages of completion. The

total dollar volume of projects presently underway and in various stages of progress is slightly more than \$77 million. These 40 projects have been underway with 35 of the Nation's most advanced research organizations and educational institutions. There are an exceptionally large number of scientific disciplines involved among these contractors.

Despite the needs of the program, which have grown considerably in size and complexity, the OCR staff level has always been held to an absolute minimum, as evidenced by the fact that the staff currently numbers 19 professional, technical, and clerical employees, whereas Congress has authorized 25.

Detailed tasks related to monitoring and administering these projects have been performed with a minimum expenditure of Federal funds. The total administrative and supervisory costs of the program in the past year involved only 2.9 percent of the total program of \$13.7 million.

Several meetings were held to bring about the likelihood of the greatest possible contribution by each contractor toward insuring the ultimate success of each project through cross-fertilization of research ideas, techniques, and disciplines, while at the same time avoiding duplication of effort.

During the past year the Office of Coal Research has also conducted three significant meetings with its General Technical Advisory Committee. This Committee comprises 20 individuals chosen by the Secretary of the Interior. All of the members are outstandingly qualified in their respective fields—business, science, technology, education, and labor. Their counsel and recommendations are of considerable importance in assuring that the projects undertaken are sound. The degree of success achieved by OCR projects to date, and their potentials for the future, are closely associated with the role of this Committee.

In the past year, numerous proposals for new projects in many areas of effort have been received. The proposals for new research have been carefully evaluated by OCR, its consultants, and other Department of the Interior agencies to assure their merits and to avoid duplication.

A number of these are deemed valuable and worth pursuing. Contracts will be awarded as soon as adequate funding becomes available. In view of the fact that, for two consecutive years, no funds have been provided for new contracts, contract action on these new proposals, as well as others of equal or greater merit (approved in previous years), had to be deferred.

More than 9,000 copies of technical reports have been distributed during the past year. They are made available without charge to selected depository libraries. Several thousand copies have been sold to the public in the United States and in more than two dozen foreign countries.

The program staff of the Office of Coal Research and OCR consultants made an extensive number of field trips in the course of insuring careful monitoring of technical and administrative details of projects in the past year. During this same period of time, hundreds of formal contract actions relating to administration of the various projects were initiated and completed.

The work being performed by OCR's various contractors may result in inventions and subsequent patents in the public domain as a result of the Government's sponsorship of the work. Up to the present time, six patents have been issued and seven patent applications are currently pending at the U.S. Patent Office. Additionally, thirty invention disclosures from contractors and OCR personnel are being reviewed by the Office of the Solicitor, Branch of Patents, pending decisions to file patent applications.

The Office of Survey and Review, Department of the Interior, recently completed a lengthy and comprehensive internal audit of

all OCR contracts and contract procedures. The results were affirmative and uniformly favorable. Only three recommendations were made, all of a minor nature, affecting only one contract. These were promptly acted upon by OCR and necessary corrective steps were instituted.

Several thousand dollars' worth of valuable scientific and technical equipment became available for use on other projects upon completion of its required use on expired or terminated contracts. Such equipment was made available to other contractors, as well as other Departmental agencies. Some was disposed of by sale through normal General Services Administration procedures. These actions resulted in substantial dollar savings to the Government.

UTILIZATION

Projects undertaken by this Division are in several broad categories designed to develop new processes and equipment for utilization of coal as a raw material.

One category is the development of processes to convert coal to pipeline-quality gas, the equivalent of natural gas. The coal-derived gas must be largely methane with a heating value of about 1,000 B.t.u.'s per cubic foot and must meet certain trade specifications. Processes for producing pipeline gas and light liquid fuels from coal also remove sulfur, thus eliminating possible air pollution.

Another category includes the development of processes for converting coal to liquid fuels. The processes in this category are intended to produce a refinery feedstock for conversion to gasoline; as well as other customary oil refinery products such as fuel oils.

A third category is directed toward developing new methods of converting coal to electric energy. Improvements for increasing efficiency or lowering capital cost will have the effect of reducing the cost of electric energy. Some energy conversion systems being considered possess inherent advantages in reducing atmospheric and thermal pollution. A potential reduction in the cost of electric energy will permit increased expenditures for reduction of air pollution.

Other work is underway to develop processes for producing chemicals from coal, particularly those which may also require coal-produced electric energy.

Conversion—gases

Pipeline Gas by Hydrogasification (July 29, 1964–July 29, 1972)—Institute of Gas Technology—\$11,646,230 U.S. Government Funds; \$2,384,230 American Gas Association Funds.

A preliminary design of a pilot plant for this pipeline-quality gas process was completed by Bechtel and a detailed design-construction subcontract has been executed with Procon, Inc. Detailed design has been completed, some heavy equipment is being ordered, and construction will start in the spring of 1969 on a site leased to the Department of the Interior by the Institute of Gas Technology in Chicago.

Meanwhile, the contractor is proceeding with large bench-scale development of the electrofluid-bed process for production of hydrogen from char. Additional hydrogen generation methods may be investigated, including molten salt gasification of char.

Prior to OCR support, the contractor worked for a number of years, with the financial support of the American Gas Association, on the development of the hydrogasification process for producing pipeline-quality gas. For this reason, the process technology was more fully developed than that of other promising coal-gasification methods. The present contract includes continuing support from the American Gas Association to cover the construction and operation of the pilot plant.

Several conceptual design studies of full-scale plants, based on experimental work, indicate that considerable improvements

have been made since the work was started, as shown by the projected gas cost (from \$1.00 to as low as 40 cents per 1,000 cubic feet). Later study of the effect of incorporating improved hydrogen sources, together with additional experimentation, indicates further cost reductions may be possible and will be explored.

CO₂ Acceptor Process (June 11, 1964–June 11, 1971)—Consolidation Coal Company—\$8,500,000.

Process and construction designs for a pilot plant have been completed. Construction is scheduled to begin by late spring or early summer of 1969. Last year, proposals for erection and operation of the pilot plant were received and evaluated by the contractor, and contract negotiations were initiated with engineering contractors.

This pipeline gas project presently relates to the use of Northwestern lignite as a raw material. Its principal feature is that it does not require large amounts of oxygen. Dolomite is used as a heat-transfer medium and CO₂ absorber. Laboratory and bench-scale work has been completed with encouraging results at the contractor's research laboratory. The contract was first amended to include the design of a pilot plant, and then further amended to include construction and operation of the pilot plant, which will be located in Rapid City, South Dakota.

Additional funds will be required to cover escalation of construction and operating costs during recent years.

Pipeline Gas from Coal (December 20, 1963–June 20, 1969)—Bituminous Coal Research, Inc.—\$1,956,000.

This process is expected to develop an economically feasible pipeline-quality gas from coal. The first phase of the work was a study of all known methods of coal gasification. The resulting report, which has been published, is a useful compendium on the subject. After considerable success in experimental development with a small unit simulating the second stage of the proposed gasifier, the contract was extended in both time and money.

During 1968, a 100-pound-per-hour second-stage unit was installed and tested. An experimental high-pressure coal feeder was built and is now under test. Experimental operation is producing data for pilot plant engineering designs under a subcontract that is expected to start in March or April 1969.

Supporting petrographic and laboratory studies are continuing.

Computer Optimization of Gasification Processes (November 15, 1966–November 15, 1969)—West Virginia University—\$162,959.

This program is designed to aid OCR gasification contractors in obtaining the best possible results and, if desirable, to integrate parts of the various gasification systems into other feasible systems. The contractor is using sophisticated mathematical computer techniques, as well as information from OCR gasification contractors. A number of basic investigations have been started to define and interrelate the important parameters.

During the work the contractor has visited laboratories, including those of all the OCR gasification contractors. Representative problems have been identified and their potential effect on process economics is being estimated. Appropriate reaction equations or system equations have been developed to allow computer programming. The computer program will form a basis for determining the effect of coal cost and rank, estimated capital and operating costs of the gasification plants, and byproduct credits on potential commercial gas price. Process areas likely to produce the greatest effect on gas cost are being determined.

The contractor has published several reports in the technical press describing some of his sophisticated procedures. It is expected

that this project will be of considerable benefit, not only to coal-gasification processes, but to all coal-conversion processes.

Conversion—liquids

Project Gasoline (August 30, 1963–August 30, 1969)—Consolidation Coal Company—\$15,200,000.

This project was undertaken to bring to successful development a process which previously had been under investigation by the contractor for a number of years. The method is to perform a solvent extraction operation on coal, then to hydrogenate the extract to produce a refinery feedstock which is a satisfactory source of high-octane gasoline.

The bench-scale work was completed in Fiscal Year 1965, and the pilot plant (erected during 1966) was accepted for operation during the second and third quarters of Fiscal Year 1967. Shakedown operation of the extraction side of the plant started in November 1966, and of the hydrogenation side in February 1967.

During 1968, no integrated operation of the plant has been achieved, even through all features of the process have proved to be technically sound. Recurring failure of equipment items has prevented satisfactory operation. The process has been changed or modified in both the extraction and hydrogenation sections of the plant, to circumvent equipment and operating problems. Early in 1968, the operating force was reduced to effect economies during the continuing shakedown.

A comprehensive report of the first five years' work is being prepared for publication in four volumes as follows:

Volume I—Research and Development Work and Review of Commercial Potential.

Volume II—Part 1—Solvent Extraction, Extract Filtration and Extract Deashing, Part 2—Hydrocracking with Supported Catalyst.

Volume III—Hydrocracking Coal and Extract with ZnCl₂ (zinc chloride) and Regeneration of ZnCl₂ Catalyst.

Volume IV—Phase II—Development of Pilot Plant Design and Construction and Initial Startup Operations.

Volume II is currently available from OCR and Volumes I, II, and IV will be available during the first quarter of 1969.

The zinc-chloride catalyst system that promises to reduce commercial production cost has been deferred until the plant has been operated, as designed. The plant and its operation have been reviewed for the Interior Department by a Special Task Force.

Project Gasoline (May 16, 1962–November 16, 1969)—The Ralph M. Parsons Company—\$444,000.

This contractor has served as a consultant and monitor on Project Gasoline, a project being conducted under contract with the Consolidation Coal Company. The work performed includes (a) evaluation of the original concept and proposal, and (b) surveillance of the Cresap Pilot Plant design and construction. The contract term has been extended, permitting the contractor to continue in this general role throughout the life of Project Gasoline.

Project COED (May 16, 1962–May 29, 1970)—FMC Corporation—\$7,670,000.

Work is now primarily directed toward construction of a 25-ton-per-day pilot plant, experimental runs of additional coals in the Process Development Unit, and improvement in char desulfurization. The original objective was to develop a process to produce a liquid product from coal, which could then be mixed with the residual char and both transported to market by pipeline. The contractor investigated several alternatives before his efforts produced a multistage fluidized-bed pyrolysis process which, upon analysis, appeared to be commercially feasible. A Process Development Unit with a capacity of about 100 pounds of coal per hour was operated successfully throughout most of 1965

to 1968. Commercially feasible yields of oil, gases (hydrogen, high-B.t.u., and fuel gas), and char were obtained from various coals in this unit. Projections of the results are highly encouraging.

A construction subcontract has been executed with Blaw-Knox Company, a site has been selected and prepared in Princeton, New Jersey, and preparations are being made to start construction of the pilot plant in the spring of 1969. Meanwhile, extensive bench-scale experimentation is proceeding on the char-desulfurization process, which holds the promise of being a source of low-cost, low-sulfur fuel for power generation.

Project Seacocke (August 10, 1964–February 10, 1969)—The Atlantic Richfield Company—\$968,000.

Research on this contract has established the technical and, in certain locations, economic feasibility of simultaneous fluid coking of coal mixed with residuum from petroleum processing. During calendar year 1968, the process design for a commercial plant was completed.

The final report, to be issued early in 1969, describes in detail all special features of equipment and operations of the process. It also indicates the special features—existing adjacent operating petroleum refineries and powerplants—which may make the system economically viable.

Additionally the report will contain much information, not hitherto published, on the characteristics of synthetic crudes produced from coal. The purpose of this project was to develop a process for using and treating coal in oil-refinery fluidized coking units. The lighter fractions of coal would be converted to a refinery feedstock, and the residual char could serve as a boiler fuel in central-station powerplants adjacent to the refinery.

Bench-scale work indicates that the process is technically feasible. Work on a larger scale was done under the contractor's direction in the OCR Process Development Unit located at the FMC Corporation laboratory, Princeton, New Jersey. Use of this existing facility permitted the final development work to be performed at considerable savings in time and cost.

H-Coal Process (February 4, 1965–February 4, 1968)—Hydrocarbon Research, Inc.—\$2,063,750.

The next step planned in this project was to have been the building and operation of a pilot plant to confirm the favorable indications of previous work. However, as funds were not available, the contract was terminated and a final report was published by OCR in 1968.

This process, an adaptation of the Hydrocarbon Research, Inc., commercial "H-Oil" process, is based on conversion of coal in an ebullating bed (a suspension of solid catalysts and coal in a flowing liquid) to a synthetic crude oil (syncrude) followed by additional treatment to refined products.

Bench-scale work, confirmed by larger operations at a rate of 200 pounds of coal per hour, produced higher yields than those originally projected. Detailed studies of coal refineries, based on experimental data, indicated potential commercial feasibility in several coal-producing areas of the United States. A report describing these studies has been published by OCR. (See Appendix.) An independent investigation of the feasibility of this process has been made by the Research Division of American Oil Company and has been published by OCR. The conclusions generally support the contractor's estimates and suggest that additional experimental work, including pilot-plant operations, may be desirable. A plant price of 12 cents per gallon of gasoline was estimated for a typical coal refinery. Coals from Illinois, Wyoming, New Mexico, and North Dakota were tested in the experimental program.

Conversion—power

Coal-Energized Fuel Cell (December 6, 1962-June 6, 1970)—Westinghouse Electric Corporation—\$3,866,899.

The objective of this work is to develop a coal-energized fuel cell system with high thermal efficiency. The project received an Industrial Research Magazine award for 1965.

Jackson and Moreland, a subsidiary of United Engineers and Constructors, Inc., estimated power production at less than 3 mills per kilowatt hour with no air or thermal pollution.

During 1968 the contract was amended to provide additional funds and extend the time to continue the bench-scale effort. Materials (metal oxides) and fabrication procedures have been developed and selected for construction of the 100-kw. development unit. Engineering design for fabrication of the 100-kw. development unit is proceeding under subcontracts with the Institute of Gas Technology and Cameron and Jones, Inc. Projected completion date for these subcontracts is June 30, 1969. An erection and operation contract for the development unit is currently awaiting funding approval. This work continues to give every indication that the objectives can be achieved.

Electrostatic Power Generation (May 10, 1966-September 30, 1968)—Gourdine Systems, Inc.—\$1,200,000.

Electrostatics (EGD) is a method of direct power conversion. With this system, gases, laden with coal-ash particles, are expanded through channels. An ionizing device at the upstream end of the channel charges the particles. The work done by the expanding gas results in the collection of very high voltages on an electrode at the downstream end of the channel. In this way it may be possible to generate high-voltage direct current from a device with no moving parts.

A conceptual design for a full-scale plant has been prepared, and small-scale laboratory tests have been conducted. A coal-fired rig has been constructed by Foster Wheeler Corporation (subcontractor) for development and testing of single and multiple electrostatic channels. Continuing problems have been encountered with operation of this combustor-generator, and the efficiencies obtained in all tests indicate that this system cannot become practical in the near future. Work has been completed and a final report is being prepared.

Thermionic Topper (April 24, 1967-April 24, 1969)—Consolidated Controls Corporation—\$241,798.

A thermionic topper is a device which, when exposed to high temperatures in a coal-fired furnace, emits ions and so generates an electric current. The high-temperature gases leaving the furnace are then used to generate steam in a conventional manner to drive a turbine generator. The results are increased power output and increased efficiency. Preliminary cost studies and estimates indicate that a thermionic topper has commercial possibilities. Analyses of such a topping device on a conventional steam cycle indicate a potential thermal efficiency gain of 5 to 10 percent absolute.

Work to date has been directed toward development of a small-size thermionic generator to be tested in experimental combustion furnaces. Material problems, together with a shortage of funds, preclude the extension of this work and a final report will be issued in 1969.

Supporting research

Low-Ash Coal (October 10, 1966-October 10, 1971)—The Pittsburgh & Midway Coal Mining Co.—\$7,640,000.

The Low-Ash Coal contract is for design, construction, and operation of a pilot plant to be located in Tacoma, Washington. De-

signatory work is in progress. Supporting laboratory studies are being undertaken, as subcontracts, at Washington State University and the Gulf Oil Corporation Research Laboratory.

The project represents a continuation of work performed by Spencer Chemical Company, an affiliate of The Pittsburgh & Midway Coal Mining Co., under a previous contract for development of a solvation process for treating coal to remove ash and other impurities. Technical feasibility was demonstrated on a wide range of coals from the highest rank to lignite. The end product, regardless of the coal type or source, contains about 16,000 B.t.u.'s per pound, has an ash content of one-tenth of one percent, and a very low sulfur content.

Studies indicate potential as a powerplant fuel (in areas where atmospheric contamination is a problem), as a gas turbine and diesel fuel (perhaps mixed with a distillate oil), a raw material for carbon and graphite electrodes, and other uses.

A specific site for the pilot plant has been selected on U.S. Government property at Ft. Louis, Washington, and the detailed construction design has been completed by Stearns-Roger Corporation. Because of funding constraints, the schedule for construction and operation of the pilot plant has not yet been established.

Electrofluidic Coal Processing (May 11, 1965-November 11, 1970)—Iowa State University—\$226,200.

An initial laboratory program indicated the feasibility of producing useful gases by using a fluidized bed and resistance electric heating. The contractor's Phase I report indicates commercial possibilities, and the Institute of Gas Technology is planning to use this system to produce hydrogen in its hydrogasification process. Larger reactors are being designed.

The successful development of improved methods for power generation, such as the fuel cell, magnetohydrodynamics, or other systems, could result in availability of large blocks of low-cost power at mine-mouth plants. A successful method for electro-treatment of coal would then permit the establishment of a chemical complex at the mine mouth. Such a complex would benefit the economy of coal-producing areas and the entire Nation.

Arc Processing (May 11, 1966-November 11, 1969)—Avco Corporation \$1,821,000.

Evaluation of experimental work performed under this contract shows that it has potential commercial application for the manufacture of acetylene. A Phase I report, indicating potential commercial feasibility, has been published by OCR.

The goal of this project is to develop a method of treating coal in an electric arc. There are many indications that coal treated by intense concentration of energy will, in microseconds, form useful chemicals such as acetylene. The problem areas are removing these chemicals from the reaction before they are degraded, maximizing the yield, and minimizing the power consumption.

The contractor has built several small high-intensity arc devices. Much has been learned about mechanics of the equipment, methods of coal feeding, and configuration of the cathodes and anodes. Acetylene has been produced and the yield has been increased several-fold (from 0.5 percent to 3.5 percent of coal feed). The specific energy requirement, a vital factor in process costs, has been reduced by a factor of 10.

A preliminary pilot plant design is being prepared, and the continuing small-scale experimental work has resulted in a steady rate of process improvements. Because of limited funding, the work will continue at the present level before proceeding to a possible pilot-plant scale.

Western Coal (August 24, 1962-August 24, 1969)—University of Utah—\$476,000 U.S. Government Funds; \$351,000 State of Utah Funds.

The purpose of this project, a laboratory-scale investigation, is to determine the processing characteristics of Western coals so that they may be readily adapted to processes being developed elsewhere by other OCR contractors. Generally, each OCR process development contractor starts work with the coal most conveniently available and with which he is most familiar. It is the desire of OCR to extend successful processes to as wide a range of coals as possible for the benefit of all areas of the country. The purpose of this research is to increase knowledge of Western coals and make this knowledge available.

Studies of coal solvation, as well as high-pressure hydrogenation of Western coals, are continuing.

Szikla-Rosinek Combustor System (June 28, 1966-December 28, 1968)—The Franklin Institute—\$196,700.

Based on the Szikla-Rosinek Combustor, which originated in Hungary, this process is intended to develop equipment to generate an economical fuel gas for gas turbines and other purposes.

The Contractor has completed his preliminary investigation and has made a preliminary design of an experimental gasifier. Lack of funds precludes further activity at this time. Therefore, the work will be terminated and a Phase I report will be prepared.

The contractor is also making an engineering analysis of the application of an ammonia turbine bottoming cycle, in connection with conventional steam turbines, as a means of eliminating cooling water requirements in coal-fired electric-generating plants. Indications are that this study can help show the way to better utilization of our Western coal resources as an important energy source, and can be of importance in conserving water in arid areas. Also, it would provide greater flexibility for siting new plants.

Induction Heating of Coal (January 4, 1967-April 14, 1968)—Stanford Research Institute—\$176,000.

The contractor conducted laboratory investigations on the electro-processing of coal in a system employing high-frequency induction transfer of electric energy to a fluidized bed of coal. The objective was to determine whether useful chemicals could be produced with this system. This approach to electro-processing is parallel to, but different from the approach of Avco Corporation and Iowa State University.

During 1967 the contractor's efforts were devoted to experimenting with equipment configurations to arrive at a workable system. However, because of materials problems and impedance matching problems, the efforts were unsuccessful. A final report was published by OCR in 1968.

Low-Temperature Coal Tar Process (September 9, 1966-September 9, 1969)—West Virginia Institute of Technology—\$16,800.

Work under this contract was directed toward demonstration of the economic feasibility of converting portions of coal tar into rubber-grade antioxidants. Alkyl phenol and Alkyl naphthol fractions were to be reacted with appropriate material in the hope of obtaining the desired antioxidant production. After two years of the three-year program, results indicated that the work was not likely to have commercial value.

The work was discontinued in December 1968, and a final report will be published early in 1969.

Multiple Catalyst Fluidized Reactions (November 27, 1968-November 27, 1973)—The University of Wyoming, Natural Resources Research Institute—\$613,700.

This research is intended to explore the reactions of coal or char with steam in a fluidized bed in the presence of several catalysts simultaneously at pressures up to 30 atmospheres. The objective will be to optimize the production of useful hydrocarbons and gases from coal.

The work, just getting underway, has begun with a small-scale investigation using existing equipment at the University. If this is encouraging, a larger bench-scale reactor will be constructed and operated to determine further process data. Data from the bench-scale unit will be used to evaluate the process and for design of a small pilot plant.

Acetylene from Anthracite (May 26, 1965–March 31, 1968)—Melpar, Inc.—\$364,000.

The objective of this project was large-scale use of anthracite in the manufacture of acetylene and other gaseous products. Early work indicated good potential for supplying feedstock to the plastic industry.

The economics of the process were updated at the end of the bench-scale work during the first quarter of 1968. This study showed a 1½ cent increase in the cost of producing acetylene from anthracite, while reduced costs were reported for other processes. Economic advantage being essentially eliminated, this work was discontinued. The final report was published in 1968.

MINING AND PREPARATION

Mining and Preparation Division is responsible for the development and technical administration of a contract research program directed toward: (a) finding new and expanded markets for coal in its conventional solid form; (b) developing more efficient, lower cost and safer methods of mining and preparing coal, thus reducing its cost to the consumer; (c) improving coal combustion and air pollution control techniques; and (d) creating markets for coal-associated minerals and waste products.

Since many of the contracts are in an advanced stage of progress, or are nearing completion, they are described in somewhat greater depth than other contracts included in this Annual Report.

Computer Simulation of Mining Techniques (June 9, 1964–March 9, 1968)—Virginia Polytechnic Institute—\$332,000.

Since the completion of an earlier contract with VPI, the mining production computer simulation programs developed under that contract have been accepted and widely used by the mining industry, both in this country and abroad. These programs are designed to mathematically simulate the motions of each piece of face equipment and record and summarize the amount of time spent at each task, including inherent delay times.

The simulators permit the operator to detect bottlenecks within the system and determine which operations should be improved. The increased efficiency resulting from the improvements can be determined. New equipment also can be evaluated by inserting its performance capabilities in the computer programs. Thus, changes in methods, plans, or equipment can be determined without costly experimentation within the mine.

To date, over 35 companies have applied the production programs. One company has reorganized its industrial engineering department to use these programs more advantageously.

A number of producing companies have obtained the programs and have adapted them to run on their own computer facilities with their own personnel.

Visitors have come to VPI from Australia, South Africa, France and Germany to learn more of these programs, and inquiries have been received from Canada and Great Britain. The programs have been used in Australia

and South Africa, and have been adapted to computers in those countries.

New Programs

The programs developed under the present contract have been extensively tested in the field. As with the mining production simulation programs, they are expected to be widely used by the industry. These programs provide a means for analysis of a wide range of engineering and operating systems, and should prove valuable in further reducing the cost and improving the safety of mining. The six programs are: ventilation network analysis (VENTSIM), power-systems-network analysis (POWERSIM), cost projection analysis and mine development scheduling (COSTSCHED), rail-haulage simulation (RAILSIM), belt-haulage simulation (BELTSIM), and pumping systems analysis (PUMPSIM).

Ventilation Program

The ventilation network analysis program determines the volume of air flowing and the pressure losses for each branch circuit in the mine. Air control devices, fans, and leakage may all be included in an analysis. By quickly and economically providing the pattern of flow and pressure losses throughout the mine, a wide variety of operating situations may be examined. These may include the effect of fan stoppages, adding new airshafts, inserting new overcasts, or reducing mine air resistance.

The program also indicates air regulator sizes, leakage volumes, and fan operating points. This program should prove valuable in both optimizing operating ventilation systems and in planning projected systems.

The program provides great capability for the insertion of safety criteria in the design of mining ventilation systems. Safety considerations can be evaluated and tested for their impact and feasibility before a design is implemented. The excessive dependence upon trial-and-error approaches can thus be reduced.

Power Programs

The power-systems-network analysis program has been structured to aid in the design or analysis of large-scale a.c. or d.c. power systems. Output from the program includes the currents, flowing, voltage drops, and power losses for each line. The current flowing, available voltage, percent of rated voltage, power consumption, and power factor are given for each load. Use of the program will enable the design engineer and the operating engineer to quickly determine the impact of changes on existing systems or to evaluate the adequacy of proposed designs.

Safety considerations and safety criteria are stressed. Electrical systems are critical in the prevention and control of mine fires and explosions, and this program has the potential to improve significantly the safety characteristics in such a system.

Cost and Scheduling Program

The cost projection analysis and mine development scheduling program is designed to show the effect of engineering and management decisions in dollars per ton. Labor, supply, general inside, general outside, plant and supervisory costs are computed on the basis of per ton mined, feet advanced, days worked, idle days accumulated, or on a monthly basis.

Thus, several operational plans may be quickly compared. For example, two-shift versus three-shift operation or the development of seven versus five entry mains may be readily compared. In addition, the program may also be used to forecast mine production and supply usage.

Rail-Haulage Program

The rail-haulage simulation program is designed to simulate haulage movements and

production capabilities under any track haulage system, any operating strategy, and with any combination of equipment. Gathering locomotives, main-line locomotives, marshalling yards and sidings may all be included in an analysis. The program provides data which would be produced by running simultaneous time-studies on all locomotives, loading stations, storage sidings, and the car dump for a number of days or weeks. The program is probably the most complex of the many programs that have been developed, but it is also among the most useful.

Belt-Haulage Program

The belt-haulage simulation program is designed to simulate the flow of material over a belt-conveyor network containing belts of any length, width, and capacity, traveling at any speed. Transfer bins, overload switches, and belt feeders may be included at any point in the system.

The program allows the user to quickly and economically determine the technically feasible belt network's designs. The most economic may then be chosen. The belt and rail-haulage programs together have the capability of handling and solving the most complex haulage problems.

Drainage Program

The pumping systems analysis program is similar in concept to the ventilation and power programs. The branch flow rates, pressure drop, and pump operating points may be quickly obtained for virtually any configuration of pumping and piping equipment. Most of the input data can be obtained from schematic diagrams of the system, handbooks and manufacturers' data.

The program can be used to minimize the pollution of stream systems by mine discharges. The benefits of mixing waters of varying quality, storage in sumps, the use of additives, aeration of effluent and other beneficiation techniques can be evaluated to determine their effect on quality of mine-water discharge.

Large Packaged Boilers (February 20, 1965–February 20, 1969)—Pope, Evans and Robbins—\$809,000.

The fluidized-bed boiler development program was described in detail in the 1968 OCR Annual Report. Recent work has been a full-scale single cell of a multicell boiler. This work has consisted of (1) finding solutions to the remaining problems in the system, (2) preparing an outline design of a "packaged" multicell boiler with a capacity of 250,000 pounds of steam per hour, (3) developing conceptual designs of a utility-sized boiler, and (4) conducting tests to determine gaseous emissions and techniques for controlling these emissions.

Development of the fluidized-bed single cell indicates that factory-assembled, coal-fired boilers may be constructed in capacities up to 350,000 pounds of steam hourly, as compared with the present 100,000-pound capacity limitation (also developed under OCR contract). The installed cost of a "packaged" fluidized-bed boiler in the range of 200,000 to 350,000 pounds per hour will be less than any field-erected counterpart, regardless of type of fuel. The installed cost, for example, will be 40 percent of the installed cost of a spreader-stoker-fired boiler of equal capacity. The present single-cell boiler has been optimized and proved with approximately 1,500 hours running time and all major obstacles have been overcome. Construction and satisfactory operation of a feasible multicell prototype coal-fired fluidized-bed boiler should demonstrate the advantages of this combustion system and assure its commercial acceptance.

Under the terms of an interagency agreement between OCR and the National Air Pollution Control Administration of the Department of Health, Education and Welfare,

special tests have been conducted to determine the air-pollutant emissions from the fluidized-bed boiler and also the extent to which these emissions, particularly sulfur dioxide, may be reduced by the addition of limestone to the bed. This investigation was initiated because of a number of potential advantages of the fluidized bed, most important of which is the excellent gas-to-solids contact that can be achieved with limestone and its resultant reaction with sulfur dioxide.

Extensive tests conducted in a small-scale unit indicate that sulfur-dioxide emissions from high-sulfur coal can be reduced significantly by addition of limestone. The fact that not more than 50 percent of the limestone reacts, suggests that this performance can be improved by continued research. Tests in the full-scale cell indicate comparable performance.

The emission of nitric oxides from the fluidized-bed combustor, for all operating conditions, is less than reported values for most conventional boilers.

The promising results achieved thus far in developing fluidized-bed boilers indicate a need for the testing of a full-scale prototype boiler as the next essential step toward commercialization. Work should continue to develop methods for maximum economic gaseous control, as well as scaling up designs of the basic boiler. Although work to date has been concentrated in the industrial-size range, the greatest potential application lies in the utility field.

In the electric utility range of two million pounds or more of hourly steam capacity, a fluidized-bed boiler will occupy about 15 percent of the volumetric space required for a pulverized coal boiler. The installation costs of such boiler equipment, auxiliaries, and building for a 1,000-megawatt powerplant should be about one-half that of a conventional pulverized boiler system and should reduce the overall powerplant costs by \$20 per kilowatt of capacity, or a total of \$20 million in capital investment.

Present indications are that budget constraints will force a termination of this work.

Sewage-Treatment Pilot Plant (August 25, 1965-April 26, 1970)—Rand Development Corporation—\$1,686,798.

The 10,000-gallon-per-hour coal-sewage pilot plant went into operation in June 1968. A clear effluent from raw sewage has been produced in one step and no major process difficulties have been encountered.

The pilot plant program is a continuation of an earlier OCR project in which the contractor found coal to be valuable as a filter medium, adsorbent and settling aid in the treatment of sewage and industrial waste waters. Although a new one-step treatment system based on coal has been developed and is being studied in the pilot plant, recent advances in the requirements for waste treatment have drawn attention to the unique disposable-filter aspect of the process as an attractive solution to problems in existing waste-treatment plants. This wider application of the coal process is also to be investigated in the pilot plant.

While technical progress to date is encouraging, a number of problem areas require further study and resolution in both the laboratory and pilot plant. Phosphate removal is unpredictable at present, and ranges from very high to negligible. Acid formation in a fresh coal bed during initial operating hours, while moderate, has not been explained. Basic scientific information is not available to explain the wide variation between coals of different geographic origins and classifications in terms of their adsorption characteristics. The ease of grinding and sizing coals to the desired range has been found to vary widely between coals from various seams. These factors indicate that coal sewage- and waste-treatment plants

cannot be built on a standard packaged-design basis, but that each will have to be engineered to the best available coal at each plant site.

These matters will receive attention during the coming year's plant operation, as will the study of combustion characteristics of the coal-sewage sludge. The contractor also expects to explore the application of coal chars to the process in the belief that many of the chars produced from OCR conversion processes may have higher adsorptive capacities than the coals from which they were derived. This possibility has been strengthened by the independent findings of other OCR contractors.

High-Temperature Boiler Tube Corrosion (November 24, 1965-September 24, 1968)—Combustion Engineering, Inc.—\$406,000.

OCR awarded a contract to Combustion Engineering to investigate methods by which coal can be processed to reduce corrosion or damage to fireside surfaces of high-temperature boilers. A further objective was to determine methods of reducing the amount of air pollutants.

This work has indicated certain relationships between coal composition and corrosion rates. Based on the data obtained from this testing program, the chief constituents affecting the corrosion rate are alkalies, alkaline earths, iron, and sulfur.

The alkaline earth materials are significant in that they may neutralize the alkalies, thus preventing formation of the complex compounds. Three of the tests conducted during this program have demonstrated the ability of alkaline earth materials to inhibit the corrosive effect of the alkalies.

Because of the close correlation between iron, pyritic sulfur, and total sulfur in most coals, it has been difficult to determine which of these variables is most significant. For corrosion to occur, both iron and sulfur must be present in some limited quantity. In addition, a certain concentration of sulfur trioxide is needed to maintain stability. The data indicate that both iron oxides and sulfur in the range normally found in utility coals are contributing factors in determining the corrosion rate.

The combination of effects of each of the variables—sodium, potassium, alkaline earths, and iron—made it possible to explain the corrosion rates on most of the coals tested. A nomograph has been constructed whereby the potential corrosiveness of a given coal can be determined. Also, amounts of neutralizing limes and limestones to be added (expressed as CaO equivalent) can be established from the nomograph. This nomograph provides a tool by which preparation processes can be modified to reduce the corrosiveness of the coal.

These results provided the groundwork for a corrosion-reduction study of the entire system of operations, from the seam face where mining begins to the point of loading for shipment.

1. The Mining System: Analyses of many channel samples indicate that the materials affecting corrosion, as well as other coal impurities, originate primarily from the roof, floor, or partings in the seam. Therefore, the corrosiveness of a coal may be reduced by mining so as to increase the alkaline earth materials or decrease the alkalies. This can be accomplished by one or more of the following:

- Inclusion or exclusion of roof material
- Inclusion or exclusion of floor material
- Inclusion or exclusion of parting materials.

2. Coal Preparation: The results of bench-scale chemical and physical tests reveal that the individual chemical constituents of coal ash often concentrate in specific size and/or weight fractions of coal. Thus, conventional sizing and gravity concentrating techniques can be used to alter the chemical compo-

sition of the coal product. Thus, it is possible to reduce corrosion through conventional coal-preparation methods.

In order to verify these possibilities, a 25-ton lot of coal was prepared by size and gravity separations to increase alkaline earths and decrease alkali content. The furnace test of this modified coal demonstrated substantial reduction of corrosion as expected.

3. Coal Additives and Blending: There are still other possibilities, at the mine site, for reducing corrosive properties. One of these is the use of locally purchased or mined corrosion-retarding additives such as limestone or dolomite.

Another method that has been in use for many years, especially in England, is the blending of corrosive and noncorrosive coals, possibly from different areas of the same mine.

A combination of these techniques may prove to be the most advantageous.

Methods used to produce noncorrosive coals can also serve for pollution control. However, 2 to 12 times as much neutralizing material may be needed to control pollution. Conversely, the amount of neutralizing material needed to control air pollution would, in most cases, exceed the amount needed to control high-temperature corrosion. According to results of the OCR study, the most corrosive coal tested would require an addition of 1.6 percent calcium oxide as measured on a coal basis to eliminate high-temperature corrosion.

To control both sulfur gas emissions and boiler corrosion, it is desirable to maintain an optimum balance between the sulfur level of the coal and the alkaline earths retained in the coal or added to the coal. Conventional cleaning using gravity techniques can remove most of the pyritic sulfur and thereby reduce the total sulfur by 50 percent or more. Such a reduction greatly reduces the alkaline earth requirements. Coal preparation processes might be designed not only to reduce the sulfur but increase alkaline earth percentages as well.

Flyash Construction Material Program (December 6, 1965-June 6, 1969)—West Virginia University—\$466,500.

The WVU-OCR brick pilot plant was described in great detail in the 1968 Annual Report of the Office of Coal Research. Briefly, the process involves mixing flyash with bottom slag or with bottom ash in predetermined amounts, and adding small quantities of sodium silicate (water glass) solution as a binding agent. This mixture is then pressed into brick, block, or other structural shapes and subsequently fired to yield an inexpensive, lightweight, high-strength, high-quality product. The process is shown in the schematic diagram.

During the past year, shakedown and test operations were undertaken, and all mechanical phases of the pilot plant have proved to be technically sound. An extensive plant optimization program has been completed utilizing one flyash-slag combination. Optimum values for such variables as forming pressure, silica content, moisture content, firing cycles, etc., have been established and will serve as a guide for the remaining flyash-slag combinations chosen for the program.

Experimental work completed this year indicates that the chemical composition of flyash and bottom ash is of little significance in the production of structural materials, with the exception of a few problem flyashes. These flyashes, when untreated, produce an undesirable structural material. Problem flyashes containing relatively high quantities of soluble minerals and flyashes which originate from limestone-based experimental air pollution control processes can be treated by adding hydrochloric or acetic acid to yield a high-quality structural product. The acid additive reduces scumming and

efflorescence, increases unfired and fired brick strength, and with certain flyashes reduces by 50 percent or more the sodium silicate binder consumption. The latter benefit offers a considerable cost saving, since the sodium silicate is the most costly item used to produce structural materials from coal ash.

A West Virginia University Coal Research Bureau report in question and answer form, covering all phases of the WVU-OCR Flyash Brick Program, will be published in the early part of the coming year.

Coal-Fired Diesel Engines (May 10, 1966-January 31, 1969)—Howard University—\$229,350.

The contractor has been investigating the feasibility of converting a conventional diesel engine into an engine utilizing a combination of pulverized coal and diesel oil as the fuel.

The work employs a small four-stroke-cycle diesel engine rated at 15 horsepower at a full speed of 1800 rpm. This engine has been reconditioned and its lubrication system and other parts modified to reduce oil contamination by the pulverized coal.

The engine is instrumented to determine typical internal-combustion engine design factors such as pressure and temperature variations, fuel consumption, exhaust gas composition, brake horsepower, and heat losses.

Most recently Howard University, in conjunction with a subcontractor (Value Engineering Company), has completed approximately 50 hours of a 100-hour test aimed at identifying and assessing problems associated with fuel injection, corrosion, abrasion, and lubricating oil contamination. The wear rates reflect some improvement over previous studies, but they are still unsatisfactory. Slag accumulation around the exhaust valve, though no problem in the existing tests, is sufficient to be of concern in extended utilization of pulverized coal as a diesel fuel. The performance of the engine was found to be very sensitive to engine speed and particle size distribution and somewhat less sensitive to types and classifications of coal.

Based on existing market prices, savings in fuel cost might be realized using a coal/oil mix, but whether it would be sufficient to offset capital investment, maintenance, storage and handling costs is somewhat questionable.

25-HOUR COMPARISON—ENGINE OPERATING ON DIESEL OIL VS. OIL AND COAL, 1000 RPM 90 PERCENT RATED LOAD EQUALS 7.5 HP

	Oil	Oil/coal
Special fuel consumption.	0.423 lbs. oil/BHP-hour.	1.596 lbs. oil plus lbs. coal/BHP-hour.
Fuel consumption.....	3.15 lbs. oil/hour.	.88 lbs. oil/hour. 11.02 lbs. coal/hour.
Mechanical efficiency.....	66 percent.....	66 percent.
Thermal efficiency.....	46.8 percent.....	16.7 percent.
Exhaust gas analysis:		
CO.....	6.3 percent.....	11.4 percent.
O ₂ (Moisture free).....	11.1 percent.....	3.8 percent.
CO.....	.14 percent.....	.5 percent.
N ₂ (Bal).....	82.5 percent.....	84.2 percent.
Heat balance:		
Heat from fuel.....	61,400 B.t.u./hour.	73,660 B.t.u./hour.
Exhaust gases.....	32 percent.....	40 percent.
Water.....	17 percent.....	15 percent.
Work (IHO).....	46.7 percent.....	39 percent.
Radiation and convection.....	4 percent.....	6 percent.

Culm Bank Processing (August 26, 1966-February 26, 1969)—Dorr-Oliver, Inc.—\$289,575 U.S. Government Funds; \$96,525 Commonwealth of Pennsylvania Funds.

Hundreds of millions of tons of anthracite refuse exist in culm banks throughout the Pennsylvania anthracite coal mining region. The contractor has upgraded the refuse by processing crushed material in a fluidized-bed reactor to burn out most of the carbon, in the hope of producing an economically attractive product, or products, for further processing and end use.

As possibilities, many end products were listed for consideration, such as concrete and lightweight aggregates, "red dog," cinder, low-grade fuels, pozzolanic cements, alumina, lime, vanadium, germanium, lithium, uranium, sulfur dioxide, sulfuric acid and carbon dioxide.

For the long term and for strategic defense reasons, extraction and recovery of alumina from red dog could have importance. However, in view of the technical problems, and the absence of economic feasibility, actual testing has not been performed under this contract. Physical characteristics of synthetically produced red dog (hardness, porosity, friability, size consist and bulk density) were such that the material was found unsuitable in roadbuilding applications, e.g., as highway embankments, soil stabilization, soil

cement mixes, and bituminous mixtures. Due to some or all of the above physical characteristics, the red dog is considered unsuitable for use as cement and lightweight aggregate in most building block mixtures.

Upgrading refuse to meet lightweight aggregate classification by bloating (increasing volume through heat treatment) did not prove feasible in a fluid-bed reactor. Test runs with flux additions did not produce bloating at safe operating temperatures, and it now seems doubtful that a fluid bed provides the type of regime for the fluxing action to take place.

Culm-bank refuse samples from Scranton and Coaldale, Pennsylvania, were processed at Dorr-Oliver's semiworks in Stamford, Connecticut, and sent on to the brick testing facilities of West Virginia University at Morgantown, West Virginia, for evaluation. In Stamford, samples of raw anthracite refuse were dried and stage-crushed from a top size of about 4 inches to minus 4 mesh, to provide a 12-inch diameter fluid-bed reactor feed containing a minimum of fines and a low sulfur content. Depending primarily on physical characteristics of the reactor product inherent in the raw refuse, superior-quality face brick can be made which has an attractive golden brown, rough-textured appearance and meets ASTM Grade SW specifications.

Brick optimization tests revealed the need for increased amounts of sodium silicate binder in cold-mix formulation and moderate to high firing temperatures in comparison with flyash-based brick. Upgrading of the fluid-bed reactor product may be achieved by crushing, screening or magnetic separation. Some nonmagnetic reactor product was found suitable for making refractory-grade brick.

Although the technical feasibility of processing anthracite into superior-quality face brick via combustion in a fluid-bed reactor has been demonstrated, the economics do not appear sufficiently attractive to justify operation of a pilot plant. It is possible that future developments will justify a reevaluation of culm-bank material as a raw material for the brick industry.

Investigation of fired refuse as roadbuilding material has not been adequately made, and large quantities of the more refractory reactor product could conceivably meet highway construction material and performance specifications.

SUPERIOR QUALITY FACE BRICK FROM TAYLOR REFUSE—ASTM SPECIFICATIONS

	Face brick (grade)		Common brick (grade)			Taylor face brick
	SW	MW	SW	MW	NW	
Compressive breaking strength (p.s.i.).....	3,000 minimum.....	2,500 minimum.....	3,000 minimum.....	2,500 minimum.....	1,500 minimum.....	3,054 4,101
Water absorption, 5-hour boil (percent).....	17 maximum.....	22 maximum.....	17 maximum.....	22 maximum.....	No limit.....	11.3 14.83
Saturation coefficient.....	0.78 maximum.....	0.88 maximum.....	0.78 maximum.....	0.88 maximum.....	No limit.....	0.744 0.57
Efflorescence.....	Slight.....	Slight.....	No limit.....	No limit.....	No limit.....	Slight Slight

Special Purpose Coals (September 26, 1966-January 26, 1969)—Pennsylvania State University—\$492,856 U.S. Government Funds; \$49,484 Pennsylvania State University Funds.

Pennsylvania State University research is aimed at adapting mining and preparation practices to yield, at the lowest possible cost, coal raw materials that are best suited for each new utilization process under development by OCR contractors. The objectives are to increase yields and efficiencies, minimize operational problems, and improve market competitiveness. The program includes investigation of both traditional and novel techniques of beneficiation that are suited to handling the complex mixture of coal types found in run-of-mine coal. Studies of coal grinding and other comminution techniques are underway in order to produce ultrafine sizes of anthracite for

special uses and to develop cost data on crushing coal to micron sizes.

In addition, Pennsylvania State University provides a service to other OCR contractors by developing analytical data on all coals under study in experimental pilot plants.

Coal types and full-seam samples from all of the major coal regions of the United States have been collected for study and testing. The coal seams sampled contained a number of layered bodies, each often consisting of strikingly different types of coal. Each seam, therefore, comprises a source from which several raw materials can be extracted if proper mining and beneficiation methods are employed.

BENEFICIATION STUDIES

Coal-type samples were studied to determine the best beneficiation methods to

segregate these materials during coal preparation. Following analysis of these studies the sample of as-mined coal was prepared, both to clean the coal and to yield the compositionally different coal types as separate products.

The ability to separate compositionally different coal materials from a single seam has been clearly demonstrated. In the case of a highly-volatile "A" rank bituminous coal from the Appalachian region, two layer samples were procured in the mine, together with a large, full-seam sample. The full-seam sample, given special preparation, produced four distinctly different types of coal material.

Similar experimental studies using lignites have shown that it is possible to control composition with these low-rank materials. The feasibility of producing coal raw ma-

terials of specified composition has been demonstrated, but still requires development of techniques for application on a commercial basis.

Properties of Various Coal Types

Each of the 42 common coal types collected has been studied to determine its important properties. Hardness, grindability and specific gravity are among these properties. The grindability of different coal types can differ greatly within coals of the same rank and even within the limits of a single seam in a single mine.

Other properties relate to utilization. The effect of heating on particles of the coal types and their elemental composition are examples. Some coal types become very fluid when heated in an inert atmosphere, others display little or no fluidity; some tend to agglomerate, others do not. These properties are of great importance to coke production for the iron and steel industries. The tendency to agglomerate is a severe difficulty in many coal-conversion processes under development. For these processes, nonagglomerating coal types must be chosen or costly pretreatment must be employed.

The mineral content of the coal types and the elemental composition of the coal ash display broad regional differences. To date, the number of samples inspected are inadequate for firm generalizations. However, different coal types have distinctly different potassium-sodium ratios. This is important in view of relationships between this ratio and the rate of boiler fireside tube corrosion.

The greatest adsorptive capacities have been found in coal types from relatively low-rank bituminous coals (high-volatile "C" rank). However, the individual coal types within this rank (and in other ranks) display significant differences in adsorptive capacities. The ability to separate these coal types in the preparation plant should permit optimizing adsorptive capacity of coal used for sewage treatment. Excellent adsorptive capacities have been demonstrated with several coal chars produced in some of the conversion processes under study by other OCR contractors.

Cooperative Studies

Preliminary attempts to predict oil yield from a knowledge of the coal types used in the process were sufficiently successful to warrant a cooperative effort with FMC Corporation to study the matter further. Bench-scale tests are being conducted to develop data on which a tentative conversion yield formula will be based. This will then be checked by test runs on a pilot-plant scale.

Similarly, studies of the relationship between coal type and acetylene production have shown promising results with considerable differences in yield from the various coal types.

EXAMPLES OF ELEMENTAL COMPOSITION OF THE ASH DERIVED FROM COAL TYPES OBTAINED IN EASTERN AND WESTERN UNITED STATES

	Eastern United States		Western United States	
	Range (percent)	Median	Range (percent)	Median
Sodium oxide	0.06-3.88	0.42	0.20-11.48	0.74
Potassium oxide	.04-2.29	.67	.05-1.53	.19
Calcium oxide	.35-9.00	2.80	1.75-34.63	19.87
Magnesium oxide	.19-1.61	.65	.68-13.25	6.57
Iron oxide	1.28-64.13	7.45	1.20-20.50	6.34
Sodium/potassium ratio	.10-15.88	.74	.18-28.70	7.00

ECONOMICS AND MARKETING

Economics and marketing studies supported by OCR are generally of two types: (a) assessments of potential markets for U.S. coal, with recommendations for action directed toward achieving indicated potentials (including transportation to markets);

and (b) market studies related to economic problems to maximize the economic impact to OCR technological projects.

Chemical By-Products from Coal (August 16, 1968-December 6, 1968)—Skeist Laboratories, Inc.—\$61,500.

Under contract with OCR, Skeist Laboratories, Inc., of Livingston, New Jersey, reviewed the potential costs and markets for the commercial byproduct chemicals anticipated from the conversion of coal to liquid and gaseous fuels. The contractor evaluated the probable net income attainable from the isolation and sale of such byproducts and submitted a final report containing a detailed discussion covering ethylene and propylene; aromatics; naphthalene; hydrogen; ammonia; sulfur and tar acids. The report also includes the economics of a conceptual all-chemical refinery.

The potential profits derived from a coal refinery are improved by the credits obtainable through the sale of chemical byproducts. The technical capability to produce chemicals from coal at a high level of profitability now exists. In the last fifteen years, dramatic improvements have been made in crude oil refining processes and chemical recovery. Projects uneconomical in the years immediately following the war now appear highly attractive.

Synthetic crude oil from coal is a much better feedstock for production of aromatics than typical naphthalene-rich petroleum crudes. Aromatics are obtainable either as prime products or coproducts with fuel production. Olefins are obtainable from naphtha or off-gas feeds as readily as from petroleum. In addition, there is the possibility of isolating a variety of intermediates not readily available from petroleum and with potential value for new families of plastics, fibers and chemical specialties. Sulfur, ammonia, cresols and cresylic acids add further to the potential profitability of the coal refinery.

Conditions have changed, the report states, and industry must not be inhibited in its plans because of past economics. Not only will coal be able to provide much of our future liquid and gas fuel requirements, but it seems certain that it will return to its historical status as the source of most of our organic chemical intermediates. The final report has been issued and is available to the public.

Study of the Identification and Assessment of Potential Markets for Chars from Coal Processing Systems (June 12, 1967-December 26, 1968)—Battelle Memorial Institute—\$61,500.

In converting coal to liquids or gases, a solid residue (char) having a substantial heating value, remains. This must be sold to receive byproduct credit for the process, or used for inplant purposes at some assigned value.

The amount of char to be produced by a single commercial plant will be considerable, varying from process to process. The range is from one million tons or less, annually, to as much as four or five million tons. Thus it is essential to find uses and markets which can consume such large quantities.

As was anticipated, the prime market for char was found to be as a fuel for the thermal generation of electric power. Some of the conversion chars possess a heating value almost as high as the net heating value of the original coal. No trouble is foreseen in burning the char.

Results from small-scale tests run in several laboratories indicate that the chars tested can be burned in a pulverized coal or cyclone furnace unit. However, an adjustment of the burner system, heat absorbing surfaces and furnace configuration is required. To burn some of these chars efficiently in a properly designed furnace-boiler system may involve no extra capital cost. Other chars may require up to 10 percent

additional capital costs for the steam generating portion of the plant.

The report states that a definite plus factor exists for the use of char in magnetohydrodynamics (MHD) a developing technology for electric power generation. The advantages of char are its lower hydrogen content and a higher conductivity of the combustion products.

Work by two OCR contractors has shown that some chars possess adsorptive properties that are equal or nearly equal to commercial activated carbon for purposes such as waste water treatment and water purification. Battelle Memorial Institute states, "The availability of relatively low cost 'activated' char should promote the use of tertiary sewage waste water treatment and treatment of waste water in general."

Study of Coal Shipments to Canada (March 29, 1968-June 29, 1969)—R. L. Banks & Associates, Inc.—\$63,197.

A transportation consulting firm, R. L. Banks & Associates, Inc., is conducting an economics and marketing study of future coal shipments to Canada. This study was undertaken as a sequel to an earlier OCR export coal survey relating to Europe and Japan. It was decided that a somewhat similar study should be undertaken to examine coal exports to Canada, the largest customer in the U.S. coal-export trade.

The contractor has finished, to a substantial extent, its study of the size and trend of market potential for U.S. coals in the Provinces of Ontario and Quebec, Canada. An investigation has been made of the fuel-consuming industries in the region and the trends of consumption. An informal report has been issued to OCR, and this, with some additional material not affecting the economic and marketing conclusions, will be published as a part of the final report.

The contractor has determined seven potential U.S. coal export areas. As the work progresses, R. L. Banks & Associates, Inc., will consider possible transport alternatives for delivering U.S. coal, in substantial amounts, to some of these areas. Transportation of coal from U.S. mines to Canadian fuel users, including consideration of hauls to lake ports; storage and handling at lake ports; lake shipping; Canadian-side unloading, storage and distribution; and alternate all-rail routes will be examined. This study covers transport changes and efficient new methods as these relate to additional coal volume forecast for a future year.

APPENDIX

LIST OF OCR TECHNICAL REPORTS

- All reports must be prepaid.
- Survey of Opportunities to Stimulate Coal Utilization: R & D Report No. 1—OCR Contract No. 14-01-0001-223. Contractor: Booz, Allen & Hamilton, Inc. Refer to: PB-181177 (Volume I)—\$3.00² PB-181178 (Volume II)—\$3.00²
- Hydrogenation of Pulverized Coal in a Plasma Jet: R & D Report No. 2—OCR Contract No. 14-01-0001-228. Contractor: Georgia Institute of Technology. Refer to: PB-166819. Cost: \$3.00²
- The Foreign Market Potential for United States Coal: R & D Report No. 3—OCR Contract No. 14-01-0001-258. Contractor: Robert R. Nathan Associates, Inc. Refer to: Above-titled report. Cost: \$7.45¹
- The Charring of Western Coals: R & D Report No. 4—OCR Contract No. 14-01-0001-274. Contractor: Montana State College. Refer to: PB-166081. Cost: \$3.00²
- Ultrafine Coal Pulverization and its Application: R & D Report No. 5—OCR Contract No. 14-01-0001-226. Contractor: FMC Corporation. Refer to: PB-166058. Cost: \$3.00²
- Optimization of Underground Mining: R & D Report No. 6—OCR Contract No. 14-01-0001-243. Contractor: Virginia Polytechnic

Footnotes at end of article.

Institute. Refer to: PB-166291 (Volume I) \$3.00,² PB-166291 (Volume II) \$3.00,² PB-166291 (Volume III) \$3.00.²

A study of Corona Processing of Coal: R & D Report No. 7—OCR Contract No. 14-01-0001-237. Contractor: General Electric Company. Refer to: PB-166406. Cost: \$3.00 for hard copy², .65 for microfiche copy.²

Coal-Associated Minerals of the United States: R & D Report No. 8—OCR Contract No. 14-01-0001-269. Contractor: West Virginia University.²

Volume 1, Pennsylvania and Maryland Coal-Associated Mineral Occurrences and Markets, PB-168110, \$3.00.²

Volume 2, Ohio Coal-Associated Mineral Occurrences and Markets, PB-168111, \$3.00.²

Volume 3, West Virginia Coal-Associated Mineral Occurrences and Markets, PB-168112, \$3.00.²

Volume 4, Southern Appalachian Coal-Associated Mineral Occurrences and Markets (Virginia, Eastern Kentucky, Tennessee, and Alabama), PB-168113, \$3.00.²

Volume 5, Mid-Western Coal-Associated Mineral Occurrences and Markets (Illinois, Western Kentucky, Indiana, Missouri, Kansas, Iowa, and Texas), PB-168114, \$3.00.²

Volume 6, Western Coal-Associated Mineral Occurrences and Markets (Colorado, Montana, New Mexico, North Dakota, Utah, South Dakota, Washington, and Wyoming), PB-168115, \$3.00.²

Volume 7, Uses, Specifications and Processes Related to Coal-Associated Minerals, PB-168116, \$3.00.²

Excerpt A new approach to the production of flyash-based structural materials, PB-168117, \$3.00.²

Solvent Processing of Coal to Produce a De-ashed Product: R & D Report No. 9—OCR Contract No. 14-01-0001-275. Contractor: Spencer Chemical Division, Gulf Oil Corporation. Refer to: PB-167809. Cost: \$3.00.²

Assessment of Potential Markets for Low-Ash Coal: R & D Report No. 10—OCR Contract No. 14-01-0001-471. Contractor: Battelle Memorial Institute. Refer to: PB-166820. Costs: \$3.00.²

Char-Oil-Energy-Development: R & D Report No. 11—OCR Contract No. 14-01-0001-235. Contractor: FMC Corporation. Refer to: PB-169562 (Volume I) \$3.00,² PB-169563 (Volume II) \$3.00.²

Char-Oil-Energy-Development: R & D Report No. 11—Supplemental—OCR Contract No. 14-01-0001-235. Contractor: FMC Corporation. Refer to: PB-173916 (FINAL) \$3.00,² PB-173917 (Appendix) \$3.00.²

An Investigation of the Use of Coal for Treatment of Sewage and Waste Waters: R & D Report No. 12—OCR Contract No. 14-01-0001-348. Contractor: Rand Development Corporation. Refer to: PB-170490. Cost: \$2.25.²

Feasibility Study of Coal-Burning MHD Generation: R & D Report No. 13—OCR Contract No. 14-01-0001-476. Contractor: Westinghouse Electric Corporation. Refer to: Above-titled report. Cost: \$9.00 for one set—three volumes.¹

Combustion Tests on a Specially Processed Low-Ash Low-Sulfur Coal: R & D Report No. 14—OCR Contract No. 14-01-0001-418. Contractor: Babcock & Wilcox Company. Refer to: PB-166816. Cost: \$3.00.²

De-Ashed Coal Combustion Study: R & D Report No. 15—OCR Contract No. 14-01-0001-417. Contractor: Combustion Engineering, Inc. Refer to: PB-166815. Cost: \$3.00.²

Pipeline Gas from Lignite Gasification—A Feasibility Study: R & D Report No. 16—Interim Report No. 1—OCR Contract No. 14-01-0001-415. Contractor: Consolidation Coal Company. Refer to: PB-166817 (Feasibility Study) \$3.00, PB-166818 (Appendix) \$3.00.

Low-Sulfur Boiler Fuel Using the Consol CO₂ Acceptor Process: R & D Report No. 16—

Interim Report No. 2—OCR Contract No. 14-01-0001-415. Contractor: Consolidation Coal

Company, Research Division. Refer to: Above-titled report and PB-176910, Cost: \$3.00.²

COAL-FIRED PACKAGED BOILERS

[R. & D. Report No. 17—OCR Contract No. 14-01-0001-242]

Design No.	Height	Boiler Width	Length (app)	OTS order No.	Cost
Report only				PB-181585	\$3.00
OCR 100 ¹	14'2"	11'7"	30'	PB-181586	3.00
OCR 100-A ²	14'2"	11'7"	30'	PB-181587	3.00
OCR 80 ¹	14'2"	11'7"	25'	PB-181589	3.00
OCR 80-A ²	14'2"	11'7"	25'	PB-181600	3.00
OCR 60 ¹	14'2"	10'11"	21'	PB-181601	3.00
OCR 60-A ²	14'2"	10'11"	21'	PB-181602	3.00
OCR 40 ¹	14'2"	10'11"	17'	PB-181603	3.00
OCR 40-A ²	14'2"	10'11"	17'	PB-181604	3.00

¹ Denotes underground storage of coal.

² Denotes above ground storage of coal.

Kinetic Studies of Thermal Dissolution of High-Volatile Bituminous Coal: R & D Report No. 18—Interim Report No. 1—OCR Contract No. 14-01-0001-271. Contractor: University of Utah, Fuels Engineering Department. Refer to: PB-167982. Cost: \$3.00.²

Plasma Reactions With Powdered Coal: R & D Report No. 18—Interim Report No. 2—OCR Contract No. 14-01-0001-271. Contractor: University of Utah. Refer to: Above-titled report. Cost: \$1.00.¹

Project Western Coal—Compilation of Four 1967 Reports: (1) Flash Heating and Plasma Pyrolysis of Coal. (2) A Kinetic Study of Coal Extraction by Tetralin with Ultrasonic Irradiation. (3) A Kinetic Comparison of Coal Pyrolysis and Coal Dissolution. (4) Kinetics of the Hydro-Removal of Sulphur, Oxygen and Nitrogen from a Low-Temperature Coal Tar. R & D Report No. 18—Interim Report No. 3—OCR Contract No. 14-01-0001-271. Contractor: University of Utah. Refer to: Project Western Coal—1967 Compilation of Reports. Cost: \$2.00.¹ (Four reports in one volume).

Compilation of Interim Reports on Projects for the Production of Pipeline Quality Gas From Coal: R & D Report No. 19. Contractors: Consolidation Coal Company, Institute of Gas Technology, The M. W. Kellogg Company, Bituminous Coal Research, Inc. Refer to: Above-titled report (Supply exhausted—not available).

Gas Generator Research and Development Survey and Evaluation, Phase One: R & D Report No. 20—Interim Report—OCR Contract No. 14-01-0001-324. Contractor: Bituminous Coal Research, Inc. (Out of print—not available).

Potential Market for Far Western Coal and Lignite: R & D Report No. 21—Phase I Final Report—OCR Contract No. 14-01-0001-475. Contractor: Robert R. Nathan Associates, Inc. Refer to: Summary, 28 pages \$35.¹ PB-169315 (Volume I) \$3.00,² PB-169316 (Volume II) \$3.00.²

The Potential Market for Midwestern and Alaskan Coal and Lignite: R & D Report No. 21—Phase II Final Report—OCR Contract No. 14-01-0001-475. Contractor: Robert R. Nathan Associates, Inc. Refer to: PB-175738. Cost: \$3.00.²

Progress Design and Cost Estimate for Production of 265 Million SCF/Day of Pipeline Gas by the Hydrogasification of Bituminous Coal: R & D Report No. 22—Interim Report No. 1—OCR Contract No. 14-01-0001-381. Contractor: Institute of Gas Technology. Refer to: PB-176982. Cost: \$3.00.²

Process Design and Cost Estimate for Production of 266 Million SCF/Day of Pipeline Gas by the Hydrogasification of Bituminous Coal—Hydrogen by the Steam-Iron Process: R & D Report No. 22—Interim Report No. 2—OCR Contract No. 14-01-0001-381. Contractor: Institute of Gas Technology. Refer to: PB-174064. Cost: \$3.00.²

Process Design and Cost Estimate for a 258

billion BTU/day Pipeline Gas Plant—Hydrogasification Using Synthesis Gas Generated by Electrothermal Gasification of Spent Char: R & D Report No. 22—Interim Report No. 3—OCR Contract No. 14-01-0001-381. Contractor: Institute of Gas Technology. Refer to: Above-titled report. Cost: \$1.25.¹

Cost Estimate of a 500 Billion BTU/day Pipeline Gas Plant via Hydrogasification and Electrothermal Gasification of Lignite: R & D Report No. 22—Interim Report No. 4—OCR Contract No. 14-01-0001-381. Contractor: Institute of Gas Technology. Refer to: Above-titled report. Cost: \$2.50.¹

Study of Costs of Production and Potential Future Markets for (Phase I) Low-B.T.U. Industrial Fuel Gas (Producer Gas) and (Phase II) Industrial Hydrogen: R & D Report No. 23—OCR Contract No. 14-01-0001-474. Contractor: Battelle Memorial Institute. Refer to: PB-174835. Cost: \$3.00.²

An economic analysis of the U.S. Export Coal Distribution System: R & D Report No. 24—OCR Contract No. 14-01-0001-480. Contractor: W. B. Saunders & Company. Refer to: Above-titled report. Cost: \$2.50.¹

Combined Desalination and Power Generation Using Coal Energy—Phase I: R & D Report No. 25—Interim Report No. 1—OCR Contract No. 14-01-0001-481. Contractor: The M. W. Kellogg Company. Refer to: Above-titled report (Supply exhausted—not available).

Combined Desalination and Power Generation Using Coal Energy—Phase II: R & D Report No. 25—Final Report—OCR Contract No. 14-01-0001-481. Contractor: The M. W. Kellogg Company. Refer to: PB-174938. Cost: \$3.00.²

Commercial Process Evaluation of the H-Coal Hydrogenation Process: R & D Report No. 26—Interim Report No. 1—OCR Contract No. 14-01-0001-477. Contractor: Hydrocarbon Research, Inc. Refer to: PB-174696. Cost: \$3.00.²

Project H-Coal Report on Process Development: R & D Report No. 26—Final Report—OCR Contract No. 14-01-0001-477. Contractor: Hydrocarbon Research, Inc. Refer to: Above-titled report. Cost: \$5.00.¹

Review and Evaluation of Project Fuel Cell: R & D Report No. 27—OCR Contract No. 14-01-0001-500. Contractor: Jackson & Moreland, Division of United Engineers & Constructors, Inc. Refer to: PB-173765. Cost: \$3.00.²

Future Market for Utility Coal in New England: R & D Report No. 28—OCR Contract No. 14-01-0001-489. Contractor: Arthur D. Little, Inc. Refer to: PB-174540. Cost: \$3.00.²

Catalytic Hydrotreating of Coal-derived Liquids—Project Seacoke—Phase II: R & D Report No. 29—Interim Report No. 1—OCR Contract No. 14-01-0001-473. Contractor: ARCO Chemical Company, A Division of Atlantic Richfield Company. Refer to: PB-174926. Cost: \$3.00.²

Coal Processing by Electrofluidics—Phase

Footnotes at end of article.

I Report: R & D Report No. 30—Interim Report No. 1—OCR Contract No. 14-01-0001-479. Contractor: Iowa State University. Refer to: Above-titled report. Cost: \$1.75.¹

A Study of the Eastern Industrial Coal Market: R & D Report No. 31—OCR Contract No. 14-01-0001-486. Contractor: Booz, Allen & Hamilton, Inc. Refer to: Above-titled report. Cost: \$2.50.¹

Evaluation of Project H-Coal: R & D Report No. 32—OCR Contract No. 14-01-0001-1188. Contractor: American Oil Company. Refer to: Above-titled report and PB-177068. Cost: \$3.00.²

Conversion of Anthracite Coal to Acetylene: R & D Report No. 33—OCR Contract No. 14-01-0001-472. Contractor: Melpar, Inc. Refer to: Above-titled report. Cost: \$1.50.¹

Avco Arc-Coal Process—Phase I Feasibility Report: R & D Report No. 34—Interim Report No. 1—OCR Contract No. 14-01-0001-493. Contractor: Avco Space Systems Division, Avco Corporation. Refer to: Above-titled report. Cost: \$1.50.¹

Separate Evaluations of Electrogas dynamics (EGD) Power Generation: R & D Report No. 35. Contractors: Dynatech Corporation—OCR Contract No. 14-01-0001-1191, OCR Contract No. 14-01-0001-1194. Engineering Research Institute of Iowa State University, OCR Contract No. 14-01-0001-1193. IIT Research Institute—OCR Contract 14-01-0001-1195. Refer to: Above-titled report. Cost: \$1.50.¹

Packaged-type Vertical Coal-Fired Water-Tube Boiler—100,000 Pounds Steam per Hour (OCR-V-100): R & D Report No. 36—Interim Report No. 1—OCR Contract No. 14-01-0001-478. Contractor: Pope, Evans and Robbins. Refer to: Above-titled report. Cost: \$1.50.¹

Commercial Potential for the Kellogg Coal Gasification Process: R & D Report No. 38—OCR Contract No. 14-01-0001-380. Contractor: The M. W. Kellogg Company. Refer to: Above-titled report and PB-180358. Cost: \$3.00.²

Project Gasoline Pre-Pilot Plant Phase I Research on CSF Process—Volume II: R & D Report No. 39—Interim Report No. 1—OCR Contract No. 14-01-0001-310. Contractor: Consolidation Coal Company. Refer to: Above-titled report. Cost: \$4.50.¹

Pyrolysis of Coal in a Fluidized Bed With an Induction Plasma: R & D Report No. 40—OCR Contract No. 14-01-0001-490. Contractor: Stanford Research Institute. Refer to: Above-titled report. Cost: \$3.00.¹

Chemical By-Products From Coal: R & D Report No. 43—OCR Contract No. 14-01-0001-1192. Contractor: Skelst Laboratories, Inc. Refer to: Above-titled report. Cost: \$2.00.¹

Study of the Identification and Assessment of Potential Markets for Chars From Coal Processing Systems: R & D Report No. 44—OCR Contract No. 14-01-0001-1192. Contractor: Battelle Memorial Institute. Refer to: Above-titled report.

PATENTS

The program of the Office of Coal Research shows promise in the number of patentable inventions that have resulted which will be in the public domain. Six (6) patents have been issued since the Office was established in July 1960, as follows:

1. No. 3,355,376—Hydrocracking of polynuclear hydrocarbons . . . Gorin, et al.
2. No. 3,257,992—Coal-burning water-tube steam generator construction, embodying integral primary coal slagging-type furnace and secondary furnace . . . John Bishop.
3. No. 3,341,447—Solvent process for carbonaceous fuels . . . Willard C. Bull, et al.
4. No. 3,371,049—Regeneration of zinc halide catalyst used in hydrocracking of polynuclear hydrocarbons . . . Gorin, et al.
5. No. 3,387,590—System for regulating the total heat output in a burning fluidized-bed heat exchanger or boiler . . . John Bishop.

6. No. 3,401,114—Process using coal in sewage treatment . . . Carlton, et al.

Seven (7) active patent applications are now pending in the U.S. Patent Office covering the following:

1. A low polarization, long-lived fuel electrode for solid-electrolyte fuel cells.
2. Solid-electrolyte stacked-disc fuel cell.
3. Dilute-phase particulate-matter boiler/heat exchanger.
4. High-quality hydrocarbon fuels from coal or any carbonaceous material.
5. Coal-fired hydrogen reformer.
6. Preparation of carbon dioxide acceptors by the melt process.
7. Reduction of unburned combustibles in flyash.

At the present time, there are thirty (30) additional invention disclosures awaiting action in the Office of the Solicitor, Branch of Patents, before formal patent applications are filed.

H.R. 3375

[Public Law 86-599, 86th Congress, 74 Stat. 336, July 7, 1960]

An act to encourage and stimulate the production and conservation of coal in the United States through research and development by authorizing the Secretary of the Interior to contract for coal research, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That as used in this Act—

(a) The term "Secretary" means the Secretary of the Interior.

(b) The term "research" means scientific, technical, and economic research and the practical application of that research.

OFFICE OF COAL RESEARCH, ESTABLISHMENT

SEC. 2. The Secretary shall establish within the Department of the Interior an Office of Coal Research, and through such Office shall—

(1) develop through research, new and more efficient methods of mining, preparing, and utilizing coal;

(2) contract for, sponsor, cosponsor, and promote the coordination of, research with recognized interested groups, including but not limited to, coal trade associations, coal research associations, educational institutions, and agencies of States and political subdivisions of States;

(3) establish technical advisory committees composed of recognized experts in various aspects of coal research to assist in the examination and evaluation of research progress and of all research proposals and contracts and to insure the avoidance of duplication of research; and

(4) cooperate to the fullest extent possible with other departments, agencies, and independent establishments of the Federal Government and with State governments, and with all other interested agencies, governmental and nongovernmental.

ADVISORY COMMITTEES, PROCEDURES

SEC. 3 (a) Any advisory committee appointed under the provisions of this Act shall keep minutes of each meeting, which shall contain as a minimum (1) the name of each person attending such meeting, (2) a copy of the agenda, and (3) a record of all votes or polls taken during the meeting.

(b) A copy of any such minutes or of any report made by any such committee after final action has been taken thereon by the Secretary shall be available to the public upon request and payment of the cost of furnishing such copy.

COMPENSATION—60 STAT. 808

(c) Members of any advisory committee appointed from private life under authority of this section shall each receive \$50 per

diem when engaged in the actual performance of their duties as a member of such advisory committee. Such members shall also be entitled to travel expenses and per diem in lieu of subsistence at the rates authorized by section 5 of the Administrative Expenses Act of 1946 (5 U.S.C. 73b-2) for all persons employed intermittently as consultants or experts receiving compensation on a per diem basis.

(d) Service by an individual as a member of such an advisory committee shall not subject him to the provisions of section 1914 of title 18 of the United States Code, or, except with respect to a particular matter which involves the Office of Coal Research or in which the Office of Coal Research is directly interested, to the provisions of sections 281, 283, or 284 of that title or of section 190 of the Revised Statutes (5 U.S.C. 99).

COAL RESEARCH DIRECTOR—5 USC 1071 NOTES—70 STAT. 739

SEC. 4. The Secretary may appoint a Director of Coal Research without regard to the provisions of the civil service laws, or the Classification Act of 1949, as amended. Section 107(a) of the Federal Executive Pay Act, as amended (5 U.S.C. 2206(a)), which prescribes an annual rate of basic compensation of \$17,500 for certain positions, is amended by adding at the end thereof the following paragraph:

"(23) Director of Coal Research, Department of the Interior."

SEC. 5. Research authorized by this Act may be conducted whenever suitable personnel and facilities are available.

SEC. 6. No research shall be carried out, contracted for, sponsored, cosponsored, or authorized under authority of this Act, unless all information, uses, products, processes, patents, and other developments resulting from such research will (with such exceptions and limitations, if any, as the Secretary may find to be necessary in the interest of national defense) be available to the general public. Whenever in the estimation of the Secretary the purposes of this Act would be furthered through the use of patented processes or equipment, the Secretary is authorized to enter into such agreements as he deems necessary for the acquisition or use of such patents on reasonable terms and conditions.

REPORT TO PRESIDENT AND CONGRESS

SEC. 7. The Secretary shall submit to the President and the Congress, on or before February 15 of each year, beginning with the year 1961, a comprehensive report concerning activities under the authority of this Act, including information on all research projects conducted, sponsored, or cosponsored under the authority of this Act during the preceding year.

APPROPRIATIONS

SEC. 8. (a) There is hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, to remain available until expended, not to exceed \$2,000,000 to be used to carry out the purposes of this Act for the fiscal year beginning July 1, 1960.

(b) There are hereby authorized to be appropriated for each fiscal year beginning after June 30, 1961, such sums as may be necessary to carry out the purposes of this Act.

(c) Sums appropriated to carry out the purposes of this Act shall remain available until expended.

Approved July 7, 1960.

FOOTNOTES

¹ Available from: Office of Coal Research, Department of the Interior, Publications, Washington, D.C. 20240. (Make checks payable to: Interior, Office of the Secretary).

² Available from: U.S. Department of Commerce, Bureau of Standards, Clearinghouse for Federal Scientific and Technical Information, 5285 Port Royal Road, Springfield, Virginia 22151. Attention: Storage and Dissemination Section. (Make checks payable to: National Bureau of Standards).

³ Available from: Superintendent of Documents, U.S. Government Printing Office, North Capitol and H Streets, N.W., Washington, D.C. 20401. (Make checks payable to: Superintendent of Documents or Treasurer of the United States).

Mr. RANDOLPH. Mr. President, will the Senator yield?

Mr. WILLIAMS of New Jersey. I yield.

Mr. RANDOLPH. Mr. President, the chairman of the Subcommittee on Labor of the Committee on Labor and Public Welfare is the Senator from New Jersey (Mr. WILLIAMS). I commend him for his capable and helpful discussion of the provisions and purposes of S. 2917. This legislation is necessary to improve the health and safety of the men who mine coal in the several producing States of this Republic. Our miners labor under hazardous conditions in the production of an energy fuel which has a dynamic impact on industry, commerce, the general economy of the United States, and, frankly, on practically all of the people regardless of the areas of the country in which they live.

Coal mining is a hazardous industry. But there are occupational hazards in many industries. We must do everything to lessen these hazards wherever they are prevalent. We must make a special commitment to help bring occupational health and safety improvements to the coal industry.

I do not wish to express a pleasantry, as pleasant as it would be to do that, but I do state factually my appreciation, as a member of the Subcommittee on Labor, for the diligent and effective leadership of the Senator from New Jersey (Mr. WILLIAMS). His leadership was apparent in all of the efforts which he constructively carried forward in presiding over the hearings by the subcommittee during the executive sessions of the subcommittee, and in his further active attention to these problems as the full committee worked its will on this vital measure which now is the pending business.

As the Senator from New Jersey will recall, we referred several unresolved and critically important facets of the bill to the full committee where the distinguished Senator from Texas (Mr. YARBOROUGH), chairman of the full Committee on Labor and Public Welfare, presided with patience and capability to help achieve the reporting of the legislation before us.

This is a very complex measure. There is, understandably, an emotionalism that cannot be separated from consideration of this type legislation. By the mention of "emotionalism" I do not imply even one iota that it supersedes or clouds the actual need for mine health and safety improvements for the men who mine coal in the United States. I only use the term in reference to the fact that too often it is tragic events which impel us to move positively into such vital areas of legislative consideration as this pending business. The report filed by our com-

mittee on this bill makes this fact clear. Congress—and the whole of government, in fact—should be more responsive to health and safety needs as normal procedure without waiting for tragedy to prod action. But, unfortunately, this is largely a failing that is inherent in the history of human behavior.

It is not inappropriate for me to say—I think it is necessary to point out—that there is a cushion of time built into several necessary provisions of this bill which I believe is to enable the coal mining industry to adjust to and meet the standards that are set down in the legislation which is before us. There are critics of these phase-in provisions who are entitled to their opinions. But I do not agree with their criticism in very many instances.

Mr. President, there were differences of opinion in the subcommittee, and then within the full committee, as to how quickly the coal mining industry would be required to meet all standards. In certain areas of the country there are conditions of mining which are different from conditions of mining in other areas. My colleague from West Virginia (Mr. BYRD) who is sitting in the Chamber during this debate, knows that there are wide differences between types and grades of coal and in mining methods in the northern part of West Virginia and in the southern part of West Virginia. Not only does coal texture differ, but so does the depth of the seams of coal. Yes, there are peculiar problems of mining that must be considered even within one State, as well as one State possibly differing from another State—even between neighboring States.

In the consideration of this legislation, which I have supported in general, and which, as I said, I helped to draft in the subcommittee and in the full committee—I have attempted not to reflect the viewpoint of any particular segment, either mining from the standpoint of the workers or mining from the standpoint of the operators. I have tried earnestly to think in terms of the overall implications and applications that will come from the passage of S. 2917, a bill that, in conference with the House probably will be brought back to the Senate to be finalized before being sent to the President.

I recall, and I hope I can reflect on and express my recollections with propriety and good taste, my membership in the House of Representatives at the time we prepared the first meaningful coal mine safety act in this country. That was in 1941. I am very quick to say it was inadequate to the needs but it was passed in 1941, even though there had been some foundation legislation prior to that time. I remember how difficult it was after we had had hearings in the Mines and Mining Committee of which I was a member—I was chairman of the Subcommittee on Coal—to develop positive legislative action. We worked and worked to bring from that committee legislation on this subject of safety and, to a lesser degree, the subject of health. I was a leader in placing a petition on the Speaker's desk so that we could discharge

the committee and bring that legislation to the House floor.

We tried very diligently over a period of many months to achieve success with that discharge petition. That effort did succeed and the House of Representatives was able to act favorably on that measure, a measure that had earlier been acted on in the Senate. So the law was passed in 1941.

As the able chairman of the subcommittee knows, there was additional legislation on this subject matter in 1952.

In that year, there was an attempt to strengthen those provisions which, frankly, were more voluntary than regulatory in the act of 1941. I recall very well that the 1941 enactment had a strengthening effect. But I am quick to indicate in this debate that I think it would have been well to have strengthened the original amendments to the act during the period 1941 to 1952. Congress certainly must share a responsibility, which could be called an irresponsibility, for failure to meet the problems as they came with greater impact. One might ask: "Why do you say they come with greater impact?" Well, they came with greater impact because in this country, as the able Senators from Kentucky and Pennsylvania and Virginia well know, and as the Senators from West Virginia and other States know, we moved into those technological developments which gave us production of coal through mechanization more than by so-called hand labor.

We had, in the State of West Virginia, 120,000 to 125,000 miners digging coal in the 1940's and early 1950's. When the transition came, in some areas of our State, and in some States more quickly than others, there was a rapid reduction in manpower in the production of this fossil fuel. The men who were a part of the mining industry, and who made such a great contribution to this country's progress, realized that they were part of a mechanization program which lessened their numbers—and they saw that the production of coal was not decreased, but rather, was increased. It was the number of men involved in the production of coal which was so drastically reduced.

Thus, from approximately 125,000 bituminous coal miners in the State of West Virginia, the mining force has dropped to perhaps not more than 40,000 men and we come now to the hour when we open debate on S. 2917.

We have not reduced production through mechanization. We have increased it substantially. We have reduced only manpower.

I think it is important to stress that with the advance of mechanization there came the increasing problems of coal dust in the mines.

Hand labor did not create a situation by digging coal which affected the health and safety of miners to the degree that their health and safety are affected today when the fast drills are at work and when the dust flies as the cutting machine slices itself into mountains.

So I say that the transition from the digging of coal by labor to the mining of coal through mechanization and technological advances brought in a new

element to the health and safety problem of miners to which I think Congress should have addressed itself more emphatically at a much earlier date.

Mr. President, let us think now in terms of the further legislation which came into being in 1966, when we felt it was necessary to apply the provisions of the Federal Mine Safety Act to those mines employing less than 15 workers, those mines which are so abundant in the State of Kentucky particularly, and to a lesser degree in Virginia and West Virginia and in some other parts of the country.

It was a difficult task to bring even that change of safety laws into being.

The record will disclose that I fought diligently to extend the Coal Mine Safety Act provisions to the smaller mines to protect all miners. Although I was not a Member of Congress during the years from 1947 through November of 1958, I say for the record that I feel that had I been here during that period of time I would have been active in giving attention to the mining problems of that era which have grown into the serious problems we begin to attack in the pending legislation.

In the 1966 act, I believe the record will indicate that there was no Member of this body who worked more earnestly for coverage to the smaller mines than did the Senator from West Virginia now speaking. But, Mr. President, I am again quick to admit that, as so often happens in this body—and what is true here is true of people generally—we react to tragedy. We react to that which causes us to stop and see the magnitude of a mine disaster like the Farmington disaster in West Virginia last November. I knew 15 of the 78 miners who perished in that disaster. I knew them personally, and, in several instances, I also knew the members of their families.

I have known many, many of the miners in West Virginia. I have worked with them on many of their problems. Today, I hope that with other Members of the Senate, I can at least partially meet the challenge of necessary and workable, yet reasonable, legislation which is encompassed in the bill now before the Senate.

Mr. President, we come so often after the fact. This is what we do legislatively, not only in this field of coal mine health and safety but also in the broad spectrum of the legislative field which we consider in the Senate.

Today we are faced with being suffocated by, or of being buried under, or of being drowned in the waste that we, the most affluent people in the world, have produced in this country.

So, in the Committee on Public Works, of which I have the responsibility to be chairman, we have been moving toward air and water pollution control and abatement legislation, and solid waste disposal programs, trying, as it were, after the fact, to see if we can keep pace with and overcome the degradation of the environment of which we are a part. We know what a difficult task it is. Unfortunately, in the field of solid waste disposal, the magnitude of that one problem in our country is hardly realized by the American people.

I use this as an illustration of the tendency of Members of Congress, as it is the tendency of all people, to come to the attacking of problems on a broad front too long a period of time after the crisis came upon us. The chairman and his subcommittee and the chairman and his full committee have performed great services in developing this bill. We thought our legislative acts of the past were bold steps, but they were timid and did not suffice.

I presided not long ago at a hearing of the subcommittee on water pollution control in Jacksonville, Fla. I have no desire to name an offender, but I can say that on that trip I saw with my own eyes, in the early morning before our meeting began, raw sewage coming into the St. Johns River. From where? From a hospital. That hospital is supposed to be concerned—and it is, as are the doctors working in it—with the health and safety of the men and women who are patients who are entitled to healing. They receive it in such an institution, but the citizenry of the community was exposed to incredible conditions by it. There is no need to mention the hospital. I saw what happened.

Like or similar conditions are repeated over and over in our country today. The reason for my mentioning it at this time is not in any sense to relieve the Congress of its responsibility, but only to say that, in a sense, it is only human nature in the Congress to come too much after the fact, rather than before the fact, on subject matters which are within the jurisdiction of almost every committee in the Senate.

Mr. President, I do not want to be misunderstood now. I am being very careful. I want to weigh my words. Humanity is involved here, and we must not overlook that. Precious lives are at stake, too, in the mining of coal. They are the lives of good people. The lives of hardy people are at stake. We must not overlook it.

I think I have the responsibility to say that the bill before us, if it is enacted, will cost many millions of dollars more than heretofore in the mining of coal. It is inescapable. There will be increased costs in the price of coal to the consumers, be they electric utilities or many of the other coal-using customers throughout the United States. But I think we must do what we are doing here. I do not use the trite expression, "We must pay the price." I do not mean that. I mean that as we necessarily move forward—perhaps much too slowly; I admit that—we must understand that the desired health and safety improvements cannot be accomplished without many of the costs being built in.

I see the Senator from Missouri (Mr. EAGLETON) on his feet. I say to him we, the consuming public, must be prepared to absorb those costs. We will pay them, possibly even in higher rates for electricity. I think industry will realize it is necessary to pay them. Those who mine the coal realize, and I think major portions of the management of the coal industry realize, that we can in no wise put profit ahead of the life of a coal miner in West Virginia or in any other State of this Union.

We in the Congress must understand, too, that the requirements on Federal departments and agencies for the administration of the provisions of this measure will be very costly and will necessitate vastly increased personnel and appropriations. That is a responsibility we must face and meet; it is another price we must pay in the interest of humanity.

Mr. President, amendments will be offered to the proposed legislation. At this time I do not indicate that I will support or oppose the amendments to be offered. It is important that we have thorough discussion and consideration of the bill. The viewpoints of members of the committee, some of whom will offer amendments, and those of other Senators who are not on the committee, but who also will offer amendments, must be given expression. There is a need for a dialog, in a democratic fashion, in the Senate on legislation of this type. There is no need to pass the bill within a few hours. In fact, that would beg the question, which is the very real one of doing that which is right or of doing that which might be expedient.

The Committee on Labor and Public Welfare, whose chairman, Senator RALPH YARBOROUGH of Texas, truly is a humanitarian in the true sense, means to do right on this measure. I have already expressed my compliment, which is in no wise cursory, about the chairman of the committee and the chairman of the subcommittee. I wish to pay the same compliments to the ranking minority member of the committee, Senator JAVITS of New York. With no coal mines in the Empire State, but with coal consumers in that great State, he has applied himself with great ability to a study of the important provisions and implications and applications of the legislation and he has made truly outstanding contributions to the development of this measure.

Mr. President, I propose to talk further at a subsequent time on this bill. I do not know what the actual progress of this legislation will be through the general debate and then through the amendment stage, but there are some matters which I shall wish to discuss with my colleagues.

We need the counsel of all Members of the Senate in the matter now before us. I hope that Members of the Senate who cannot, because of other commitments and responsibilities, be in the Chamber during the debate and discussion and determination will read carefully the report on S. 2917 and the material which is inserted in the RECORD by the chairman of the subcommittee as a necessary part of the RECORD.

I repeat what I have said in varying ways over a period of weeks and months, and it is that I believe the Senate will help the Congress of the United States send to the President a bill that will be effective. It must be effective. We will send to the President a bill that is workable—and it must be workable. We will send to the President a bill that is in the interests of the American public, as well as to the coal miners and their families. I am sure that to such a commit-

ment not one, but all the Members of this body will subscribe.

I thank my colleague for yielding.

Mr. WILLIAMS of New Jersey. Mr. President, I wish to say for myself that, coming as I do from a State that does not have coal mines, the responsibility of developing this legislation in the committee involved new subject matter to me. I wish to express my gratitude to the Senator from West Virginia. He brought to our committee deliberations nearly three decades of attention to the welfare of miners under the legislative processes, and it was invaluable to the chairman of the subcommittee and to the committee. His experience and his tireless devotion were certainly appreciated.

Mr. EAGLETON. Mr. President, will the Senator from New Jersey yield?

Mr. WILLIAMS of New Jersey. I yield.

Mr. EAGLETON. Mr. President, this is a good bill. That expression is perhaps a cliché; it is often said of almost any bill that is taken up for consideration by the Senate; but I can personally attest to the comprehensive and thorough treatment given to S. 2917, the Federal Coal Mine Health and Safety Act of 1969. I know of no bill that has been before this, the first session of the 91st Congress, that has received more attention in its public hearings, from a voluminous list of witnesses from all walks of life, than did S. 2917. I know of no bill, through its many executive sessions in both the Labor Subcommittee and the full Committee on Labor and Public Welfare, that has had expended upon it more man-hours by both Senators and their able staffs.

I think it is appropriate as we begin the consideration of this bill that I make some reference to three Senators who, above all others, played major roles in the evolution of the matter that is now before us.

First, of course, is the chairman of the Labor Subcommittee, the Senator from New Jersey (Mr. WILLIAMS). Most of us, though we are reluctant to admit it, are somewhat parochial in nature. We concern ourselves with those things that are of immediate and direct concern to our constituents in our respective States. We display more interest toward matters that are precisely germane to our electorate, and leave those things that are somewhat remote from our own jurisdiction to other Senators and other times.

The Senator from New Jersey, as has been pointed out, is from a State that has no coal mines. He has no vested interest, as a politician, in coal mines. He has no vested interest, as a politician, in coal mining. His constituency is not directly affected.

Yet, despite this lack of any immediate personal or political interest, he has displayed the greatest of patience, the greatest degree of leadership, and untold energy in seeing that S. 2917 was reported out from committee and is now before the Senate. Without his patience and his diligence, in my humble judgment, the bill would not have been before us in this first session of the 91st Congress, and indeed perhaps would not have been here in the second session, and might not even be before the 92d Congress when it convenes.

I pay tribute to him, not in the idle way in which Senators sometimes exchange personal pleasantries, but most sincerely, because he has been the single most important contributing factor, I think, to the evolution of this bill.

Next, I would be remiss if I did not point out the efforts of the Senator who just completed his introductory remarks, the senior Senator from West Virginia (Mr. RANDOLPH). As a display of my parochialism, I subscribe only to Missouri newspapers, and a couple of other journals called national in scope, some printed in this city and elsewhere in the East. I am not a subscriber to any newspaper published in West Virginia. I have no friends or relatives there to speak of, and so I am not in constant communication with the State. But it has been brought to my attention that it has been alleged that the Senator from West Virginia (Mr. RANDOLPH) was something less than completely interested in seeing that a sound, effective, workable, and meaningful Coal Mine Safety Act would come out of this session of Congress.

Whoever makes those statements in West Virginia could not be more totally misinformed, whether intentionally or unintentionally I know not, because at the same time that the Senator from New Jersey (Mr. WILLIAMS) was expending the amount of effort and time that I have already stated he put forth, Senator RANDOLPH likewise attended every session, both of public hearings of the Labor Subcommittee and of every executive session of both the Labor Subcommittee and the full Committee on Labor and Public Welfare, when the bill was considered. And not only was he there in attendance, he was there as a vigorous participant, trying to help bring out a bill that was effective and meaningful. He brought to this committee an expertise, a knowledge, an awareness, and a compassion that were indispensable to the creation of this bill. No other member of the committee was really knowledgeable about coal mining in specific detail. Senator RANDOLPH was and is, and at each juncture he was of immense value to all other Senators who served on both the subcommittee and the full committee, in imparting to us the expertise and the knowledge that, I repeat, were indispensable to the committee. At no time did he attempt to obstruct, impede, or in any way hinder the progress of this bill. At every meeting, on every point, he, together with Senator WILLIAMS, attempted to move the bill, to resolve disputes, to reconcile differences, and to move on to another section.

This is a complex and detailed bill, with facts and figures and percentages, and time limitations and duration periods, and rules and regulations that defy comprehension by even a reasonably well-informed layman. It is not the kind of bill that you can crank out of a committee in an hour, a day, or a week. But Senator RANDOLPH was there at every session, pushing, prodding, keeping us moving, explaining when explaining was necessary, so that this bill could come to the floor. I think it is only fair that the people of his State and, more importantly, the people of this country, and coal miners from every State, be made

aware of the fact that without Senator RANDOLPH's prodding, his urging, his persuasion, and his ability to work out rational and effective compromises, this bill would not be before us.

This unjustified criticism should not be his reward for such labors. The gratitude and the thanks of the people who work in coal mines are owed to him. I think that in due course more and more people will begin to realize this. And those who have been critical, those who have done all the carping, will look back upon their criticism and their carping as, at the very least, terribly misguided.

Mr. RANDOLPH. Mr. President, will the Senator yield for a comment?

Mr. EAGLETON. I yield.

Mr. RANDOLPH. Mr. President, I am not an overly sensitive person to criticism, because I understand the problems of a legislator. I have experienced these problems during my 14 years in the House of Representatives and now for more than 10 years in the Senate. That is almost a quarter of a century of service in the Congress. So I can understand the attitudes of people—their misunderstandings and their apprehension and their criticism.

I think some misunderstandings have occurred. I hope that they can be clarified.

I shall ever be grateful for the expressions of my colleague, the Senator from Missouri, a valued member of the Committee on Labor and Public Welfare. In fact, I say with no overstatement that I shall carry in my pleasantest of memories that which he has said. I shall not forget.

Mr. EAGLETON. Mr. President, I thank the Senator from West Virginia.

Mr. President, the third Senator in the triumvirate who are owed so much insofar as the bill is concerned, is the ranking Republican member of the Committee on Labor and Public Welfare, the Senator from New York (Mr. JAVITS). He, like the Senator from New Jersey (Mr. WILLIAMS) is not a representative of a coal-producing State. However, again like the Senator from New Jersey, it is typical of the Senator from New York that in anything he undertakes, he gives of himself in an almost inexhaustible manner. He, too, is a tremendously skillful legislative craftsman.

The Senator from New York was of inestimable value in resolving the conflicting opinions of those who espoused opposite views with the result that the bill accomplishes the desired end.

Without the help of the distinguished Senator from New York, without his persuasion as an articulate and capable lawyer, and without his ability to find satisfactory and effective ways of surmounting what, from time to time, appeared to be an impasse, the bill would perhaps not be before the Senate today.

Mr. President, the entire Senate which, in due course, will cast its vote with respect to S. 2917 should be deeply and everlastingly grateful to these three Senators, the Senator from New Jersey (Mr. WILLIAMS), the Senator from West Virginia (Mr. RANDOLPH), and the Senator from New York (Mr. JAVITS), for the effort, the talent, the energy, and the

compassion which they displayed in bringing the bill into being so that coal miners in all of the various States that engage in that industry will from the date of its enactment forward have a better, safer, and healthier place in which to work and ply their trade.

Mr. President, I yield the floor.

Mr. WILLIAMS of New Jersey. Mr. President, I certainly express my appreciation to the Senator from Missouri for the generosity of his remarks dealing with me and also once again for his complete participation in all of our committee deliberations, for the hard and important but pleasant work that consumed us all with dedication, without acrimony, but with agreement and with good results, because we reported the bill with a unanimous vote.

The Senator from Missouri was most helpful in every step of the way. I appreciate his efforts.

Mr. BYRD of West Virginia. Mr. President, I would like to ask the able Senator from New Jersey a question as to what consideration if any was given to the possibility of having provisions included in the bill which would provide compensation for miners suffering from black lung who do not qualify for compensation under State law.

The reason I ask the question is that I have been very interested in legislation which would provide for compensation to miners suffering from pulmonary diseases who are not covered by State statute. In West Virginia there are many miners suffering from black lung and other pulmonary diseases who do not qualify under State statutes for compensation.

With this in mind, I gave considerable time to the development of proposed legislation which would provide Federal assistance in this area. I was able to work with the Washington headquarters of the United Mineworkers of America in developing a proposed bill which would provide Federal assistance over a period of 20 years, with the Federal assistance decreasing, I believe, in the amount of 5 percent a year and the States picking up the additional costs annually, but with no cost to the coal industry. I have felt that if the Federal Government could provide assistance along this line, without additional cost to the industry, we would not incur the opposition of the industry, which is already heavily burdened with overhead costs; but, at the same time, the Federal Government would be assuming some responsibility in this area, and I think it should assume such responsibility.

So it was with the advice and counsel and assistance of Mr. George Titler, vice president, and other officials of the United Mineworkers of America, that I was able to prepare the proposed legislation, and my senior colleague, Senator RANDOLPH, and I joined in cosponsoring it.

As the able Senator from New Jersey will recall, I appeared before his subcommittee and testified in support of this measure. My first question, therefore, is, Was consideration given in the subcommittee deliberations to adding provisions dealing with compensation?

My second question is, What are the prospects for such legislation at this point being added by way of an amendment to this bill?

My third question is, If such prospects are not good, what encouragement or assurance could the able Senator give to the Senator from West Virginia as to the prospects for such legislation in the near future?

Mr. WILLIAMS of New Jersey. First, the committee did not have before it any proposed legislation dealing exclusively with workmen's compensation for black lung disease, pneumoconiosis. One of the bills, S. 1094, although it included provisions on this subject, had health and safety as its major thrust. I believe I am accurate when I state my recollection that the first time the attention of the committee was directly drawn to the need for compensation for men disabled by black lung disease was by the junior Senator from West Virginia (Mr. BYRD). Of course, it was my personal feeling as chairman of the subcommittee that this certainly should receive careful attention and, so far as the chairman was concerned, most sympathetic consideration.

As we continued our hearings and deliberations on the safety and health measure, we did not deal in any comprehensive way with this particular approach of compensation for the disease. As necessary as it is, as grateful as we were that the junior Senator from West Virginia brought it to us, it was not dealt with at that point to the extent that we were able to include it in the pending bill.

So far as amendments here are concerned, it would seem to me that it is now established that this disease, without preadventure, is associated with the dust in the coal mining process, that it is disabling, and that it should be a compensable disease.

I would believe that our committee responsibility should be to consider it in depth. In the meantime, if there were a way to deal with this temporarily through a measure to bring disability payments to men disabled by the disease, certainly I would try to find, even now, a way to deal with the emergency in a temporary fashion, looking toward a comprehensive, long-range program of compensation for men disabled by pneumoconiosis.

Mr. BYRD of West Virginia. Mr. President, I thank the able Senator for his response. I understand his answer to be that it is quite possible that consideration might be given on the floor of the Senate to language which would establish a short-term program to assist coal miners who suffer from pulmonary diseases and who do not qualify under State statutes. Am I correct?

Mr. WILLIAMS of New Jersey. That is what I tried to convey to the Senator, yes.

Mr. BYRD of West Virginia. With the idea that there would be a study running concurrently with the temporary program, the study leading possibly to a long-range program.

Mr. WILLIAMS of New Jersey. Yes. I would think that would make a great deal of sense. That would be the logical and

best way to do it. Whoever would make the study—Federal or State—it would be subject to discussion, decision, and conclusion. I would think a permanent program would be most sensible.

Mr. BYRD of West Virginia. I appreciate the sympathetic attitude on the part of the able Senator from New Jersey.

I realize that such long-range legislation would require considerable study and would require some actuarial cost estimates. But I would hope that something could be worked out while the bill is on the floor, leading in this direction at least—perhaps providing for an interim program as the chairman has suggested.

At this moment I also wish to express my appreciation to the able Senator for the great effort he has put into this matter and for the long hours of hard work he has spent in bringing this bill to the floor. I think he has done a splendid job.

I also wish to congratulate my able senior colleague, Senator RANDOLPH, who has been so diligent and so thorough in his study of this measure.

I also wish to congratulate and express appreciation to the able senior Senator from New York (Mr. JAVITS), who likewise has performed admirably.

Mr. WILLIAMS of New Jersey. Mr. President, may I say in that regard that it has been mentioned that this Senator comes from a State that does not have coal mining as an industry, and the Senator from New York, who has been so helpful in the whole process, comes from a State that is not known as a coal mining State. I do not know whether the Senator from New York has been, but I have been lightly abused and chided about my interest in an industry that does not come on bulking large in my State. With apology to the Senator from New York, I was referred to as the "Broadway coal miner."

But I will say this: Not knowing much about the industry and getting into this with a responsibility, I spent a good deal of time in coal mines and now know a little of the problems and dangers and I have a great feeling of compassion for the problems of the coal miners. I now have a sufficient working knowledge to feel confident that this bill is needed and it is a good bill to meet the objectives.

Mr. JAVITS. Mr. President, will the Senator yield?

Mr. WILLIAMS of New Jersey. I yield.

Mr. JAVITS. Mr. President, for the information of the Senate, I should like to say at this moment that the Prime Minister of Israel is downstairs, being received by the Committee on Foreign Relations, of which I am a member. I should be honored to attend that session, if I am permitted to do so. So, although I am the ranking minority member, rather than follow Senator WILLIAMS, the Senator from Kentucky (Mr. COOPER), who has a profound interest in the proposed legislation, will succeed Senator WILLIAMS to the floor.

With the permission of the acting majority leader, I should like to ask unanimous consent that, following Senator COOPER's remarks, I may be recognized in respect of this bill.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BYRD of West Virginia. Mr. President, I have just this further observation with respect to the statement by the Senator from New Jersey. He spoke of the need for Federal research, and research on the part of the industry, into the hazards of coal mining, and with respect to the health and safety of coal miners.

I want the record to show, Mr. President, that the Federal Government has been cognizant of the need for research in connection with diseases among the coal mining population.

As far back as 1963, I was successful in adding an amendment in the amount of \$100,000 to the bill making appropriations for the Public Health Service to establish a research program in West Virginia dealing with pulmonary diseases among the coal-mining population. Each year thereafter the committee appropriated moneys for the continuation of this research program. Last year, the appropriation was \$1,227,000, the result being that presently at the University of West Virginia in Morgantown there is what we call ALFORD, the Appalachian Laboratory for Occupational Respiratory Diseases, which gives its entire time to the study of pulmonary diseases among the mining population of Appalachia.

Also I would point out that Congress has appropriated approximately \$5 million for the construction of the Appalachian Health Center which I was instrumental in locating at Morgantown, W. Va., and that center will carry on and conduct continuing research with respect to pulmonary diseases among the mining population.

I say this so the record will show that the Federal Government has not only appropriated moneys for coal research and research dealing with the commercialization of coal, the development of byproducts from coal, and so forth, but that it has also appropriated money dealing with research in connection with mining diseases.

I do not mean to denigrate what the Senator has said about the need for increased health research, but I thought the record should show that the Congress has not been entirely oblivious to this great need and that it has been responding over a period of several years.

Mr. WILLIAMS of New Jersey. We are where we are because there are now clear findings of the relationship of the dust to the respiratory system. Certainly some of the best data we have had in making these findings came from the facility the Senator referred to.

I wish to ask the Senator from West Virginia, who has been so close to this industry and the problems connected with the industry so much longer than I have, is it not true that the disease known as pneumoconiosis was not absolutely related to coal dust and the respiratory system until recent years?

Mr. BYRD of West Virginia. I think that is correct. Certainly as a result of this research we have learned more about pneumoconiosis, silicosis, black lung, and other pulmonary diseases, so prevalent among coal miners.

Mr. WILLIAMS of New Jersey. I agree. I thank the Senator from West Virginia.

Mr. JAVITS. Mr. President, I ask unanimous consent that the unanimous-consent agreement which was just obtained with respect to the order of speakers may be vacated.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. JAVITS. Mr. President, with the kind consent of the Senator from Kentucky (Mr. COOPER), I shall speak now because I find that the affairs downstairs have been delayed.

The PRESIDING OFFICER. The Senator from New York is recognized.

Mr. JAVITS. Mr. President, as the ranking minority member of the Committee on Labor and Public Welfare, the Subcommittee on Labor, and as the author of two of the bills which the committee considered in drafting the coal mine health and safety bill which is now before the Senate as S. 2917, I support the bill as reported by the committee. The Subcommittee on Labor and the full committee have given this bill the most careful and detailed consideration.

I think with the great leadership which has been given to this matter by the Senator from New Jersey (Mr. WILLIAMS), we have brought to the Senate a credible reform measure on this most dangerous of all industrial fields.

I realize there are objections to the bill and problems which will be raised, primarily by our very distinguished friend, the Senator from Kentucky (Mr. COOPER). However, I think that all in all we have produced a product which is worthy of the Senate. Certainly it had the most thorough consideration.

We have heard over 40 witnesses representing the administration, operators of both large and small mines, coal miners, medical and safety experts in this country and Europe, and other interested persons. The hearing record covers over 1,500 pages.

The bill which is now before the Senate was the product of some 13 days of executive consideration by the Subcommittee on Labor and the full committee, and is certainly the most comprehensive health and safety legislation ever to come before the Congress. It is in no sense a partisan bill. It incorporates the ideas and suggestions of virtually every member of the committee. Furthermore, and I want to emphasize this point, it is in no sense a compromise bill. Throughout this bill the committee has consciously avoided sacrificing considerations of health or safety to economics or efficiency. To put the matter succinctly, this bill, if properly enforced, will produce the safest and healthiest coal mines possible, given the state of existing technology.

Under the bill, strict new interim safety standards are established to cope with the danger of explosions such as the one which killed 78 miners in Farmington, W. Va., last November. The improved standards are not, however, limited to those directed at preventing "major disasters"; that is, those which threaten injury or death to five or more miners. All types of dangers are covered, including

particularly, roof falls, which are responsible for most of the deaths which have, year in and year out, occurred in the mines. In addition, the bill, for the first time, establishes health standards to limit the level of coal dust, the cause of the infamous "black lung" disease, which has disabled and killed thousands of miners. The Secretaries of Interior and Health, are given the responsibility and authority to develop and promulgate improved safety and health standards in the future, as research and experience show that new standards are necessary. A strict enforcement scheme is established with civil and criminal penalties applicable to operators of mines in which violations of health and safety standards occur and to miners in the case of violations of standards prohibiting smoking. Other salient features of the bill include crash research programs in areas in which the committee believes further and prompt improvement is necessary and a tax going up to 4 cents per ton of produced or imported coal to finance health and safety research.

Mr. President, I do not for a moment deny that this bill is strong medicine for the coal mine industry. But strong medicine is clearly required in the face of the facts concerning health and safety in this industry.

Coal mining is perhaps the most dangerous occupation in America. In the last 10 years there have been over 112,000 accidents in coal mines, 2,752 of them fatal. In 1968 alone there were 9,806 accidents, in which 311 men died. I have already spoken of the horrible catastrophe which occurred last year in Farmington, W. Va., where the Mannington mine exploded, killing 78 miners. After that disaster, industry-government conferences were held, pledges were made by all parties to take special steps to increase health and safety in the mines, the number of inspections was drastically increased, the practice of notifying operators prior to Federal inspection was stopped, but we have still had over 95 fatalities in underground coal mines since last November.

No radical change can be expected in this record unless and until the existing Coal Mine Safety Act is modernized and strengthened.

As long ago as 1942, the Russell Sage Foundation published a study regarding the prevention of fatal explosions in coal mines. The authors of that report wryly commented:

Dead miners have always been the most powerful influence in securing passage of mining legislation.

Mr. President, there is no doubt that the Mannington disaster has had a great deal to do with the kind of bill that the committee has reported out and is pending before the Senate today. This bill obviously comes too late to help the miners buried in the Mannington mine, or their widows and children, but it does represent an attempt, perhaps for the first time, to close the barn door before the horse have been stolen.

This is especially true insofar as the safety provisions of the bill dealing with the danger of explosions or ignitions are

concerned. These provisions, which are of great importance to me, deal with such matters as better ventilation practices, more frequent tests for methane, the use of automatic methane monitors and the elimination of the wholly spurious distinction between so-called "nongassy" and "gassy" mines.

The elimination of this distinction between gassy and nongassy mines proved to be most controversial, and aside from the dust standard, no issue was given as much time or attention by the committee. After hearing the arguments advanced by the small mine gassy mine operators, and particularly the most eloquent and persuasive arguments of the senior Senator from Kentucky (Mr. COOPER), who appeared before the committee in executive session, the committee concluded, in my opinion correctly, that the danger of methane ignitions or explosions in mines previously classified as nongassy is sufficiently great to warrant elimination of the distinction and to require that all electric face equipment used in such mines be made permissible.

The committee report goes into this question in very great detail and, in my judgment, conclusively demonstrates the correctness of the decision reached by the committee. Briefly, the record shows that during the past 17 years, over 50 methane ignitions, causing 27 fatalities, have occurred in nongassy mines of every description, including drift, slope and shaft mines, above and below the water table. In many of the mines in which these explosions or ignitions occurred, none or only the slightest trace of methane had ever been found previously. As this record implies, the fact is that there is really no such thing as a nongassy mine; trapped pockets of methane may exist in any type of mine, whether or not it is a drift, slope or shaft mine and whether or not it is above the water table.

The majority of the methane ignitions or explosions which have occurred in nongassy mines have been caused by smoking or open flames. However, at least nine of the explosions were caused by low horsepower electric face equipment, such as drills, and it appears that four explosions one of which killed 11 miners, have been caused by electric face equipment in nonpermissible condition. Thus, it simply flies in the face of the facts to maintain, as some small operators have done, that the use of nonpermissible equipment has never been the cause of any injury or fatality in nongassy mines.

The senior Senator from Kentucky pointed out to the committee that in comparison to gassy mines, nongassy mines have an excellent safety record, particularly insofar as explosions or ignitions are concerned. Such is indeed the case. Senator COOPER also made several suggestions concerning the maintenance of proper barriers between coal mines and gas wells, and the prohibition of open flames and nonpermissible low horsepower equipment, such as drills, which the committee adopted, in substance. However, the committee, by a

vote of 14 to 3, rejected his amendment which would have permitted the continued use of heavy nonpermissible type electric face equipment in nongassy mines. I voted against the amendment in committee, and will oppose it if offered on the floor.

In my view it is our duty to enact legislation which will provide the highest degree of protection possible to miners employed in both gassy and nongassy mines, and the fact that gassy mines may be more dangerous than nongassy mines does not justify ignoring such hazards as may exist in nongassy mines. Furthermore, the committee has, in fact, taken account of the much more dangerous nature of gassy mines as compared to nongassy mines. Section 301(i) of the bill requires the stationing of a Federal inspector permanently in those "underground mines which liberate excessive quantities of explosive gas and which are most likely to present explosion dangers in the opinion of the Secretary, based on the past history of the mine and other criteria he shall establish."

The heart of the matter is that gas can occur in any mine, and that sparks from nonpermissible equipment can ignite such gas in any kind of mine. If smoking or open flame lamps, or small nonpermissible equipment can cause explosions in nongassy mines, as it has on nine occasions, then so can large nonpermissible equipment, as has been demonstrated in four cases.

Nor in my view, does the cost of converting all equipment to permissible status justify continuance of present practices. The committee gave the most careful consideration to the economic arguments advanced by the small nongassy mine operators and Senator COOPER on their behalf. Members of the committee staff held intense discussions of this question of cost with representatives of the administration. As the committee report points out, one result of these intense deliberations was the finding that the previously high cost of obtaining approval from the Bureau of Mines for electric face equipment could be substantially moderated if a field inspection system were utilized, authorizing on the spot inspection of nonstandardized equipment. Fortunately, the Bureau of Mines concluded that such a system was indeed feasible and the committee bill specifically authorizes the uses of such a system.

The use of the field inspection system will drastically cut the estimated costs of conversion, rebuilding or upgrading existing equipment to meet permissibility standards. Instead of having to ship equipment to Pittsburgh for approval, operators will be permitted to buy component parts, link them together in a permissible manner and obtain approval from authorized representatives of the Bureau. As a result, the average cost of conversion for the typical small, nongassy mine, will probably not exceed \$10,000. This of course is just an average figure and will vary considerably from mine to mine. But it is certainly a far cry from the exaggerated statements which have been made by some small nongassy op-

erators to the effect that this bill would cost the average small mine operator over \$200,000 in conversion costs.

The committee further recognized that even this much reduced cost level might produce problems for many small operators. It, therefore, authorized long-term low-interest loans to be made to such operators under both the Small Business Act and the Economic Development Act. Under these acts low-interest loans can be made for terms ranging up to 20 to 25 years to small operators to enable them to finance the cost of conversion of their existing equipment.

Finally, the committee also considered the problem of unavailability of equipment. Operators who demonstrate that they are unable to comply with the bill's requirements concerning the permissibility of heavy electric face equipment may obtain permits for noncompliance for up to 4 years, allowing them to continue to use existing nonpermissible equipment in nongassy mines.

Of equal importance to the improvements in standards designed to prevent explosions and all other accidents contained in this bill, are the provisions designed once and for all to end the scourge of "black lung," otherwise known as coal workers pneumoconiosis. The history of this disease and the lack of recognition accorded to it by medical authorities represents a sad comment on our insensitivity to the health and well-being of the hundreds of thousands of miners who have spent most of their working lives underground. First known as "miners con," then as "miners asthma," then classified as "silicosis" or "anthrasilicosis," coal workers pneumoconiosis has taken a terrible toll. In its complicated form it causes progressive massive fibrosis of the lung, severely impairing the respiratory functions of the miner, and eventually causing heart failure and death. The disease is particularly insidious in that there is no known cure, progression of the disease from its simple to its complicated stage is not necessarily halted when exposure to dust ends, and miners who are afflicted with it in the complicated form often spend the last years of their lives as virtual invalids, forced to gasp for breath with the least exertion. The incidence of the disease in the United States was revealed for the first time when the Public Health Service conducted a study of the problem between 1963 and 1965. The study showed that approximately 20 percent of all retired miners suffer from the disease and 10 percent of active miners suffer from it.

The Public Health Service study further found that among working miners 6.8 percent showed evidence of simple pneumoconiosis and 3.0 percent showed evidence of complicated pneumoconiosis; the percentages for nonworking miners were 9.2 and 9.0 respectively. Among miners working in dusty locations, such as near the face, these percentages were naturally higher. Thus 22.3 percent of working and 33 percent of nonworking miners who worked at or near the face of the mine showed evidence of pneumoconiosis.

The committee bill deals with the black lung problem the way it should be dealt with: It establishes strict controls on respirable coal dust, the cause of the disease.

From studies made in Great Britain, which is far ahead of the United States in attempting to deal with this problem, we know that the probability of developing simple pneumoconiosis decreases with decreasing dust concentration. Thus at 7 milligrams per cubic meter, which is the average dust level in mines surveyed by the Bureau of Mines, the rate per 1,000 miners after 35 years of continuous exposure, would be 36 percent. At 4.5 milligrams, the expected rate would be 150 per 1,000 miners or 15 percent. At 3 milligrams per cubic meter, the expected rate would be 50 per 1,000 miners, or 5 percent and at 2 milligrams per cubic meter, the expected rate would drop to 20 per 1,000 miners, or 2 percent.

British data also indicate that the probability of developing progressive massive fibrosis, which is the result of complicated pneumoconiosis, also significantly decreases with reduced dust exposure. Thus, at 7 milligrams per cubic meter the probability of developing complicated pneumoconiosis after 35 years of exposure is 13 percent. At 4.5 milligrams per cubic meter the rate is 4 percent; and at 3 milligrams per cubic meter, the rate is 2 percent.

Under the committee bill, 6 months after the date of the bill all mines which can do so must meet a 3-milligram standard; those which cannot meet that level, because of the unavailability of equipment using available technology can obtain permits for noncompliance from a special interim compliance panel set up for that purpose, which will permit them to operate for up to 1 year at a level which they can meet but in no event exceeding 4.5 milligrams per cubic meter. If upon the expiration of the initial permit for noncompliance the operator still cannot reduce dust levels to meet the 3 milligram standard, he may obtain up to a maximum of three renewal permits for periods of 6 months each, entitling him to operate at the lowest level which he can maintain, but again in no event exceeding 4.5 milligrams.

Three years after the date of enactment of the bill, all operators who can do so must meet a 2-milligram standard and those who cannot meet that standard using available technology may again receive permits for noncompliance entitling them to operate at levels not exceeding 3 milligrams. After 6 years from the date of enactment of the act, all mines must meet the 2-milligram standard unless the Secretary of the Interior, acting upon the basis of health standards established by the Surgeon General, and after due notice to Congress, extends this time for absolute compliance with the 2-milligram standard. Any such extension can be vetoed by either House of Congress.

Moreover, within 1 year after the date of enactment, the Surgeon General must develop and submit to the Secretary of the Interior and to Congress recommen-

dations as to the absolute maximum permissible total exposure of individuals to coal dust during any working shift and within 3 years after the date of enactment the Secretary of the Interior must publish a schedule specifying the time within which mines shall reduce the total personal exposure to dust on a working shift to the levels recommended by the Surgeon General.

Mr. President, the provisions relating to dust control are based on information as to British experience in reducing the incidence of "black lung" through a dust control program and on information given to the committee, primarily by the Bureau of Mines, as to what is, in fact, attainable, given the state of existing technology in the coal mine industry. They are also consistent with the recommendations of the Public Health Service made in December 1968 for a 3-milligram standard and have, in general, been endorsed by the administration.

Specifically, the Director of the Bureau of Mines, Mr. John O'Leary, testified that virtually all coal mines in the United States could, with proper use of existing technology, and that includes primarily ventilation and water sprays, meet a 4.5-milligram standard.

In addition, the Director testified that approximately 30 to 50 percent of all U.S. mines could, using existing technology, meet a 3-milligram standard. Finally, the Director testified that it was his belief that within 3 years existing technology would be improved to the point where virtually all U.S. mines could meet the 3-milligram standard.

Although various representatives of the coal mine operators dispute Mr. O'Leary's contentions, the operators utterly failed to present to the committee any scientific evidence refuting them, or justifying the use of only a "best efforts" approach to meeting maximum dust levels, as urged by the operators. The committee also properly refused to adopt the suggestion of industry representatives and Secretary of Interior Hickel which would have permitted a 6-month extension on a mine-by-mine basis to reduce dust levels to 4.5 milligrams.

The fact is that despite the fact that the industry has been on notice concerning the dust problem for years; despite the fact that as long ago as last December the Surgeon General made a public recommendation for reduction of dust level to 4.5 milligrams; despite the fact that S. 1300 gave the industry notice that an interim maximum of 4.5 milligrams was being requested by the Administration; and, despite the fact that industry representatives pledged to take meaningful action to meet this problem both at the industry-Government conference last December and in testifying on this legislation last February—up to this very day—with one or two exceptions, virtually nothing has been done by operators to reduce dust levels. I deplore this record of inaction by the industry and I have recently expressed these sentiments in identical letters to Mr. Stephen Dunn, the president of the National Coal Association, and Mr. James Garvey, president of Bituminous

Research, Inc. I ask that a copy of my letter to Mr. Dunn be printed in the RECORD.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

SEPTEMBER 3, 1969.

Mr. STEPHEN F. DUNN,
President, National Coal Association,
Washington, D.C.

DEAR MR. DUNN: Thank you for your recent communications concerning the coal mine health and safety bill, which, as you know, has recently been ordered reported by the Committee on Labor and Public Welfare. The Committee, quite properly in my opinion, rejected the suggestion that the provisions concerning coal dust merely require operators to use their best efforts to achieve a 4.5 milligram standard, and permit operators who cannot meet that standard to continue to operate, provided that miners exposed to excessive dust levels wear respirators. I have as yet seen no scientific evidence that a substantial number of operators cannot meet a 4.5 milligram standard, the maximum that would be allowed under permits for noncompliance during the first three years after the bill is enacted. Furthermore, I am informed that even those operators who have informed myself and other Committee members that they are not currently meeting a 4.5 milligram standard, without any improvement in dust control techniques, have not applied correct measurement techniques and may well be meeting the standard. Under these circumstances, I believe it would have been most irresponsible for the Committee to reject an absolute environmental dust control standard and to permit the use of respirators, especially since the testimony clearly indicated that many miners would refuse to wear them and, in any event, there is some question whether respirators will offer effective protection against coal workers' pneumoconiosis.

In my view, the Committee also properly rejected the suggestion that an additional six months be permitted, on a mine by mine basis, to attain a 4.5 milligram standard. The coal mine industry has been on notice that it would be asked to meet a dust standard of no higher than 4.5 milligrams for almost eight months. Another few months will probably elapse before this bill is signed into law. Despite this delay, and despite the firm promises by operators to the effect they are concerned about the dust problem and would make every effort to comply with the 4.5 standard, the industry, with at most a very few exceptions, has made no concerted attempt to lower existing dust levels. Indeed, had a real program been instituted by coal mine operators to reduce dust levels to 4.5 milligrams, without success, perhaps the Committee would have been more receptive to their protestations.

I believe that the industry ought not to wait until the legislative process has been completed before it begins to implement known techniques for reducing dust levels in the coal mines; I hope that the members of your organization will agree.

With best wishes,
Sincerely,

JACOB K. JAVITS.

Mr. JAVITS. Mr. President, I hope very much that the industry will finally realize that we are not kidding about ending "black lung" in this country and that this bill is just not going to be weakened to spare the industry the cost of reducing dust to the level necessary to accomplish that objective.

In short, Mr. President, we have put health and safety first, above every other consideration. Under the leadership of

the Senator from New Jersey (Mr. WILLIAMS), I hope very much that the Senate will sustain us.

Now, Mr. President, may I thank the distinguished Senator from Kentucky (Mr. COOPER) for being so gracious as to allow me to proceed and not disturb the arrangements we have made before.

Mr. COOPER. Mr. President, I thank the Senator from New York. He is the ranking Republican member on the committee and certainly has the privilege of speaking at any time he wishes and for as long as he wishes. I know that it is necessary for him to be in the Committee on Foreign Relations, and I am sure he will return to the Chamber later.

Mr. President, at the outset, I wish to pay my respects to and congratulate the chairman of the Subcommittee on Labor and Public Welfare, the distinguished Senator from New Jersey (Mr. WILLIAMS), and all the members of the subcommittee who have worked so faithfully on the pending bill. Also the chairman of the committee, the Senator from Texas (Mr. YARBOROUGH), and the Senator from West Virginia (Mr. RANDOLPH), who has a vital interest in the coal mine industry and in mine health and safety.

Mr. President, this debate will continue. I do not intend to speak at any great length today. I shall offer some amendments so that they may be printed for the convenience of Senators.

Mr. President, this is a very important subject. The coal industry itself is an important industry in this country. I believe there are 22 States which produce sizable amounts of coal. It happens that my State of Kentucky is the second largest producer of coal in the Nation following West Virginia. Pennsylvania is third, and Virginia, Illinois, Ohio, and Tennessee are also producers of large amounts of coal. There are many States in the West which, if transportation were accessible to the large industrial centers, would be larger producers of coal.

While the number of men who work in the mines has steadily lessened due to the modernization of mines, coal mining is still a source of income for thousands of miners and their families all over the Nation. Due to his progressive outlook and the work of the United Mine Workers of America, the coal miners have been paid wages which do not compensate them entirely for the dangerous work they undertake, but which have provided them with a higher wage standard than that of many members of other unions in this country.

Coal mine health and safety is a difficult subject. Not many of us have been in a coal mine. It is very hard to visualize what a coal mine is like, and how it works. Not many of us have worked in a coal mine. Not many of us have operated a coal mine. But, coal mining affects the livelihood of a great segment of our people. In addition to the workers, management, and those who furnish capital for the mines, it affects the railroads, the trucking industry, and every community in which the mines are located.

Mr. President, the subject of safety

and health is difficult. In 1941, the first act was passed which gave the Bureau of Mines authority to make inspections and recommendations to the States and to the mine owners.

In 1952, the first substantial amendment was adopted by the Congress. It classified mines into two groups, title I and title II. Title I comprised those employing 14 or fewer. Title II were those employing more than 14.

In the case of title I mines, the small mines, the enforcement of the regulations was left to the States. In the case of title II mines, enforcement resided within the Bureau of Mines.

I served on the Labor and Public Welfare Committee in the 1950's for, I believe, 5 or 6 years. I served as a member of the Subcommittee on Mine Safety. For 2 or 3 years—1957, 1958, and 1959—under the leadership of former Senator Morse, who was chairman of the subcommittee, we tried to work out some amendments to provide better safety standards for the mines. I was on the committee. Senator Morse, the champion of the workingman, was on that committee. The late Senator John F. Kennedy was a member of that committee.

We brought a bill to the floor of the Senate which would have attacked the greatest danger in the mines, by requiring improved mine supports, to reduce the hazards of rib, roof, and face falls. The bill passed the Senate, but it was not passed in the House. It is my understanding that it was not passed in the House—and I say this with all respect—because of the opposition of the United Mine Workers, even though the bill would have provided better standards of safety against rib, face, and roof falls, for the protection of its members.

In 1966, while I was not a member of the committee, Senator Morse asked me to join with him in working on a bill to provide better standards for safety in our mines. I did so. That bill became law, the first major amendment to the Federal Coal Mine Safety Act since 1952. I am very proud to say that Senator Morse, on the floor of the Senate, called attention to the work I had done on it. I do not say that with any personal pride, but to indicate that throughout the years I have been interested in the subject and also that I have had some practical experience in dealing with it.

The bill before us today was, of course, developed in the subcommittee of the Committee on Labor and Public Welfare, and again I pay my tribute to the Senator from New Jersey (Mr. WILLIAMS). I have read and studied the hearings. I have noticed the assiduous dedication he has paid to the subject, as have the other members of the committee.

The bill deals, as its title indicates, with measures to provide better health standards to protect those who are in this hazardous occupation, and chiefly to deal with the disease of pneumoconiosis and other pulmonary diseases.

The health standards are directed to reduce the hazards created by dust that accumulates in mines, and particularly at the face of the coal, as a result of the operations of cutting machines, and continuous mining machines. These ma-

chines dig into the face of the coal and create large volumes of dust which miners have to breathe and swallow and thus their lungs are affected. Many of them are permanently injured. The bill fixes standards to give miners greater protection. I think the committee is to be complimented for its work.

The second section of the bill deals with safety standards which would provide a better measure of protection against injuries which could be permanent and serious and, above all, which could be fatal. It is directed toward reducing the number of fatalities and major and minor injuries. Again, the committee has done very fine work in providing better protection against roof, rib, and face falls.

I offered an amendment to the bill on this subject, and it was accepted by the committee. Measures which were practical and good and deserved inclusion in the bill were those providing for better ventilation, a larger volume of air that must be circulated through the mines to protect against gas, additional inspections for gas shelters within the mines, and better means of escape.

I proposed to the committee another amendment which would maintain the classification between gassy and nongassy mines. That is a subject to which I shall address myself in a few minutes.

Safety is the thrust of this legislation, and it is the chief concern of the Congress and of the people, certainly those who work within the mines.

When one discusses an amendment such as the one I shall offer, it is argued that one places more interest upon economic considerations than he does upon the safety of those who work in the mines. In the comparisons I am going to make now between the dangers in the gassy and the dangers in the nongassy mines, I will answer that charge. In fact, I will not only answer the safety argument, but I will say to those whose proposal would close down many of the nongassy mines and leave open the large gassy mines which are killing the miners year after year, that economic considerations take precedent over the safety of those who work in those gassy mines.

I asked the Bureau of Mines for its best information upon the number of gassy and nongassy mines and the number of fatalities and injuries that have occurred in those mines over a period of years, for which the Bureau has accurate information. The Bureau of Mines sent me tables, which I shall ask to have placed in the RECORD, and I hope Members of this body will examine those records.

The first chart that I shall ask to be placed in the RECORD is a statement which was received from the Bureau of Mines giving the number of gassy mines and the number of nongassy mines by State, the production and the number of employees. These figures are for the year 1967.

The records of the Bureau of Mines indicate that there were 392 gassy mines and 3,191 nongassy mines. Thus, there were 8 times as many nongassy mines operating as there were gassy mines.

Mr. President, I ask unanimous consent that Mr. O'Leary's letter dated June 5,

1969, and the attached chart be inserted in the RECORD at this point.

There being no objection, the correspondence was ordered to be printed in the RECORD, as follows:

U.S. DEPARTMENT OF THE INTERIOR,
BUREAU OF MINES,
Washington, D.C., June 5, 1969.

HON. JOHN SHERMAN COOPER,
U.S. Senate,
Washington, D.C.

DEAR SENATOR COOPER: Enclosed is the information on the number of underground mines, employees, and production, by States,

for the calendar year 1967, as requested in your letter of May 28, 1969.

The data were not available in the manner you requested but were collected in the following manner:

1. The number of mines is the number inspected during the year.
2. The number of employees and production were assembled from the best source available to our field offices.

We will be glad to supply any additional information you may need.

Sincerely yours,
JOHN F. O'LEARY,
Director.

NUMBER OF BITUMINOUS UNDERGROUND COAL MINES, EMPLOYMENT AND PRODUCTION BY STATES AND BY GASSY AND NONGASSY MINES, 1967

	Gassy			Nongassy		
	Number of Mines	Employees	Production	Number of Mines	Employees	Production
Alabama.....	17	3,222	8,443,850	85	1,633	739,350
Arizona.....				1	3	969
Arkansas.....	5	61	93,600			
Colorado.....	23	1,026	3,008,995	36	239	569,915
Illinois.....	26	5,271	27,797,978	9	111	525,834
Indiana.....	7	421	1,564,831	4	285	142,483
Iowa.....				5	51	244,917
Kentucky.....	32	3,851	18,996,388	913	10,687	42,000,000
Maryland.....				33	236	2,287,406
Missouri.....				2	14	409,550
Montana.....	1	16	6,200	12	41	3,000
New Mexico.....		98	625,000	7	22	22,650
North Dakota.....				1	5	4,375
Ohio.....	18	2,115	8,922,588	55	1,244	4,496,000
Oklahoma.....	1	4	2,400			
Oregon.....				1	5	1,000
Pennsylvania.....	68	13,973	46,110,933	279	3,007	8,302,238
Tennessee.....	7	57	135,250	142	1,924	4,364,750
Texas.....	10	799	2,785,122	17	359	1,478,102
Utah.....	44	3,347	14,265,000	673	4,722	16,625,000
Virginia.....	1	7	8,599	3	31	48,017
Washington.....				32	30	30,812
West Virginia.....	132	20,848	80,348,324	908	20,181	61,037,451
Wyoming.....				5	60	118,942
Total.....	392	55,116	213,115,058	3,191	45,472	143,453,737

Mr. COOPER. Mr. President, how did the Bureau of Mines determine whether a mine should be classed gassy or nongassy?

The method is prescribed in the law, and also in the Code of Mine Safety. A mine is classed as gassy when an inspector, upon taking a test near the face of the mine—I think within 12 inches—finds in that portion of air, more than 0.25 percent of the volume to be methane, in which case the mine is immediately classified as a gassy mine, and can never be changed back and reclassified as a nongassy mine.

I want this point to be remembered: That for a nongassy mine to maintain its classification, there must never be detected, in that mine, more than 0.25 percent of methane. All mines operating with more than that percentage are classified as gassy mines.

The Federal Coal Mine Safety Act does not require any special care or vigilance to be taken until 1.0 percent of methane gas is found, at which point the operator must increase his ventilation. So there is an incentive upon nongassy mine owners to follow the regulations and observe the best practices in their mines, to keep that percentage of methane below 0.25 percent; but there is no incentive, in a gassy mine, to keep the percentage below 1 percent.

The records show that explosions usually occur when the volume of methane gas reaches 4.0 to 5.0 percent.

What is the record? In 16 years, in the 392 gassy mines, there were 374 work-

ers killed, and 427 who suffered serious injuries. In that same 16 years, with nearly eight times as many nongassy mines—3,191 mines—there were 27 fatalities and 54 injuries. Can you imagine what the death and injury record would have been in those 3,191 mines if they had all been gassy, based on the present record of the gassy mines? I have calculated it, and theoretically, at the same rate, there would have been more than 4,000 deaths in those nongassy mines, if they had in fact been gassy.

Mr. President, I ask unanimous consent that the record of ignitions and gas explosions as reported by the Bureau of Mines for the period 1952-68 for nongassy mines and the record for gassy mines be inserted in the RECORD at this point.

There being no objection, the charts were ordered to be printed in the RECORD, as follows:

NUMBER OF GAS IGNITIONS OR EXPLOSIONS IN NONGASSY COAL MINES AND NUMBER OF PERSONS KILLED OR INJURED, JULY 1, 1952, THROUGH NOV. 30, 1968

Year	Number of ignitions or explosions	Killed	Injured
1952 (6 months).....	0	0	0
1953.....	3	0	3
1954.....	5	0	6
1955.....	3	0	4
1956.....	4	0	2
1957.....	5	0	5
1958.....	3	0	3
1959.....	3	1	2
1960.....	4	2	0
1961.....	7	0	7

Footnotes at end of table.

NUMBER OF GAS IGNITIONS OR EXPLOSIONS IN NONGASSY COAL MINES AND NUMBER OF PERSONS KILLED OR INJURED, JULY 1, 1952, THROUGH NOV. 30, 1968—Con.

Year	Number of ignitions or explosions	Killed	Injured
1962.....	4	11	6
1963.....	1	0	0
1964.....	4	0	6
1965.....	3	5	4
1966.....	2	0	3
1967.....	0	0	0
1968.....	1	0	3
Total.....	22	16	25

- ¹ No. 1 mine, Philips & West Coal Co., Robbins, Tenn., Mar. 23 1959, 9 killed, 0 injured.
- ² Mine No. 2, Blue Blaze Coal Co., Herrin, Ill., Jan. 10 1962, 11 killed, 0 injured.
- ³ No. 2-A mine, C. L. Kline Coal Co., Robbins, Tenn., 5 killed, 0 injured.

GASSY MINES—IGNITIONS OR EXPLOSIONS JULY 1, 1952-DECEMBER 1968

Year	Number of ignitions or explosions	Killed	Injured
1952.....	7	0	15
1953.....	21	9	32
1954.....	23	19	37
1955.....	18	4	20
1956.....	29	8	18
1957.....	20	66	20
1958.....	19	42	32
1959.....	19	1	12
1960.....	13	1	7
1961.....	17	26	27
1962.....	17	41	16
1963.....	33	36	35
1964.....	35	6	27
1965.....	32	14	32
1966.....	26	10	31
1967.....	30	12	44
1968.....	22	79	22
Total.....	381	374	427

Mr. COOPER. Mr. President, this is the glaring record of the gassy mines. One of the chief reasons we are even considering this bill is that last year, in Farmington, W. Va., there was a tragic explosion which resulted in the deaths of 78 men.

In one mine, 78 men. In nearly 3,200 nongassy mines, in 16 years, there have been 27 fatalities. One fatality is tragic, but I intend to produce records to show that there is hardly any industry in this country that has had as good a safety record as the nongassy mines: 16 years, 3,200 mines, and 27 fatalities.

Then I shall place in the RECORD another table. I asked the Bureau of Mines to give me a list of the mines in which two or more explosions had occurred for any period of time of which they had records. They submitted to me a list of mines which experienced two or more explosions between July of 1952 and July of 1969.

Many of the gassy mines have had explosions more than once. Some of them have had as many as 18 explosions in one gassy mine. The chart shows the number killed, and I shall submit it for the RECORD. For example, there have been as many as 18 in the Clinchfield mine at Dola, W. Va.; seven occurred in the Pittsburgh & Midway coal mine at Union, Ky.; 10 at the United States Steel Corp. mine at Concord, Ala.; eight at the Jones-Laughlin Steel Co. mine at Con-

cord, Ala.; eight at the Jones-Laughlin Steel Co. mine in Vestaburg, Pa., and, of course, we are reminded poignantly of the fact that the explosion at the Farmington mine in West Virginia last year, which took the lives of 78 miners, was preceded in 1954 by an explosion which took 16 lives at the mine owned by the Consolidated Coal Co.

I asked them to give me the same information about the nongassy mines, as to whether there had been more than one explosion. In only two nongassy mines have there been more than one ignition or gas explosion over this same period.

So there is a sound basis for the distinction between gassy and nongassy mines. Later in the debate, I shall comment on the physical characteristics of the mines, to show why they are nongassy. But I point out, just for emphasis again, the figures: 392 mines, 374 fatalities. Three thousand, one hundred and ninety-one nongassy mines, 27 fatalities—all over a 16-year period.

Up to 18 multiple explosions have occurred in one gassy mine. This mine in West Virginia, where the explosion that killed 78 miners took place, had a similar explosion several years before, and as I recall, 16 or 17 were killed then. Testimony given the committee indicates that this mine is located in a gasfield.

Mr. President, I ask unanimous consent to include in the RECORD at this point a table prepared by the Bureau of Mines listing the number of ignitions and explosions occurring in "gassy" mines in the period July 1952 through July 1969, and a table listing those gassy mines experiencing two or more ignitions or gas explosions.

There being no objection, the tables were ordered to be printed in the RECORD, as follows:

GASSY MINES

GASSY UNDERGROUND MINES IN WHICH MORE THAN 1 IGNITION OR EXPLOSION OCCURRED, JULY 1952-JULY 1969

Mine	Company	Location	Number of ignitions or explosions	Killed	Injured
Compass No. 2	Clinchfield Coal	Dola, W. Va.	6	22	2
Shannopin	Jones & Laughlin Steel Corp.	Bobtown, Pa.	4	0	0
Nelms No. 2	The Youghogheny & Ohio Coal	Hopedale, Ohio	4	0	2
Enoco collieries	Enoco Collieries, Inc.	Bruceville, Ind.	2	0	4
Emerald	Hillman Coal & Coke	Clarksburg, Pa.	2	0	0
Itmann No. 3	Itmann Coal	Itmann, W. Va.	3	0	3
Mathies	Mathies Coal	Courtney, Pa.	4	0	0
Glen Burn colliery	Gap-Anthractite	Shamokin, Pa.	3	1	6
Moss No. 3	Clinchfield Coal	Duty, Va.	4	0	2
Kenilworth	Independent Coal	Kenilworth, Utah	2	0	0
Rolena No. 3	United States Steel Corp.	Greensboro, Pa.	5	37	5
Colver Ebsenburg	Eastern Associated Coal Corp. (3) Ebsenburg Coal Co. (1)	Colver, Pa.	4	0	0
Bunker	Trotter Coal	Cassville, W. Va.	2	0	1
Howe	Howe Coal	Heavener, Okla.	6	0	2
Lambert Fork	Clinchfield Coal	Dante, Va.	3	0	1
No. 34	Bishop Coal	Bishop, W. Va.	3	22	1
Gateway	Gateway Coal	Clarksburg, Pa.	8	0	0
No. 2	Carbon Fuel	Helper, Utah	3	9	3
Lancashire No. 15	Barnes & Tucker	Bakerton, Pa.	8	0	14
No. 2 shaft, Storrs colliery	Moffat Coal	Dickson City, Pa.	2	0	5
Pursglove No. 15	Christopher Coal	Pursglove, W. Va.	4	0	9
Vesta No. 5	Jones & Laughlin Steel Corp.	Vestaburg, Pa.	8	0	1
Consolidation No. 9, Llewellyn shaft No. 9	Mountaineer Coal, division of Consolidation Coal, Jamison Coal Co.	Farmington, W. Va.	3	98	1
Keystone No. 1	Eastern Associated Coal Corp.	Keystone, W. Va.	2	0	2
No. 32	Bethlehem Mines Corp.	Revloc, Pa.	2	0	0
Ireland	Hanna Coal	Moundsville, W. Va.	4	0	0
Concord No. 1	United States Steel Corp.	Concord, Ala.	10	0	0
Sunnyside No. 3	Kaiser Steel Corp.	Sunnyside, Utah	2	0	0
Beatrice	Beatrice-Pocahontas	Keen Mount, Va.	5	0	5
Nelms (No. 1)	The Youghogheny & Ohio Coal	Cadiz, Ohio	4	0	0
Dutch Creek	Mid-Continent Coal & Coke	Redstone, Colo.	8	9	10
O'Donnell No. 1	Rochester & Pittsburgh Coal	Four States, W. Va.	2	0	6
Moss No. 2	Clinchfield Coal	Dola, W. Va.	18	2	5
Wildwood	Butler Consolidated Coal	Wildwood, Pa.	2	0	4
Osage No. 3	Christopher Coal	Cassville, W. Va.	4	1	9
Loveridge	Mountaineer Coal, Division of Consolidation Coal	Fairview, W. Va.	3	1	1
Robena No. 4	United States Steel Corp.	Greensboro, Pa.	2	0	0
Forge Slope	Glen Nan Corp.	Newport Township, Pa.	2	4	10
Bird No. 3	Bird Coal	Johnstown, Pa.	6	0	9
Compass No. 3	Compass Coal	Dola, W. Va.	6	0	4
Valley Camp No. 3	Valley Camp Coal	Triadelphia, W. Va.	2	0	1
Clyde	Republic Steel Corp.	Fredricktown, Pa.	3	0	0
DeKoven No. 6	Pittsburgh & Midway Coal Mining	Union, Ky.	7	1	4
No. 93	Consolidation Coal	Jordan, W. Va.	2	0	2
Mensie	Warner Collieries	East Springfield, Ohio	3	0	2
Marianna No. 58	Bethlehem Mines Corp.	Marianna, Pa.	6	6	5
Maple Creek	United States Steel Corp.	New Eagle, Pa.	2	0	7
Ernest No. 3	Rochester & Pittsburgh Coal	Ernest, Pa.	3	0	1

GASSY MINES—METHANE IGNITIONS AND EXPLOSIONS IN GASSY UNDERGROUND COAL MINES, JULY 1952 TO JULY 1969

Date	Mine	Town	State	Company	Killed	Injured
July 1, 1952	Stankiewicz Slope	Shamokin	Pennsylvania	Frank Stankiewicz, operator	0	2
Sept. 15, 1952	Diamond No. 2	Charles	do	Imperial Coal Corp.	0	1
Oct. 7, 1952	No. 53	Cokeburg	do	Bethlehem Mines Corp.	0	2
Oct. 21, 1952	Potts Colliery	Locustdale	do	Philadelphia & Reading Coal & Iron	0	4
Oct. 23, 1952	Lance Colliery	Larksville	do	Glen Alden Coal	0	2
Nov. 12, 1952	No. 34	Bishop	West Virginia	Pocahontas Fuel	0	1
Dec. 9, 1952	Maple Hill Colliery	Shanandoah	Pennsylvania	Philadelphia & Reading Coal & Iron	0	2
Jan. 16, 1953	Loomis Colliery	Nanticoke	do	Glen Alden Coal	1	2
Jan. 29, 1953	Packer No. 5 Colliery	Girardville	do	Gilbertson Coal	0	3
Mar. 6, 1953	Jamison No. 22	Fairview	West Virginia	Jamison Coal & Coke	3	0
Mar. 12, 1953	Chieftain No. 2	Dola	do	Pursglove Coal Service	0	0
Apr. 28, 1953	Lancashire No. 15	Bakerton	Pennsylvania	Barnes & Tucker	0	2
Aug. 12, 1953	No. 2 Shaft-Storrs Colliery	Dickson City	do	Moffat Coal	0	1
Aug. 14, 1953	Tracy Slope	Port Carbon	do	Cano & Martin Coal	0	7
Aug. 26, 1953	No. 1 Slope	Minersville	do	Frank Russian, operator	0	1
Oct. 3, 1953	Tri-K	Terre Haute	Indiana	Tri-K Mining	0	0
Oct. 30, 1953	No. 14	Duquoin	Illinois	Peabody Coal	0	2
Nov. 4, 1953	Pursglove No. 15	Pursglove	West Virginia	Christopher Coal	0	1
Nov. 20, 1953	No. 2	Tire Hill	Pennsylvania	Bird Coal	0	0
May 1, 1953	Vesta No. 5	Vestaburg	do	Jones & Laughlin Steel Corp.	0	0
May 12, 1953	No. 58 Slope	Nanticoke	do	Biscontin & Sons Coal	2	0
May 29, 1953	No. 6 Dodson Colliery	Lansford	do	Weston-Dodson	2	2
June 3, 1953	No. 33	Near Bishop, Va.	West Virginia	Pocahontas Fuel	1	0
June 4, 1953	Peach Mountain Slope	Schuykill	Pennsylvania	Bassininsky, Carl & Wenner	0	4
June 12, 1953	Potts Colliery	Locustdale	do	Philadelphia & Reading Coal & Iron	0	2
June 22, 1953	Pursglove No. 15	Pursglove	West Virginia	Christopher Coal	0	3
Dec. 13, 1953	No. 10	Wilcoe	do	U.S. Steel Corp., Oper. Div.	0	2
Jan. 7, 1954	Oriole	Madisonville	Kentucky	Bell & Zoller Coal	0	1
Jan. 13, 1954	No. 11	Capels	West Virginia	New River & Pocahontas Consolidated Coal	0	0
Feb. 9, 1954	IHI No. 3	Rifle	Colorado	Haas Coal	0	2
Feb. 17, 1954	Bunker	Cassville	West Virginia	Trotter Coal	0	1
Feb. 18, 1954	Joanne	Rachel	do	Joanne Coal	0	0
Apr. 6, 1954	Havaco No. 9	Havaco	do	New River & Pocahontas Consolidated Coal	0	3
Apr. 14, 1954	No. 8 Coaldale Colliery	Coaldale	Pennsylvania	Lehigh Navigation Coal	0	2
Apr. 17, 1954	New Castle	New Castle	Colorado	New Castle Coal	0	0
Apr. 27, 1954	Springdale	Logan's Ferry	Pennsylvania	Allegheny-Pittsburgh Coal	0	0
Apr. 28, 1954	No. 2 Shaft Storrs Collieries	Dickson City	do	Moffat Coal	0	4
May 4, 1954	Enoco Collieries	Bruceville	Indiana	Enoco Collieries, Inc.	0	4
May 6, 1954	do	Bruceville	do	do	0	1

GASSY MINES—METHANE IGNITIONS AND EXPLOSIONS IN GASSY UNDERGROUND COAL MINES, JULY 1952 TO JULY 1969—Continued

Date	Mine	Town	State	Company	Killed	Injured
May 12, 1954	Gaston No. 2	Wyoming	West Virginia	Gaston Coal	1	6
May 25, 1954	No. 10	Franklin	Washington	Palmer Coking Coal	0	2
June 8, 1954	Carbon No. 5	Carbon	Oklahoma	Lone Star Steel	0	0
July 16, 1954	Fies	Madisonville	Kentucky	Miners Coal	0	0
Aug. 24, 1954	Germantown Colliery	Centralia	Pennsylvania	Raven Run Coal	1	0
Aug. 27, 1954	Lucerne No. 3	Lucerne Mines	do	Rochester & Pittsburgh Coal	1	0
Sept. 28, 1954	Buttonwood	Wilkes-Barre	do	Glen Alden Coal	0	8
Nov. 3, 1954	No. 32	Revloc	do	Bethlehem Mines Corp.	0	0
Nov. 13, 1954	No. 9	Farmington	West Virginia	Jamison Coal & Coke	16	0
Nov. 17, 1954	Bird No. 3	Johnstown	Pennsylvania	Bird Coal Co.	0	0
Dec. 13, 1954	No. 1 Slope	Buck Run	do	Katchmar & Machita Partners	0	3
Jan. 18, 1955	Mathies	Courtney	do	Mathies Coal	0	0
Jan. 28, 1955	Wyoming	Wyoming	West Virginia	Red Jacket Coal Corp.	2	5
Feb. 25, 1955	No. 2	Wilcoe	do	United States Steel Corp.	0	0
Mar. 14, 1955	Loomis Colliery	Nanticoke	Pennsylvania	Glen Alden Coal	0	0
Mar. 18, 1955	Vesta No. 5	Vestaburg	do	Jones & Laughlin Steel Corp.	0	0
Apr. 25, 1955	No. 2 Lykens Vein Slope	Shamokin	do	Allen Shoffler Coal Hole	1	1
Do	No. 9 Vein	Trevorton	do	Fair Deal Coal	0	2
Do	Coiltown	Nebo	Kentucky	Coiltown Mining	0	2
June 9, 1955	South Wilkes-Barre Colliery	Wilkes-Barre	Pennsylvania	Glen Alden Corp.	0	0
June 17, 1955	Vesta No. 5	Vestaburg	do	Jones & Laughlin Steel Corp.	0	0
June 18, 1955	South Wilkes-Barre Colliery	Wilkes-Barre	do	Glen Alden Corp.	0	0
Aug. 23, 1955	Ten Mile	Dola	West Virginia	Haywood Coal	0	0
Aug. 29, 1955	Saginaw No. 1	St. Clairsville	Ohio	Saginaw Dock & Terminal	0	2
Oct. 22, 1955	Hickory Drift No. 12	Pine Grove	Pennsylvania	Knorr-Schwalm Dunleavy Coal	0	2
Nov. 8, 1955	Nelms	Cadiz	Ohio	Youghioheny & Ohio Coal	0	0
Nov. 30, 1955	Pursglove No. 15	Pursglove	West Virginia	Christopher Coal	0	5
Dec. 9, 1955	Maysville No. 1 Slope Glen Burn Colliery	Kulpmont	Pennsylvania	Susquehanna Coal Div. The M. A. Hanna Co.	1	1
Jan. 4, 1956	Peach Mountain Slope	Pottsville	do	Lengle Coal	0	2
Feb. 3, 1956	McCurtain	McCurtain	Oklahoma	Lone Star Coal	0	0
Feb. 14, 1956	Alexander No. 2	Moore's Junction	Ohio	Wilson Coal	0	2
Feb. 20, 1956	Pikeview	Pikeview	Colorado	Pikes Peak Fuel, division of the Golden Cycle Corp.	0	0
Feb. 24, 1956	Clyde	Fredericktown	Pennsylvania	Republic Steel Corp.	0	0
Mar. 2, 1956	Vesta No. 5	Vestaburg	do	Jones & Laughlin Steel Corp.	0	0
Mar. 14, 1956	S & J	Minersville	do	S & J Coal	0	2
Mar. 20, 1956	Vesta No. 5	Vestaburg	do	Jones & Laughlin Steel Corp.	0	0
Mar. 22, 1956	Osage No. 3	Cassville	West Virginia	Christopher Coal	0	0
Apr. 3-4, 1956	Green Valley	Terre Haute	Indiana	Snow Hill Coal Corp.	0	0
Apr. 6, 1956	Compass No. 3	Dola	West Virginia	Compass Coal	0	0
Apr. 12, 1956	Ebensburg No. 1	Colver	Pennsylvania	Ebensburg Coal	0	0
Apr. 13, 1956	Valley Camp No. 3	Triadelphia	West Virginia	Valley Camp Coal	0	1
Apr. 24, 1956	Compass No. 3	Dola	do	Compass Coal	0	0
May 21, 1956	Vesta No. 5	Vestaburg	Pennsylvania	Jones & Laughlin Steel Corp.	0	1
May 31, 1956	Praco	Praco	Alabama	Alabama By-Products Corp.	2	0
June 9, 1956	Nos. 4 and 6, Lansford Colliery	Lansford	Pennsylvania	Panther Valley Coal	0	5
July 12, 1956	Pond Creek	Williamson	Kentucky	Osborne Mining Corp.	1	1
July 19, 1956	V.C. No. 3	Triadelphia	West Virginia	Valley Camp Coal	0	0
Aug. 31, 1956	Allen	Stonewall	Colorado	Colorado Fuel & Iron Corp.	0	0
Sept. 18, 1956	Bunker	Cassville	West Virginia	Trotter Coal	0	0
Oct. 8, 1956	Compass No. 3	Dola	do	Compass Coal	0	0
Oct. 20, 1956	Lancashire No. 15	Bakerlon	Pennsylvania	Barnes & Tucker	0	1
Oct. 25, 1956	Green Valley	Terre Haute	Indiana	Snow Hill Coal Corp.	0	0
Nov. 2, 1956	Bunker	Cassville	West Virginia	Trotter Coal	0	1
Nov. 7, 1956	Truesdale Colliery	Nanticoke	Pennsylvania	Glen Alden Corp.	4	0
Dec. 7, 1956	Marianna No. 58	Marianna	do	Bethlehem Mines Corp.	0	0
Dec. 14, 1956	Shannon	Bobtown	do	Jones & Laughlin Steel Corp.	0	0
Dec. 20, 1956	Baltimore Colliery	Wilkes-Barre	do	The Hudson Coal	0	2
Do	Deerfield	Itmann	West Virginia	American Coal	1	0
Dec. 21, 1956	New Castle Vulcan No. 3	New Castle	Colorado	New Castle Coal	0	2
Jan. 3, 1957	Loveridge	Fairview	West Virginia	Jamison Coal & Coke	0	0
Jan. 11, 1957	No. 2	Morganfield	Kentucky	Syers Coal	0	1
Jan. 17, 1957	Blackwood Drift	Zerbe	Pennsylvania	Bonton & Donfrio Coal	0	1
Jan. 18, 1957	Evan Jones	Jonesville	Alaska	Evan Jones Coal	5	0
Jan. 23, 1957	South Dip Slope	Trevorton	Pennsylvania	B and P Coal	0	2
Feb. 4, 1957	No. 34	McDowell County, W. Va.	(Near Bishop, Va.)	Pocahontas Fuel	37	0
Feb. 19, 1957	Bird No. 3	Johnstown	Pennsylvania	Bird Coal	0	4
Feb. 26, 1957	No. 4 (C main opening)	Alva	Kentucky	Black Star Coal Corp.	0	0
Mar. 10, 1957	No. 93	Jordon	West Virginia	Consolidation Coal (W. Va.)	0	2
May 1, 1957	Clyde	Fredericktown	Pennsylvania	Republic Steel Corp.	0	0
May 10, 1957	Vesta No. 5	Vestaburg	do	Jones & Laughlin Steel Corp.	0	0
May 27, 1957	DeKoven	Union	Kentucky	Pittsburg & Midway Coal Mining	0	0
June 6, 1957	Jensie	E. Springfield	Ohio	Warner Collieries	0	0
June 14, 1957	Loomis Colliery	Nanticoke	Pennsylvania	Glen Alden Corp.	3	2
Aug. 2, 1957	Jensie	E. Springfield	Ohio	Warner Collieries Co.	0	6
Aug. 6, 1957	No. 93	Jordon	West Virginia	Consolidation Coal (W. Va.)	0	0
Sept. 23, 1957	Marianna No. 58	Marianna	Pennsylvania	Bethlehem Mines Corp.	6	5
Oct. 9, 1957	Germantown Colliery	Centralia	do	Raven Run Coal	0	2
Nov. 16, 1957	Mayton Slope	Coal Run	do	Mayton Brothers	0	3
Nov. 20, 1957	Wyoming No. 8 Slope Henry Colliery	Plains	do	Lehigh Valley Coal	0	1
Dec. 11, 1957	Peerless No. 3	Greewood	Arkansas	Peerless Coal	4	0
Dec. 27, 1957	No. 31	Amonate	West Virginia	Pocahontas Fuel	11	0
Jan. 17, 1958	Powhatan No. 3	Dilles Bottom	Ohio	The Powhatan Mining	0	1
Do	Spring Canyon No. 4	Spring Canyon	Utah	Spring Canyon Coal	4	0
Feb. 6, 1958	O'Donnell	Four States	West Virginia	Rochester & Pittsburgh Coal	0	2
Apr. 8, 1958	Moss No. 2	Dola	Virginia	Clinchfield Coal Corp.	2	4
May 1, 1958	No. 9 Coaldale Colliery	Coaldale	Pennsylvania	Coaldale Mining	0	4
June 11, 1958	Wildwood	Wildwood	do	Butler Consolidated Coal	0	3
June 19, 1958	Maysville No. 1 Slope, Glen Burn Colliery	Kulpmont	do	Susquehanna Collieries, Division The M. A. Hanna Co.	1	4
June 27, 1958	Osage No. 3	Cassville	West Virginia	Christopher Coal	0	1
July 9, 1958	Slab Fork No. 1	Slabfork	do	Slab Fork Coal	3	0
Aug. 22, 1958	No. 6	Bradshaw	do	Island Creek Coal	0	2
Sept. 6, 1958	Ernest No. 3	Ernest	Pennsylvania	Rochester & Pittsburgh Coal	0	1
Sept. 18-19, 1958	Conemaugh	Smokeless	do	Conemaugh Mining	0	3
Sept. 26, 1958	No. 34	McDowell County, W. Va.	(Near Bishop, Va.)	Pocahontas Fuel (Division of Consolidation Coal)	0	0
Sept. 29, 1958	No. 11	Capels	West Virginia	The New River & Pocahontas Consolidated Coal	0	0
Oct. 17, 1958	No. 2	Robbins	Tennessee	Terry Coal	0	0
Oct. 27, 1958	Potts Colliery	Locustdale	Pennsylvania	Locust Dale Mining & Contracting	0	1
Do	Bishop (No. 34)	Bishop	West Virginia	Pocahontas Fuel (Division of Consolidation Coal)	22	0
Oct. 28, 1958	Burton	Craigsville	do	Oglebay Norton	14	3
Dec. 5, 1958	Avondale Colliery	Plymouth	Pennsylvania	Avon Mining	0	1
Dec. 19, 1958	Landsburg	Landsburg	Washington	Palmer Coking Coal	0	2
Jan. 29, 1959	Loveridge	Fairview	West Virginia	Mountaineer Coal Co. Division of Consolidation Coal	1	0
Feb. 5, 1959	Loveridge	do	do	do	0	0
Feb. 6, 1959	No. 7	Vivian	do	Peerless Coal & Coke	0	0
Mar. 18, 1959	Nelms	Cadiz	Ohio	Youghioheny & Ohio Coal	0	0
Apr. 16, 1959	Robena No. 3	Greensboro	Pennsylvania	United States Steel Corp.	0	1
Apr. 22, 1959	Peca Shaft	Mahanoy City	do	Peca Coal	0	1
May 5, 1959	Buck Mountain Slope	Ravine	do	Guy Zimmerman & Partners	0	2

GASSY MINES—METHANE IGNITIONS AND EXPLOSIONS IN GASSY UNDERGROUND COAL MINES, JULY 1952 TO JULY 1969—Continued

Date	Mine	Town	State	Company	Killed	Injured
June 1, 1959	Lake Superior No. 3	Superior	West Virginia	Lake Superior Coal	0	0
June 4, 1959	Colver	Colver	Pennsylvania	Eastern Gas & Fuel Association, Coal Division	0	0
June 11, 1959	No. 27	Scarlet	West Virginia	Island Creek Coal	0	1
June 22, 1959	Compass No. 2	Dola	do.	Clinchfield Coal, Division of Pittston Co., compass operations.	0	0
June 23, 1959	Moss No. 3	Duty	Virginia	do.	0	0
Aug. 15, 1959	Dutch Creek	Redstone	Colorado	Mid-Continent Coal & Coke	0	3
Aug. 20, 1959	Lancashire No. 15	Bakerton	Pennsylvania	Barnes & Tucker	0	1
Aug. 31, 1959	Compass No. 2	Dola	West Virginia	Clinchfield Coal (Division of Pittston compass operations).	0	0
Oct. 9, 1959	Nelms	Cadiz	Ohio	Youghiogheny & Ohio Coal	0	0
Oct. 20, 1959	Buckhorn No. 2	Johnston City	Illinois	Bell & Zoller Coal	0	3
Dec. 11, 1959	Shannopin	Bobtown	Pennsylvania	Jones & Laughlin Steel Corp.	0	0
Dec. 21, 1959	Wildwood	Wildwood	do.	Butler Consolidated Coal	0	0
Jan. 30, 1960	Colver	Colver	do.	Eastern Gas and Fuel Associates, Coal Division	0	0
Feb. 22, 1960	Nelms No. 1	Cadiz	Ohio	Youghiogheny & Ohio Coal	0	0
Mar. 1, 1960	Jensie	East Springfield	do.	North American Coal Corp., Powhatan Division	0	0
May 17, 1960	Marianna No. 58	Marianna	Pennsylvania	Bethlehem Mines Corp.	0	0
July 1, 1960	Nos. 4 and 6 Slopes	Zerbe	do.	Rickert Bros. Coal	0	2
July 12, 1960	Nelms No. 2	Hopedale	Ohio	Youghiogheny & Ohio Coal	0	0
July 20, 1960	Bessie	Maben	Alabama	U.S. Pipe & Foundry	0	2
Aug. 26, 1960	Compass No. 2	Dola	West Virginia	Clinchfield Coal	0	0
Sept. 11, 1960	Olga No. 1	Coalwood	do.	Olga Coal	1	0
Oct. 27, 1960	Dutch Creek	Redstone	Colorado	Mid-Continent Coal & Coke	0	0
Nov. 4, 1960	Enoco Collieries	Bruceville	Indiana	Enoco Collieries, Inc.	0	1
Nov. 5, 1960	No. 3 Rock Slope	Buck Run	Pennsylvania	David J. Dando Mining	0	2
Nov. 8, 1960	Lucerne No. 3	Lucerne Mines	do.	Rochester & Pittsburgh Coal	0	0
Jan. 16, 1961	Enoco Collieries	Bruceville	Indiana	Enoco Collieries, Inc.	0	3
Jan. 21, 1961	No. 32 Slope, No. 18 Mine, Wanamie Colliery.	Wanamie	Pennsylvania	Glen Alden	0	3
Jan. 17, 1961	O'Donnell No. 2	Sand Fork	West Virginia	Rochester & Pittsburgh Coal	0	0
Jan. 4, 1961	Scovern & Saiter Slope Mine	Gowen City	Pennsylvania	Gowen Coal	0	1
Jan. 13, 1961	Dutch Creek	Redstone	Colorado	Mid-Continent Coal & Coke	0	0
Feb. 16, 1961	Marianna No. 58	Marianna	Pennsylvania	Bethlehem Mines Corp.	0	0
Mar. 2, 1961	Viking Mine	Terre Haute	Indiana	Viking Coal	22	0
Apr. 18, 1961	Osage No. 3	Cassville	West Virginia	Christopher Coal	1	5
Apr. 17, 1961	Itmann No. 1	Itmann	do.	Pocahontas Fuel (Division of Consolidation Coal)	0	2
May 16, 1961	Moss No. 2	Clinchfield	Virginia	Clinchfield Coal	0	1
May 29, 1961	No. 5	Omar	West Virginia	Omar Mining	2	1
July 29, 1961	do.	Trammel	Virginia	Phillips Coal	1	2
Oct. 20, 1961	Nelms No. 1	Cadiz	Ohio	Youghiogheny & Ohio Coal	0	0
Oct. 26, 1961	Lancashire No. 15	Bakerton	Pennsylvania	Barnes and Tucker	0	4
Nov. 24, 1961	Marianna No. 58	Marianna	do.	Bethlehem Mines Corp.	0	0
Dec. 12, 1961	Federal No. 1	Grant Town	West Virginia	Eastern Gas & Fuel Associates	0	4
Dec. 14, 1961	Nos. 2 and 3 Slopes	Buck Run	Pennsylvania	Deitrick & Ebert Coal	0	1
Feb. 2, 1962	Nelms No. 2	Hopedale	Ohio	Youghiogheny & Ohio Coal	0	2
Feb. 5, 1962	Glen Burn Colliery	Shamokin	Pennsylvania	Gap-Anthracite	0	1
Feb. 7, 1962	do.	do.	do.	do.	0	2
May 24, 1962	Shannopin	Bobtown	do.	Jones & Laughlin Steel	0	0
June 6, 1962	Loyal	Loyalhanna, Twp	do.	Seonor	1	5
June 12, 1962	No. 3	Winifrede	West Virginia	Fields Creek	0	0
Aug. 7, 1962	Banning No. 3	West Newton	Pennsylvania	Republic Steel	0	0
Aug. 9, 1962	No. 1	Grimpsleyville	Virginia	S. & S.	0	1
Sept. 28, 1962	Moss No. 3	Duty	do.	Clinchfield Coal	0	1
Oct. 2, 1962	Robena (Nos. 1, 2, and 3)	Greensboro	do.	United States Steel	2	2
Oct. 23, 1962	DeKoven	DeKoven	Kentucky	The Pittsburgh & Midway	1	0
Oct. 25, 1962	Kenilworth	Kenilworth	Utah	Independent Coal & Coke	0	0
Nov. 13, 1962	Marianna No. 58	Marianna	Pennsylvania	Bethlehem Mines Corp.	0	0
Nov. 29, 1962	Top Split Mammoth Slope	Goodspring	do.	Bush Coal	0	2
Dec. 6, 1962	Robena No. 3	Greensboro	do.	United States Steel	37	0
Dec. 14, 1962	Lancashire No. 15	Bakerton	do.	Barnes and Tucker	0	0
Dec. 24, 1962	Emerald	Clarksville	do.	Hillman Coal and Coke	0	0
Jan. 4, 1963	Maple Creek	New Eagle	do.	U.S. Steel Corp.	0	1
Jan. 4, 1963	Emerald	Clarksville	do.	Hillman Coal & Coke	0	0
Jan. 8, 1963	Moss No. 2	Clinchfield	Virginia	Clinchfield Coal	0	0
Jan. 14, 1963	No. 40 Slope	Wanamie	Pennsylvania	Ciarofoni Coal	0	2
Jan. 23, 1963	Glen Burn	Shamokin	do.	Gap-Anthracite Coal	1	3
Jan. 29, 1963	Moss No. 2	Clinchfield	Virginia	Clinchfield Coal	0	0
Feb. 4, 1963	Skidmore Slope	Valley View	Pennsylvania	Williamson Coal	0	2
Mar. 20, 1963	Bird No. 3	Johnstown	do.	Bird Coal	0	0
March 1963	Itmann No. 3	Itmann	West Virginia	Itmann Coal	0	0
Apr. 8, 1963	No. 4 Acton	Helena	Alabama	Paramount Coal	0	2
Apr. 12, 1963	Moss No. 3	Clinchfield	Virginia	Clinchfield Coal	0	0
Apr. 16, 1963	Forge Slope	Newport Twp.	Pennsylvania	Glen Nan Coal Corp.	4	8
Apr. 17, 1963	Bird No. 3	Johnstown	do.	Bird Coal	0	2
Apr. 25, 1963	Compass No. 2	Dola	West Virginia	Clinchfield Coal	22	0
May 14, 1963	Moss No. 3	Clinchfield	Virginia	Clinchfield Coal	0	1
July 18, 1963	Mathies	Courtney	Pennsylvania	Mathies Coal	0	0
July 23, 1963	Nelms No. 2	Hopedale	Ohio	The Youghiogheny & Ohio Coal	0	0
Aug. 7, 1963	Moss No. 2	Clinchfield	Virginia	Clinchfield Coal	0	0
Aug. 8, 1963	do.	do.	do.	do.	0	0
Aug. 13, 1963	Kenilworth	Kenilworth	Utah	Independent Coal & Coke	0	0
Aug. 17, 1963	Itmann No. 3	Itmann	West Virginia	Itmann Coal	0	2
Aug. 21, 1963	Maple Creek	New Eagle	Pennsylvania	United States Steel Corp.	0	0
Aug. 26, 1963	Lancashire No. 15	Bakerton	do.	Barnes & Tucker	0	1
Sept. 16, 1963	Mathies	Courtney	do.	Mathies Coal	0	0
Sept. 27, 1963	Dritton No. 1	Dritton	do.	J. F. Lee	0	2
Oct. 12, 1963	Moss No. 2	Clinchfield	Virginia	Clinchfield Coal	0	0
Oct. 14, 1963	Compass No. 2	Dola	West Virginia	do.	0	1
Oct. 15, 1963	Robena Nos. 1, 2, 3, 4	Greensboro	Pennsylvania	United States Steel Corp.	0	0
Oct. 24, 1963	do.	do.	do.	do.	0	0
Oct. 31, 1963	Ernest No. 3	Ernest	do.	Rochester & Pittsburgh Coal	0	0
Nov. 4, 1963	Gateway	Clarksville	do.	Gateway Coal	0	0
Nov. 6, 1963	do.	do.	do.	do.	0	0
Nov. 11, 1963	Dutch Creek	Redstone	Colorado	Mid-Continent Coal & Coke	0	9
Dec. 16, 1963	No. 2	Helper	Utah	Carbon Fuel	9	1
Feb. 3, 1964	Dutch Creek	Redstone	Colorado	Mid-Continent Coal & Coke	0	0
do.	Bednarczyk Nos. 2 and 3 slopes	Gowen City	Pennsylvania	Bednarczyk Coal	3	1
Feb. 24, 1964	Moss No. 2	Clinchfield	Virginia	Clinchfield Coal	0	0
Feb. 26, 1964	Ireland	Moundsville	West Virginia	Hanna Coal	0	0
Feb. 28, 1964	do.	do.	do.	do.	0	0
do.	Crescent	Central City	Kentucky	Nashville Coal, Inc.	0	0
Mar. 1, 1964	Marion	Tunnelton	Pennsylvania	Tunnelton Mining	0	0
Mar. 11, 1964	Concord No. 1	Concord	Alabama	United States Steel Corp.	0	0
May 7, 1964	Bird No. 3	Johnstown	Pennsylvania	Bird Coal	0	2
May 8, 1964	Moss No. 2	Clinchfield	Virginia	Clinchfield Coal	0	0
May 26, 1964	Dutch Creek	Redstone	Colorado	Mid-Continent Coal & Coke	0	0
June 16, 1964	Compass No. 3	Dola	West Virginia	Clinchfield Coal	0	0

GASSY MINES—METHANE IGNITIONS AND EXPLOSIONS IN GASSY UNDERGROUND COAL MINES, JULY 1952 TO JULY 1969—Continued

Date	Mine	Town	State	Company	Killed	Injured
June 24, 1964	O'Donnell No. 1	Four States	West Virginia	Rochester & Pittsburgh Coal	0	4
July 15, 1964	Huber	Ashley	Pennsylvania	Glen Alden Coal	0	2
July 20, 1964	Robena No. 4	Greensboro	do	United States Steel Corp.	0	0
July 27, 1964	Concord No. 1	Concord	Alabama	do	0	0
July 30, 1964	No. 2	Acton	do	Alabama Red Ash Coal	0	2
Aug. 5, 1964	Robena No. 3	Greensboro	Pennsylvania	United States Steel Corp.	0	0
Aug. 18, 1964	Moss No. 2	Clinchfield	Virginia	Clinchfield Coal	0	0
Aug. 19, 1964	No. 9 Vein South Dip Slope	Trevorton	Pennsylvania	Fair Deal Coal	0	2
Sept. 3, 1964	DeKoven No. 6	Union	Kentucky	The Pittsburgh & M. Jway Coal Mining Co.	0	1
Sept. 15, 1964	Gateway	Clarksville	Pennsylvania	Gateway Coal	0	0
Sept. 28, 1964	No. 6	Bradshaw	West Virginia	Island Creek Coal	3	0
Oct. 3, 1964	Nelms No. 2	Hopedale	Ohio	The Youghiogheny & Ohio Coal Co.	0	2
Oct 5, 1964	Dutch Creek	Redstone	Colorado	Mid-Continent Coal & Coke	0	0
Oct. 7, 1964	Lady Dunn No. 105	Cannelton	West Virginia	Cannelton Coal	0	3
Oct. 17, 1964	Westland	Westland	Pennsylvania	Pittsburgh Coal	0	0
Nov. 2, 1964	Lancashire No. 15	Bakerton	do	Barnes & Tucker	0	2
Nov. 7, 1964	Colver	Colver	do	Eastern Associated Coal Corp.	0	0
Nov. 9, 1964	Beatrice	Keen Mt	Virginia	Beatrice Pocahontas	0	0
Nov. 20, 1964	Itmann No. 3	Itmann	West Virginia	Itmann Coal	0	1
Dec. 3, 1964	Concord No. 1	Concord	Alabama	United States Steel Corp.	0	0
Dec. 7, 1964	No. 19	Wanamie	Pennsylvania	Glen Alden Coal	0	5
Dec. 11, 1964	Gateway	Clarksville	do	Gateway Coal	0	0
Jan. 7, 1965	Sunnyside No. 3	Sunnyside	Utah	Kaiser Steel Corp.	0	0
Jan. 26, 1965	Bird No. 3	Johnstown	Pennsylvania	Bird Coal	0	1
Feb. 3, 1965	DeKoven No. 6	Union	Kentucky	The Pittsburgh & Midway Coal Co.	0	1
Feb. 11, 1965	No. 5	Marvin	Virginia	Horn & Whited Coal	0	2
Feb. 18, 1965	Clyde	Fredricktown	Pennsylvania	Republic Steel Corp.	0	0
Feb. 18, 1965	No. 217 Slope	Nanticoke	do	Bristol Mining Co.	0	1
Feb. 26, 1965	Delmont No. 10B	Hunkers	do	Delmont Fuel	0	2
Mar. 3, 1965	Moss No. 2	Clinchfield	Virginia	Clinchfield Coal	0	0
Mar. 3, 1965	Pleasant View	Madisonville	Kentucky	Island Creek Coal	0	0
Mar. 16, 1965	No. 2	Helper	Utah	Carbon Fuel	0	2
Mar. 25, 1965	Osage No. 3	Cassville	West Virginia	Christopher Coal	0	0
Mar. 31, 1965	Beatrice	Keen Mt	Virginia	Beatrice Pocahontas Co.	0	0
Apr. 13, 1965	Keystone	Herdon	West Virginia	Eastern Associated Coal Corp.	0	4
Apr. 28, 1965	Moss No. 2	Clinchfield	Virginia	Clinchfield Coal	0	0
Apr. 30, 1965	Liewellyn Shaft	Farmington	West Virginia	R. G. Johnson	4	1
June 3, 1965	Robena No. 3	Greensboro	Pennsylvania	United States Steel Corp.	0	0
June 8, 1965	Tracy Slope	Donaldson	do	Rickert Coal	0	0
June 24, 1965	Lancashire No. 15	Bakerton	do	Barnes & Tucker	0	4
Do	Loweridge	Fairview	West Virginia	Mountaineer Coal Co.	0	1
July 6, 1965	No. 3 Slope	Tremont	Pennsylvania	Herb and Reed	0	2
Do	Pandora	Sullivan	Indiana	Pandora Coal Co., Inc.	0	0
July 16, 1965	DeKoven No. 6	Union	Kentucky	The Pittsburgh & Midway Coal Mining Co.	0	2
Aug. 15, 1965	Sunnyside No. 1	Sunnyside	Utah	Kaiser Steel Corp.	0	1
Sept. 27, 1965	Moss No. 2	Clinchfield	Virginia	Clinchfield Coal	0	1
Oct. 20, 1965	Compass No. 3	Dola	West Virginia	do	0	1
Nov. 8, 1965	Flat Top	Flat Top	Alabama	U.S. Pipe & Foundry	0	1
Nov. 19, 1965	Hillsboro	Coffeen	Illinois	Truax-Traer Coal	0	0
Nov. 29, 1965	Keystone No. 1	Keystone	West Virginia	Eastern Associated Coal Corp.	0	1
Nov. 29, 1965	No. 11	Pennington Gap	Virginia	Turner Coal	0	2
Dec. 15, 1965	Keystone No. 1	Keystone	West Virginia	Eastern Associated Coal Corp.	0	1
Dec. 16, 1965	Brule No. 4	Otsego	do	Oglebay Norton Co.	1	1
Dec. 21, 1965	Bishop	Bishop	do	Bishop Coal Co.	0	1
Dec. 23, 1965	Bishop	do	do	do	0	1
Dec. 28, 1965	Dutch Creek	Redstone	Colorado	Mid-Continent Coal & Coke	9	0
Jan. 24, 1966	DeKoven No. 6	Union	Kentucky	The Pittsburgh & Midway Coal Mining	0	0
Jan. 25, 1966	No. 19	Wanamie	Pennsylvania	Glen Alden Coal	0	4
Jan. 28, 1966	Shannopin	Bobtown	do	Jones & Laughlin Steel Corp.	0	0
Jan. 29, 1966	do	do	do	do	0	5
Feb. 11, 1966	No. 1 Lykens Vein Slope	Joliett	do	Lengel Coal	0	1
Feb. 12, 1966	Gateway	Clarksville	do	Gateway Coal	0	0
Mar. 2, 1966	Burnwell No. 1	Hesperus	Colorado	Oren A. Pilcher, operator	3	0
Mar. 11, 1966	DeKoven No. 6	Union	Kentucky	The Pittsburgh & Midway Coal Mining	0	1
Apr. 19, 1966	Moss No. 2	Clinchfield	Virginia	Clinchfield Coal	0	1
June 1, 1966	Beatrice	Keen Mountain	do	Beatrice Pocahontas	0	3
June 13, 1966	Shannopin	Bobtown	Pennsylvania	Jones & Laughlin Steel Corp.	0	0
June 23, 1966	Robena No. 3	Greensboro	do	United States Steel Corp.	0	4
July 20, 1966	No. 2 Dutch Creek	Redstone	Colorado	Mid-Continent Coal and Coke	0	0
July 23, 1966	Siltix	Mount Hope	West Virginia	The New River	7	2
Aug. 4, 1966	Concord No. 1	Concord	Alabama	United States Steel Corp.	0	0
Aug. 12, 1966	Warwick No. 2	Greensboro	Pennsylvania	Duquesne Light	0	0
Aug. 31, 1966	Huber Colliery	Ashley	do	Blue Coal Corp.	0	2
Sept. 1, 1966	Nos. 3 and 4	Superior	West Virginia	Cannelton Coal	0	2
Oct. 6, 1966	Ireland	Moundsville	do	Hanna Coal	0	0
Oct. 27, 1966	Stanaford No. 2	Stanaford	do	The New River	0	1
Nov. 4, 1966	Concord No. 1	Concord	Alabama	U.S. Steel Corp.	0	0
Nov. 30, 1966	Beatrice	Keen Mountain	Virginia	Beatrice Pocahontas	0	0
Dec. 2, 1966	Moss No. 2	Clinchfield	do	Clinchfield Coal	0	1
Dec. 14, 1966	Concord No. 1	Concord	Alabama	U.S. Steel Corp.	0	0
Dec. 26, 1966	Lancashire No. 24	Stiles Crossing	Pennsylvania	Barnes & Tucker	0	0
Jan. 10, 1967	Mathies	Courtney	do	Mathies Coal	0	0
Jan. 24, 1967	Virginia Pocahontas No. 1	Oakwood	Virginia	Island Creek Coal (shaft sinking operations, Zint-McKinney-Williams Corp.)	3	5
Jan. 30, 1967	Joanne	Rachel	West Virginia	Joanne Coal	2	4
Feb. 2, 1967	Nelms No. 2	Hopedale	Ohio	The Youghiogheny & Ohio Coal	0	0
Feb. 7, 1967	Jamison No. 1	Salina	Pennsylvania	Jamison Coal	0	3
Mar. 6, 1967	Beatrice	Keen Mountain	Virginia	Beatrice Pocahontas	0	6
Mar. 10, 1967	Concord No. 1	Concord	Alabama	U.S. Steel Corp.	0	0
Mar. 30, 1967	Compass No. 2	Dola	West Virginia	Clinchfield Coal	0	1
Apr. 19, 1967	No. 32	Revioc	Pennsylvania	Bethlehem Mines Corp.	0	0
Apr. 3, 1967	Moss No. 2	Clinchfield	Virginia	Clinchfield Coal	0	0
May 12, 1967	Gateway	Clarksville	Pennsylvania	Gateway Coal	0	0
June 1, 1967	do	do	do	do	0	0
June 14, 1967	DeKoven No. 6	Union	Kentucky	The Pittsburgh & Midway Coal Mining	0	0
June 20, 1967	Rosa Valley No. 6	Hopedale	Ohio	Hanna Coal Co.	0	1
June 22, 1967	No. 1	Bartley	West Virginia	Island Creek Coal	0	2
June 29, 1967	Osage No. 3	Cassville	do	Christopher Coal	0	3
July 6, 1967	Humphrey No. 7	Maidsville	do	do	0	0
July 28, 1967	No. 1	David	Kentucky	Princess Coals, Inc.	4	0
Aug. 10, 1967	Moss No. 2	Clinchfield	Virginia	Clinchfield Coal	0	0
Aug. 17, 1967	Forse Slope	Newport Township	Pennsylvania	Glen Nan Coal	0	2
Aug. 18, 1967	Robena No. 4	Greensboro	do	U.S. Steel Corp.	0	0
Sept. 6, 1967	No. 7	Keen Mountain	Virginia	Horn & Whited Coal	0	6
Sept. 27, 1967	Lancashire No. 15	Bakerton	Pennsylvania	Barnes & Tucker	0	4
Oct. 10, 1967	Ireland	Moundsville	West Virginia	Ohio Valley Division Consolidation Coal	0	0

GASSY MINES—METHANE IGNITIONS AND EXPLOSIONS IN GASSY UNDERGROUND COAL MINES, JULY 1952 TO JULY 1969—Continued

Date	Mine	Town	State	Company	Killed	Injured
Oct. 17, 1967	Buck Slope	Tremont	Pennsylvania	Farley Coal	0	1
Do	No. 32	Revioc	do	Bethlehem Mines Corp.	0	0
Do	Compass No. 2	Dola	West Virginia	Clinchfield Coal	0	3
Nov. 17, 1967	DeKoven No. 2	Union	Kentucky	The Pittsburgh & Midway Coal Mining	3	1
Nov. 28, 1967	Compass No. 3	Dola	West Virginia	Clinchfield Coal	0	3
Jan. 13, 1968	Gateway	Clarksville	Pennsylvania	Gateway	0	0
Jan. 22, 1968	West Gulf No. 5	Eccles	West Virginia	Winding Gulf Coals, Inc.	1	1
Feb. 8, 1968	Clyde	Fredricktown	Pennsylvania	Republic Steel Corp.	0	0
Feb. 22, 1968	Sunnyside No. 1	Sunnyside	Utah	Kaiser Steel Corp.	0	0
Apr. 9, 1968	Vesta No. 5	Vestaburg	Pennsylvania	Jones & Laughlin Steel Corp.	0	0
May 8, 1968	Virginia Pocahontas Mine No. 1	Oakwood	Virginia	Island Creek Coal	0	2
July 5, 1968	Howe No. 1	Heavener	Oklahoma	Howe Coal	0	0
July 10, 1968	Concord No. 1	Concord	Alabama	U. S. Steel Corp.	0	0
July 15, 1968	Mars No. 2	Wilsonburg	West Virginia	Clinchfield Coal	0	3
July 19, 1968	Howe No. 1	Heavener	Oklahoma	Howe Coal	0	0
July 24, 1968	Slab Fork No. 8	Slab Fork	West Virginia	Slab Fork Coal	0	8
July 26, 1968	Howe No. 1	Heavener	Oklahoma	Howe Coal	0	0
July 30, 1968	do	do	do	do	0	0
Aug. 27, 1968	Ireland	Moundsville	West Virginia	Consolidation Coal	0	0
Aug. 30, 1968	Moss No. 2	Dante	Virginia	Clinchfield Coal	0	2
Sept. 12, 1968	Nelms No. 2	Hopedale	Ohio	Youghiogheny & Ohio	0	0
Oct. 21, 1968	Middle Split Slope	Goodspring	Pennsylvania	Erdman Bros. Coal	0	1
Oct. 31, 1968	Howe No. 1	Heavener	Oklahoma	Howe Coal	0	2
Nov. 13, 1968	No. 2	Dante	Virginia	Clinchfield Coal	0	3
Nov. 20, 1968	Consol No. 9	Farmington	West Virginia	The Mountaineer Coal Division of Consolidation Coal	78	0
Nov. 22, 1968	Lambert Fork	Dante	Virginia	Clinchfield Coal	0	0
Dec. 23, 1968	do	do	do	do	0	1
Dec. 23, 1968	Concord No. 1	Concord	Alabama	U. S. Steel Corp.	0	0
Jan. 8, 1969	No. 10	Tams	West Virginia	Slab Fork Coal	0	3
Feb. 6, 1969	Howe No. 1	Heavener	Oklahoma	Howe Coal	0	0
Feb. 12, 1969	Robena No. 1	Greensboro	Pennsylvania	U. S. Steel Corp.	0	0
Feb. 13, 1969	Dutch Creek No. 1	Redstone	Colorado	Mid-Continent Coal & Coke	0	0
Mar. 19, 1969	Howe No. 1	Heavener	Oklahoma	Howe Coal	0	0
Apr. 29, 1969	No. 2	Helper	Utah	Carbon Fuel	0	0
May 23, 1969	Concord No. 1	Concord	Alabama	U. S. Steel Corp.	0	0
May 26, 1969	Gateway	Clarksville	Pennsylvania	Gateway Coal	0	0
June 9, 1969	do	do	do	do	0	0
June 10, 1969	Lambert Fork	Dante	Virginia	Clinchfield Coal	0	0
June 10, 1969	Keystone 3-B	Herndon	West Virginia	Eastern Associated Coal Corp.	0	5

Mr. COOPER. Mr. President, what is the remedy? I say, with all respect to the chairman, because I know how hard he has labored, that remedy, of course, is to increase the safety standards, both in the gassy and nongassy mines. We seek a remedy to improve the good safety record of the nongassy mines, and I hope to improve the bad safety record of the gassy mines.

The committee's remedy would be to point to the nongassy mines and say to them, "These mines will have to equip themselves with what is called permissible equipment," which means equipment designed, as best they can, not to emit sparks.

I studied the record of the hearings. The committee did not hear one iota of testimony on the cost of equipping these mines with permissible machinery, with the exception of the testimony of Mr. Cloyd B. McDowell, president of the Harlan County Coal Operators Association, who testified from his own knowledge that the cost of installing permissible machinery in one section of a small mine would be \$260,000—a mine producing 150 to 250 tons of coal a day. Of course, it would be economically impossible to operate a mine of that small production with such a high capital expenditure. He testified that a Bureau of Mines representative had estimated that it would cost \$10 million in Harlan County alone for the nongassy mines to change over to permissible equipment.

Increased costs have the effect of driving these small mines out of business, and they not only drive the mineowners out of business, but also the miners, and the effect is felt on the economy of the community in which the mines are located.

Coal production must continue. There is an ever-mounting demand for coal, and we are thankful for that, and for

the increased demand for electrical energy.

The coal industry, due to the efforts of both operators and miners, can today produce a ton of coal as cheaply as in World War II. Not many businesses can make that statement. The prices of few products can be listed in a comparable manner.

The supply of coal must be produced. What happens? The small mines, usually operated and owned by people in the community and furnishing work in the community, will be closed down. Production will come from the gassy mines.

The miners who are able-bodied and must find work can only go to the gassy mines. There is a reason why they are gassy. People who have not seen these mines may not know that there are several types of mines.

First, we have shaft mines. Shaft mines are in western Kentucky, Illinois, and Ohio which go down vertically into the deep earth. From that shaft, entries and corridors run in all directions.

Then there are slope mines, entering on the surface of the earth and running at an angle under the earth. Then again, there are corridors, entries, and rooms going in many directions.

This type of mine requires a large area in which to operate. It requires a large area in which to install the advanced and modern equipment. And the only way in which these mines can be operated efficiently and economically is to employ a large number of miners. These are the situations in which a large number of miners are killed, as happened in West Virginia. These mines are located under the water table and the gas cannot be released. As a result they are gassy.

The nongassy mines are termed "drift mines."

We see entries running horizontally into the side of the hill. There are rooms and hallways from the main entry. They are above the water level, and the gas has escaped. That is the reason that they do not have 0.25 percent of methane per volume of air.

There is no testimony in the hearing record on the question of cost and the availability of permissible equipment. I shall introduce correspondence I have had from equipment manufacturers on this subject.

If these men are driven out of the nongassy mines containing less than 0.25 percent gas by volume in the air—and I have been told that is less dangerous and gassy than the volume of air in some outside areas—and driven into the gassy mines where the explosions and fatalities are, historically, much more likely to occur, I do not think that this provision in the bill will increase safety in our mines.

Let me answer the economic argument. I propose to offer an amendment to maintain the classification between gassy and nongassy mines so that there will be an incentive to keep the volume of gas low, if there is any, in these nongassy mines.

It will be said—and I have already heard some comments—"That is a measure which places economic interest above human life and safety."

Is it? If classifying these nongassy mines as gassy mines drives men into the gassy mines which have experienced explosions year after year, how does that improve safety?

I am going to offer an amendment to go farther than the committee has done. I will say, "Close down the mines that have experienced two or more ignitions or gas explosions."

Why do we not close them down? Why

do we not close that mine in West Virginia that has already taken the lives of nearly 100 men?

It will not be done because the large coal operators, in Pennsylvania and West Virginia and New York, the United States Steel Co. and the Bethlehem Steel Co. in my State, these people who came in and helped develop these areas—and I am not going to attack them for their development of these areas, because we needed it—have ravaged our hills and taken out the wealth and left the hills scarred.

The big companies operating gassy mines will be protected because they have an economic interest to be protected. They have put millions of dollars into the mines. They have the most advanced machinery. They have the continuous miners which create large quantities of the coal dust and cause pneumoconiosis.

The miners are not getting pneumoconiosis in the small mines. Where is the economic interest? It is with the big coal companies who are going to keep operating these gassy mines in gassy fields.

I know a good deal about the coal industry, if I may say so. I live on the edge of the coal section of Kentucky. I own no mine. I own no interest in any mine. However, I have been in the mines. It may surprise some. I have never worked in a mine. However, one summer I worked 4 months at a mine. It did not amount to much work I laid track and worked on cars.

I know how the big organizations develop. There was a time if a coal operator saw one talking with a United Mine Worker official, he was dead to him. And if a United Mine Worker official saw one talking with a coal operator, he was dead to him. Today the big coal operators and the United Mine Workers—and I am just stating a fact and not criticizing either one of them—are together on every measure which affects their interests, such as this, to keep these big coal mines open, these gassy mines which are the mines that are killing the miners who work in them.

Mr. President, I ask unanimous consent to insert in the RECORD the lead editorial appearing in the Courier-Journal of August 23, 1969, entitled "Do Non-gassy Mines Require Caution Needed in Gassy Ones?"

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

**DO NON-GASSY MINES REQUEST CAUTION
NEEDED IN GASSY ONES?**

Bureau of Mines Director John O'Leary was back on Capitol Hill this week defending his coal mine health and safety bill and promising to fight any and all attempts to water it down. He has facts, figures and evidence to support him, as well as the emotional impetus supplied by recent mine disasters and accumulating medical data showing the need for better working conditions in the nation's underground mines. And with the exception of one questionable segment, the bill he is backing is a good one.

Mr. O'Leary admits that tighter safety regulations and the machinery it will require will probably raise the price of coal, but says that coal consumers need fuel so much that they won't balk at paying. He also declares that he is not moved by claims that hundreds of small coal operators may be put out of

business if they are forced to install in their small, non-gassy mines the same safety equipment required in big, gassy mines. And it is here that he misses the point.

No one, including Mr. O'Leary, can say with any assurance whether or not a small operator, with a coal lease and some expensive machinery on which he probably owes considerable money, can afford to amortize the cost of safety equipment and pay it off by raising the price of his coal, as Mr. O'Leary suggests. But the point is not whether he can but whether he should be required to. There is a great deal of evidence that small, non-gassy drift mines do not need, for the health and safety of their miners, the same equipment needed in the big, gassy shaft or slope mines.

A MATTER OF STATISTICS

As Senator John Cooper—certainly no foe of mine safety—has pointed out, the record on gas explosions in American mines in recent years indicates strongly that non-gassy mines simply do not need the same safety equipment that conditions in gassy mines require, and that the cause of miner safety would gain little by the installation. Between 1952 and 1969 there were only 52 explosions in all non-gassy mines, and only four were fatal. There were 381 explosions in gassy mines, in which 374 miners were killed and 427 were injured.

Investigations revealed furthermore, that in each of the fatal explosions in non-gassy mines the explosion was caused by open flames (matches, cigarette lighters or open lamps) resulting from violation of existing mine-safety laws. They could have been prevented, in other words, by closer enforcement and obedience of present regulations, and would not necessarily have been prevented by reclassification of the mines or the installation of new safety equipment.

Kentucky, of course, has an economic stake in the argument. Most Kentucky mines are drift mines that run into the hillside fairly near the top of the earth and extend for relatively short distances. The state has few gassy mines, large shaft mines sunk into the earth like wells which branch out into passageways below the water table and thus tend to trap pockets of gas. It seems obvious that gassy mines should be equipped with ventilating and non-sparking machinery that is not needed for safety or health purposes in non-gassy mines.

It is therefore hard to see why all mines should be indiscriminately lumped into the gassy category and all required to have the same kind of equipment, which is what Mr. O'Leary is asking. He is certainly on the right track with his other demands for higher health and safety provisions, and everyone familiar with the bloody record of American coal mining will wish him success. But on the matter of the non-gassy mines, he hasn't made a good case for himself.

Mr. COOPER. Mr. President, I send to the desk three amendments and ask unanimous consent that they be printed in the RECORD.

The PRESIDING OFFICER. The amendments will be received and printed, and will lie on the table; and, without objection, the amendments will be printed in the RECORD.

The amendments (Nos. 207, 208, and 209) are as follows:

AMENDMENT No. 207

On page 51, beginning with line 8, strike out all through line 24 and insert in lieu thereof the following:

"(1) (1) One year after the operative date of this title—

"(A) all electric face equipment which is taken into or used in by the last open crosscut of any grassy mine shall be permissible; and

"(B) only permissible junction or distribu-

tion boxes shall be used for making multiple power connections in by the last open crosscut or in any other place where quantities of methane in amounts in excess of 1 per centum may be present or may enter the air currents, except that the Secretary may permit, under such conditions as he may prescribe, nonpermissible junction or distribution boxes in use, on the operative date of this title, in by the last open crosscut or in any other place where quantities of methane in amounts in excess of 1 per centum may be present or may enter the air current, to continue in use for such period as he deems appropriate, after taking into consideration the availability of permissible junction or distribution boxes and the time required to install such boxes."

On page 52, line 4, strike out "coal" and insert in lieu thereof "gassy".

On page 52, line 4, strike out "coal" and insert in lieu thereof "gassy".

On page 52, line 21, strike out "(D)" and insert "(A)".

On page 53, line 4, strike out "(D)" and insert "(A)".

On page 53, line 6, strike out "(D)" and insert "(A)".

On page 53, line 12, strike out "(D)" and insert "(A)".

On page 54, line 1, strike out "(D)" and insert "(A)".

On page 54, line 12, strike out "(D)" and insert "(A)".

On page 54, line 22, strike out "(D)" and insert "(A)".

On page 56, beginning with line 18, strike out all through line 20 and insert in lieu thereof the following:

"(n) On and after the operative date of this title, all electric coal drills used in a nongassy mine shall be permissible and shall be maintained in a permissible condition."

On page 80, line 6, strike out "and".

On page 80, line 10, strike out the period and insert in lieu thereof a semicolon and the word "and".

On page 80, between lines 10 and 11, insert the following:

"(9) 'gassy mine' means any mine which has been or hereafter is classed in any manner as a gassy or gaseous mine in accordance with the laws of the State in which it is located or any Federal law, or which has been operated as a gassy mine prior to the operative date of this title, or in which methane has been ignited, or in which an authorized representative of the Secretary finds methane in an amount of 0.25 per centum or more in any open workings of such mine when tested at a point not less than twelve inches from the roof, face, or rib."

AMENDMENT No. 208

At the end of page 7, add the following: "Sec. 6. Any coal mine in operation on the date of the enactment of this Act which, during the period commencing July 1, 1952, and ending on such date of enactment, has experienced two or more ignitions or explosions due to methane shall, within sixty days following such date of enactment, close and cease its mining operations. After the date of the enactment of this Act, any coal mine which has experienced, subsequent to July 1, 1952, two ignitions or explosions due to methane shall, within sixty days following such second ignition or explosion, close and cease its mining operations."

AMENDMENT No. 209

On page 57, between lines 11 and 12, insert the following:

"(r) (1) For a transition period of eight years from the operative date of this title, the provisions of this section requiring use of permissible electric equipment, other than hand drills, shall not be applicable to any drift mine which has not been classed as gassy or which is not subsequently found to be gassy under the laws of any State. On

and after two years from the operative date of this title, all replacement equipment acquired for use in any mine referred to in this subsection shall be permissible and shall be maintained in a permissible condition, and in the event of any major overhaul of any item of equipment in use on or after two years from the operative date of this title, such equipment shall be put in and shall thereafter be maintained in permissible condition.

"(2) As used in this subsection, the term 'drift mine' means a coal mine driven in a substantially horizontal direction into the side of a hill or mountain, above drainage, to work a seam of coal which runs on substantially the same lateral plane as that of the mine entry or portal."

Mr. WILLIAMS of New Jersey. Mr. President, will the Senator yield?

Mr. COOPER. I yield.

Mr. WILLIAMS of New Jersey. Mr. President, certainly I know the long-standing interest and contribution of the Senator from Kentucky to the debates over the years on the whole subject matter of legislation dealing with coal mines.

We have had opportunities this year to learn from the Senator from Kentucky in the committee about this matter.

As I recall, the Senator mentioned roof falls and other safety areas in which we found agreement with the Senator from Kentucky. We know that the Senator will move to deal with the present gassy-nongassy classification. Is that what I am to understand, that the Senator would continue the gassy-nongassy distinction?

Mr. COOPER. I have just introduced an amendment to preserve the classification.

Mr. WILLIAMS of New Jersey. That nomenclature does not say that there is no gas in a nongassy mine.

Mr. COOPER. I just describe how they are classified. Certainly, there is less gas in a nongassy mine.

Mr. WILLIAMS of New Jersey. So what it boils down to—in the Senator's terms—is the difference between lots of gas and less gas.

Mr. COOPER. That is the assumption upon which this proposal is made.

The Director of the Bureau of Mines, Mr. O'Leary has told the committee that all mines are potentially gassy. There is some truth in that. But what I have done today is to put into the RECORD the statistics furnished by the Bureau of Mines which show that the nongassy mines are probably as safe as any industry in the United States, while the gassy mines have continued to kill and injure people year after year.

Mr. WILLIAMS of New Jersey. I just wanted to raise this point at this time: We are in agreement, the committee and the Senator from Kentucky, that we have arrived at the point that in nongassy mines smoking should be prohibited. Am I correct in that?

Mr. COOPER. Absolutely.

Mr. WILLIAMS of New Jersey. We are in agreement there. Because, even though there might be a small amount of gas, that cigarette could ignite even the small amount of gas.

One further thing: We would agree that in the nongassy mines we absolutely prohibit open flames.

Mr. COOPER. Yes. I offered that amendment.

Mr. WILLIAMS of New Jersey. We certainly agree. These are prohibitions

on open flame and smoking in nongassy mines. Whatever happens to the bill or to the Senator's amendment, in nongassy mines we are not going to have the flames that could ignite even that little bit—as the Senator has said, the 0.25 gas that is there.

Mr. COOPER. The Senator is absolutely correct. If any gas at all is present, the flame is likely to ignite it. That is so in connection with coal dust, as well as fires. Coal dust itself is combustible, and if it has any gas in it, it is even more dangerous.

I asked the Bureau of Mines to give me the causes of the 52 ignitions which had occurred in nongassy mines over

a period of 16 years, and the record shows that, with the exception of the use of a nonpermissible drill—with which there was an explosion, as I recall, in nine cases—none of the other explosions would have been prevented even if they had had permissible equipment. It came from other causes, such as smoking, igniting matches, and that sort of thing.

Mr. President, I ask unanimous consent that a table identifying the 52 ignitions in nongassy mines and their causes be inserted in the RECORD at this point.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

IGNITIONS IN MINES CLASSED NONGASSY AT THE TIME THE IGNITION OCCURRED

Date of ignition	State	Source of ignition	Number	Fatalities	Injuries
Jan. 3, 1953	Pennsylvania	Match	1	0	0
May 5, 1953	Kentucky	Open flame lamp	2	0	2
Oct. 9, 1953	Pennsylvania	do	3	0	0
Apr. 9, 1954	do	do	4	0	1
May 10, 1954	Tennessee	Match	5	0	0
May 17, 1954	Kentucky	Open flame (lamp)	6	0	0
May 28, 1954	Pennsylvania	Smoking or electric arc at signal station	7	0	3
Nov. 30, 1954	Kentucky	Arc from 250-volt circuit used to blast	8	0	2
June 18, 1955	Pennsylvania (anthracite)	Nonpermissible electric coal drill	9	0	1
July 23, 1955	do	do	10	0	2
Dec. 19, 1955	Maryland	Smoking	11	0	1
Feb. 28, 1956	Alabama	Open flame (lamp)	12	0	0
Mar. 21, 1956	Colorado	Nonpermissible electric coal drill	13	0	2
July 17, 1956	Kentucky	Open flame (lamp)	14	0	0
Nov. 28, 1956	Pennsylvania	do	15	0	0
Jan. 17, 1957	do	do	16	0	0
Feb. 5, 1957	do	do	17	0	0
Feb. 26, 1957	Kentucky	Match	18	0	0
May 1, 1957	Pennsylvania	Open flame (lamp)	19	0	2
Nov. 16, 1957	do	Nonpermissible blower fan or match	20	0	3
Jan. 10, 1958	Virginia	Open flame (lamp)	21	0	0
Jan. 31, 1958	Tennessee	do	22	0	0
Dec. 11, 1958	Pennsylvania	Nonpermissible electric coal drill	23	0	3
Mar. 23, 1959	Tennessee	Electric locomotive or smoking	24	9	0
Oct. 8, 1959	Pennsylvania	Improperly assembled flame safety lamp	25	0	2
Nov. 4, 1959	Virginia	Cigarette lighter	26	0	2
Aug. 16, 1960	do	Open flame (lamp)	27	0	0
Aug. 23, 1960	Kentucky	do	28	0	0
Dec. 7, 1960	Pennsylvania	Nonpermissible blower fan	29	0	1
Dec. 28, 1960	West Virginia	Match	30	2	0
Apr. 13, 1961	Colorado	Smoking	31	0	1
May 9, 1961	Virginia	Open flame (lamp)	32	0	0
May 30, 1961	West Virginia	Smoking	33	0	1
Aug. 3, 1961	Virginia	Open flame (lamp)	34	0	0
Aug. 28, 1961	Pennsylvania	Nonpermissible blower fan	35	0	3
Oct. 7, 1961	do	Nonpermissible electric coal drill	36	0	1
Nov. 28, 1961	Virginia	Open flame (lamp)	37	0	0
Jan. 10, 1962	Illinois	Permissible type shuttle car being repaired where ignition occurred	38	11	0
Apr. 9, 1962	Pennsylvania (anthracite)	Match	39	0	1
Nov. 12, 1962	do	Nonpermissible electric coal drill	40	0	1
Nov. 21, 1962	Virginia	Match	41	0	4
July 17, 1963	Kentucky	Open flame (lamp)	42	0	0
June 11, 1964	Pennsylvania	Propane torch or burning blasting fuse	43	0	3
July 17, 1964	do	Match	44	0	2
Oct. 14, 1964	Virginia	Open flame (lamp)	45	0	0
Dec. 16, 1964	Pennsylvania	Nonpermissible electric coal drill	46	0	1
Jan. 25, 1965	do	do	47	0	3
May 24, 1965	Tennessee	Cigarette lighter	48	5	0
Aug. 6, 1965	Virginia	Smoking	49	0	1
June 20, 1966	West Virginia	do	50	0	2
Nov. 7, 1966	Virginia	Nonpermissible electric coal drill	51	0	1
Aug. 2, 1968	Kentucky	Match	52	0	3
Total			52	27	56

PRIVILEGE OF THE FLOOR

Mr. WILLIAMS of New Jersey. Mr. President, I ask unanimous consent that the members of the staff of the Committee on Labor and Public Welfare may have the privilege of the floor during consideration of the pending bill.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. WILLIAMS of New Jersey. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

FEASIBILITY INVESTIGATIONS OF CERTAIN RESOURCE DEVELOPMENTS

Mr. BYRD of West Virginia. Mr. President on behalf of the Senator from Washington (Mr. JACKSON), I ask the Chair to lay before the Senate a message from the House of Representatives on S. 574.

The PRESIDING OFFICER laid before the Senate the amendments of the House of Representatives to the bill (S. 574) to authorize the Secretary of the Interior to engage in feasibility investigations of certain water resource de-

velopments which were, on page 1, line 11, strike out "and".

On page 2, line 3, strike out "Colorado." and insert "Colorado;"

And, on page 2, after line 3, insert:

(4) Shoshone project, Buffalo Bill Dam modifications, the Shoshone River, about five miles west of Cody, Wyoming;

(5) Missouri River Basin project, James Division, Sioux Falls unit, in the Big Sioux River Basin in the vicinity of Sioux Falls, South Dakota;

(6) Amargosa project, in the Amargosa River Basin in the vicinity of Beatty, Nevada, and Death Valley Junction, California;

(7) Willamette River project, Calapooia division, in the Calapooia River Basin in Linn County, Oregon; and

(8) Willamette River project, South Yamhill division, on the South Yamhill and Willamette Rivers in Yamhill and Polk Counties, Oregon.

Mr. BYRD of West Virginia. Mr. President, the purpose of this measure is to authorize the Secretary of the Interior to undertake feasibility investigations of certain Federal reclamation projects. This authority is required to permit the orderly continuation of the Bureau of Reclamation's program of investigations leading to recommendations for authorization of water resource development projects.

S. 574, as passed by the Senate on May 23, included authorization of three studies which had then been recommended by the Department of the Interior. The House has amended the bill to add five additional studies which have been recommended by the Department since the Senate acted.

The Committee on Interior and Insular Affairs believes that the studies added by the House should be authorized. They meet the requirement of being potentially feasible project proposals as shown by completed reconnaissance studies. Separate bills have been introduced in the Senate which would authorize each of the studies added by the House.

Mr. President, I move that the Senate concur in the amendment of the House.

This has been cleared on both sides of the aisle.

The PRESIDING OFFICER. The question is on agreeing to the motion of the Senator from West Virginia.

The motion was agreed to.

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

MESSAGES FROM THE PRESIDENT

Messages in writing from the President of the United States were communicated to the Senate by Mr. Geisler, one of his secretaries.

SOCIAL SECURITY MESSAGE FROM THE PRESIDENT (H. DOC. NO. 91-163)

The PRESIDING OFFICER laid before the Senate the following message

CXV—1713—Part 20

from the President of the United States, which was referred to the Committee on Finance:

To the Congress of the United States:

This nation must not break faith with those Americans who have a right to expect that Social Security payments will protect them and their families.

The impact of an inflation now in its fourth year has undermined the value of every Social Security check and requires that we once again increase the benefits to help those among the most severely victimized by the rising cost of living.

I request that the Congress remedy the real losses to those who now receive Social Security benefits by increasing payments by 10 per cent.

Beyond that step to set right today's inequity, I propose that the Congress make certain once and for all that the retired, the disabled and the dependent never again bear the brunt of inflation. The way to prevent future unfairness is to attach the benefit schedule to the cost of living.

This will instill new security in Social Security. This will provide peace of mind to those concerned with their retirement years and to their dependents.

By acting to raise benefits now to meet the rise in the cost of living, we keep faith with today's recipients. By acting to make future benefit raises automatic with rises in the cost of living, we remove questions about future years; we do much to remove this system from biennial politics; and we make fair treatment of beneficiaries a matter of certainty rather than a matter of hope.

In the 34 years since the Social Security program was first established, it has become a central part of life for a growing number of Americans. Today approximately 25 million people are receiving cash payments from this source. Three-quarters of these are older Americans; the Social Security check generally represents the greater part of total income. Millions of younger people receive benefits under the disability or survivor provisions of Social Security.

Almost all Americans have a stake in the soundness of the Social Security system. Some 92 million workers are contributing to Social Security this year. About 80 per cent of Americans of working age are protected by disability insurance and 95 per cent of children and mothers have survivorship insurance protection. Because the Social Security program is an essential part of life for so many Americans, we must continually re-examine the program and be prepared to make improvements.

Aiding in this Administration's review and evaluation is the Advisory Council on Social Security which the Secretary of Health, Education and Welfare appointed in May. For example, I will look to this Council for recommendations in regard to working women; changing work patterns and the increased contributions of working women to the system may make present law unfair to them. The recommendations of this Council and of other advisers, both within the Government and outside of it, will be important to our planning. As I indicated in my message to the Con-

gress on April 14, improvement in the Social Security program is a major objective of this Administration.

There are certain changes in the Social Security program, however, for which the need is so clear that they should be made without awaiting the findings of the Advisory Council. The purpose of this message is to recommend such changes.

I propose an across-the-board increase of 10% in Social Security benefits, effective with checks mailed in April 1970, to make up for increases in the cost of living.

I propose that future benefits in the Social Security system be automatically adjusted to account for increases in the cost of living.

I propose an increase from \$1680 to \$1800 in the amount beneficiaries can earn annually without reduction of their benefits, effective January 1, 1971.

I propose to eliminate the one-dollar-for-one-dollar reduction in benefits for income earned in excess of \$2880 a year and replace it by a one dollar reduction in benefits for every two dollars earned, which now applies at earnings levels between \$1680 and \$2880, also effective January 1, 1971.

I propose to increase the contribution and benefit base from \$7800 to \$9000, beginning in 1972, to strengthen the system, to help keep future benefits to the individual related to the growth of his wages, and to meet part of the cost of the improved program. From then on, the base will automatically be adjusted to reflect wage increases.

I propose a series of additional reforms to ensure more equitable treatment for widows, recipients above age 72, veterans, for persons disabled in childhood and for the dependent parents of disabled and retired workers.

I emphasize that the suggested changes are only first steps, and that further recommendations will come from our review process.

The Social Security system needs adjustment now so it will better serve people receiving benefits today, and those corrections are recommended in this message. The system is also in need of long-range reform, to make it better serve those who contribute now for benefits in future years, and that will be the subject of later recommendations.

THE BENEFIT INCREASE

With the increase of 10% the average family benefit for an aged couple, both receiving benefits, would rise from \$170 to \$188 a month. Further indication of the impact of a 10 per cent increase on monthly benefits can be seen in the following table:

	Present minimum	New minimum	Present maximum	New maximum
Single person (a man retiring at age 65 in 1970).....	\$55.00	\$61.00	\$165.00	\$181.50
Married couple (husband retiring at age 65 in 1970).....	82.50	91.50	247.50	272.30

The proposed benefit increases will raise the income of more than 25 million

persons who will be on the Social Security rolls in April, 1970. Total budget outlays for the first full calendar year in which the increase is effective will be approximately \$3 billion.

AUTOMATIC ADJUSTMENTS

Benefits will be adjusted automatically to reflect increases in the cost of living. The uncertainty of adjustment under present laws and the delay often encountered when the needs are already apparent is unnecessarily harsh to those who must depend on Social Security benefits to live.

Benefits that automatically increase with rising living costs can be funded without increasing Social Security tax rates so long as the amount of earnings subject to tax reflects the rising level of wages. Therefore, I propose that the wage base be automatically adjusted so that it corresponds to increases in earnings levels.

These automatic adjustments are interrelated and should be enacted as a package. Taken together they will depoliticize, to a certain extent, the Social Security system and give a greater stability to what has become a cornerstone of our society's social insurance system.

REFORMING THE SYSTEM

I propose a series of reforms in present Social Security law to achieve new standards of fairness. These would provide:

1. *An increase in benefits to a widow who begins receiving her benefit at age 65 or later.* The benefit would increase the current 82½% of her husband's benefit to a full 100%. This increased benefit to widows would fulfill a pledge I made a year ago. It would provide an average increase of \$17 a month to almost three million widows.

2. *Non-contributory earnings credits of about \$100 a month for military service from January, 1957 to December, 1967.* During that period, individuals in military service were covered under Social Security but credit was not then given for "wages in kind"—room and board, etc. A law passed in 1967 corrected this for the future, but the men who served from 1957 (when coverage began for servicemen) to 1967 should not be overlooked.

3. *Benefits for the aged parents of retired and disabled workers.* Under present law, benefits are payable only to the dependent parents of a worker who has died; we would extend this to parents of workers who are disabled or who retire.

4. *Child's insurance benefits for life if a child becomes permanently disabled before age 22.* Under present law, a person must have become disabled before age 18 to qualify for these benefits. The proposal would be consistent with the payment of child's benefit to age 22 so long as the child is in school.

5. *Benefits in full paid to persons over 72, regardless of the amount of his earnings in the year he attains that age.* Under present law, he is bound by often confusing tests which may limit his exemption.

6. *A fairer means of determining benefits payable on a man's earnings record.* At present, men who retire at age 62 must compute their average earnings through three years of no earnings up to age 65,

thus lowering the retirement benefit excessively. Under this proposal, only the years up to age 62 would be counted, just as is now done for women, and three higher-earning years could be substituted for low-earning years.

CHANGES IN THE RETIREMENT TEST

A feature of the present Social Security law that has drawn much criticism is the so-called "retirement test," a provision which limits the amount that a beneficiary can earn and still receive full benefits. I have been much concerned about this provision, particularly about its effects on incentives to work. The present retirement test actually penalizes Social Security beneficiaries for doing additional work or taking a job at higher pay. This is wrong.

In my view, many older people should be encouraged to work. Not only are they provided with added income, but the country retains the benefit of their skills and wisdom; they, in turn, have the feeling of usefulness and participation which employment can provide.

This is why I am recommending changes in the retirement test. Raising the amount of money a person can earn in a year without affecting his Social Security payments—from the present \$1680 to \$1800—is an important first step. But under the approach used in the present retirement test, people who earned more than the exempt amount of \$1680, plus \$1200, would continue to have \$1 in Social Security benefits withheld for every \$1 they received in earnings. A necessary second step is to eliminate from present law the requirement that when earnings reach \$1200 above the exempt amount, Social Security benefits will be reduced by a full dollar for every dollar of added earnings until all his benefits are withheld; in effect, we impose a tax of more than 100% on these earnings.

To avoid this, I would eliminate this \$1 reduction for each \$1 earned and replace it with the same \$1 reduction for each \$2 earned above \$3000. This change will reduce a disincentive to increased employment that arises under the retirement test in its present form.

The amount a retired person can earn and still receive his benefits should also increase automatically with the earnings level. It is sound policy to keep the exempt amount related to changes in the general level of earnings.

These alterations in the retirement test would result in added benefit payments of some \$300 million in the first full calendar year. Approximately one million people would receive this money—some who are now receiving no benefits at all and some who now receive benefits but who would get more under this new arrangement. These suggestions are not by any means the solution to all the problems of the retirement test, however, and I am asking the Advisory Council on Social Security to give particular attention to this matter.

CONTRIBUTION AND BENEFIT BASE

The contribution and benefit base—the annual earnings on which Social Security contributions are paid and that can be counted toward Social Security benefits—has been increased several times since the Social Security program began. The further increase I am recommending—

from its present level of \$7800 to \$9000 beginning January 1, 1972—will produce approximately the same relationship between the base and general earnings levels as that of the early 1950s. This is important since the goal of Social Security is the replacement, in part, of lost earnings; if the base on which contributions and benefits are figured does not rise with earnings increases, then the benefits deteriorate. The future benefit increases that will result from the higher base I am recommending today would help to prevent such deterioration. These increases would, of course, be in addition to those which result from the 10% across-the-board increase in benefits that is intended to bring them into line with the cost of living.

FINANCING

I recommend an acceleration of the tax rate scheduled for hospital insurance to bring the hospital insurance trust fund into actuarial balance. I also propose to decelerate the rate schedule of the old-age, survivors and disability insurance trust funds in current law. These funds taken together have a long-range surplus of income over outgo, which will meet much of the cost. The combined rate, known as the "social security contribution," already scheduled by statute, will be decreased from 1971 through 1976. Thus, in 1971 the currently scheduled rate of 5.2% to be paid by employees would become 5.1%, and in 1973 the currently scheduled rate of 5.65% would become 5.5%. The actuarial integrity of the two funds will be maintained, and the ultimate tax rates will not be changed in the rate schedules which will be proposed.

The voluntary supplementary medical insurance (SMI) of title XVIII of the Social Security Act, often referred to as part B Medicare coverage, is not adequately financed with the current \$4 premium. Our preliminary studies indicate that there will have to be a substantial increase in the premium. The Secretary of Health, Education and Welfare will set the premium rate in December for the fiscal year beginning July 1970, as he is required to do by statute.

To meet the rising costs of health care in the United States, this Administration will soon forward a Health Cost Control proposal to the Congress. Other administrative measures are already being taken to hold down spiraling medical expenses.

In the coming months, this Administration will give careful study to ways in which we can further improve the Social Security program. The program is an established and important American institution, a foundation on which millions are able to build a more comfortable life than would otherwise be possible—after their retirement or in the event of disability or death of the family earner.

The recommendations I propose today, which I urge the Congress to adopt, will move the cause of Social Security forward on a broad front.

We will bring benefit payments up to date.

We will make sure that benefit payments stay up to date, automatically tied to the cost of living.

We will begin making basic reforms in

the system to remove inequities and bring a new standard of fairness in the treatment of all Americans in the system.

And we will lay the groundwork for further study and improvement of a system that has served the country well and must serve future generations more fairly and more responsibly.

RICHARD NIXON.

THE WHITE HOUSE, September 25, 1969.

EXECUTIVE MESSAGES REFERRED

As in executive session, the Presiding Officer laid before the Senate messages from the President of the United States submitting sundry nominations, which were referred to the appropriate committees.

(For nominations this day received, see the end of Senate proceedings.)

ORDER FOR ADJOURNMENT

Mr. BYRD of West Virginia, Mr. President, I ask unanimous consent that when the Senate completes its business today it stand in adjournment until 12 o'clock noon tomorrow.

The PRESIDING OFFICER. Without objection, it is so ordered.

THE NEW YORK METS

Mr. JAVITS. Mr. President, I am very glad that this opportunity comes at the end of the day for me to make this brief statement.

I wish to call to the attention of the Senate a great victory of an underdog, the Mets of New York. This is so unusual that I think it is worthy of the attention of even the Senate.

The success of the Mets is not just a reward to a fabulous and hustling ball club, but it is a symbol of the fact that even in New York City the fighting underdog can win.

Mr. President, in New York we dare to hope that the Mets will be the champions of the world. Regardless of what other team loyalties may be in the Senate I hope that Members will cheer us on simply because at one point in the lives of all Members, every one of us has been the underdog and this is a time when the underdog has really come out on top.

PRIME MINISTER GOLDA MEIR

Mr. WILLIAMS of New Jersey. Mr. President, I had the great pleasure of visiting with Mrs. Golda Meir, the Prime Minister, in Tel Aviv in early June of this year.

If Mrs. Meir were not so down-to-earth human and real, her majesty and beauty and power would be overwhelming. The moments I had with her for me will be unforgettable.

The Washington Post article by Marie Smith in today's newspaper has so magnificently described the greatness of Mrs. Meir that I ask unanimous consent to have it printed in the RECORD so that everyone will have the opportunity to appreciate the qualities of this great leader.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

MRS. MEIR: A STERN LIBERAL

(By Marie Smith)

PHILADELPHIA, September 24.—“She has a face you can't walk past in a crowd without noticing—the large nose that gives character, the broad brow, the firmly set jaw, the warmth in her eyes.”

Shaul Ben-Haim, a counselor at the Embassy of Israel was describing Golda Meir, Israel's 71-year-old Prime Minister, who arrived here today on the first leg of an official visit. She flies to Washington on Thursday.

The usually stern face of Golda Meir was wrinkled by smile after smile as she stepped off the plane here and acknowledged the cheers of the estimated 5,000 school children shouting, “Shalom,” and waving friendly signs, saying among other things, “We dig Golda.”

She waved to them walked over and shook hands with a score or more. En route, she stopped to kiss three little boys.

For a fleeting moment, she was again just a doting grandmother. The three little boys were the sons of her only son, Menachin Meir, a concert cellist who is this year a graduate student in music at the University of Connecticut.

As they waited for the giant El Al airplane that brought her from Israel to land, they reminisced about Mrs. Meir.

Gideon Meir, 7, the youngest grandson, talked about the month-long visit they had with the Prime Minister in Tel Aviv last summer and the delicious gefiltefish she had prepared for them.

Daniel, 9, said his grandmother was, “very busy,” and added, “A President doesn't work as hard as a Prime Minister.” But he said, he did not want to be either.

Amnon, 11, the eldest of the grandchildren, recalled a helicopter ride Golda Meir took them on last summer and said he wanted to be a pilot.

“At heart, she's really a homemaker,” said Clara Stern of her elder sister, the Prime Minister, Mrs. Stern, from Bridgeport, Conn., added that she was not surprised that Golda became Prime Minister. Recalling their youth in Milwaukee, she said, “Even then, Golda was a leader. When she was nine, she organized a club at school to raise money to buy textbooks for children.”

Menachin's wife, said she resents hearing Mrs. Meir described as “a tough leader.”

“She's one of the kindest, most considerate people. She's tough only because she has tough problems.”

“Yes,” added Mrs. Stern, “She thinks like a man—no trivialities—but the idea that she is tough like a man is a lot of nonsense. She loves beautiful clothes, jewelry and she loves to give presents.”

“They say she comes here to shop for planes,” the Prime Minister's daughter-in-law continued. “But she would love nothing better than to go to Macy's basement and shop for kitchen gadgets. She loves buying kitchen gadgets.”

“Or buying toys for the grandchildren,” Mrs. Stern added.

Mrs. Meir wore a black and white tweed suit, black gloves and ivory necklace and carried white gloves.

She wore no makeup and her frizzled dark graying hair was pulled severely back from a center part to a heavy bun at the nape of her neck.

She walked at a slow pace because her heavy legs are plagued with phlebitis and varicose veins. On the flight from Tel Aviv she propped her legs up in front of her and read Israeli and London newspapers and some official papers before closing her eyes for one of her quick naps that enabled her to outwork any of the men around her.

When people ask the deep-voiced former Milwaukee school teacher what it is like for a woman in her statesmanship role, her answer is “I wouldn't know. I was never a man.”

Prime Minister Meir is never at a loss for words but is reluctant to talk about herself. Those who have worked through the years with her are ready with anecdotes, however, that tell more about her than she herself would ever disclose.

“She has managed to bridge the gap between being a woman and a Prime Minister. But her womanly qualities come out on occasions,” one aide said.

“She won't go to sleep at night while the Israeli soldiers are over the border on military operations. She leaves word to be telephoned when they return. When the word comes, she answers the telephone on the first ring.”

In a crisis, instead of wringing her hands, Mrs. Meir lights another cigarette.

“She's a chain smoker but puts the cigarettes away when photographers are around. She says she does not want to influence young people to smoke,” the aide said.

But Mrs. Meir adds, “at my age, there's no danger of dying young.”

At the end of a long day of conferences and crises she often goes into her bathroom at 2 a.m. and washes her hair. “She always washes her own hair though. She never went to a hairdresser in her life,” said Lou Keddar, the Prime Minister's personal assistant who accompanied her on this visit.

Mrs. Keddar, who was deputy head of the Department of Africa Ministry before becoming Mrs. Meir's personal assistant, said the Prime Minister selects her own clothes and has “very simple tastes.”

“She cleans her own shoes, too, because she thinks she can do it as well as anyone,” Mrs. Keddar added.

The Prime Minister wears her hemlines at mid-calf but is not opposed to the mini-skirts that are also popular in Israel.

Mrs. Meir has a married daughter who lives on a collective farm in Israel and delights in visiting her. She dotes on her five grandchildren, “but she doesn't have a complex of being a mother to everyone, or look upon herself as being the mother of a nation,” the aide added.

She is not a great orator, but when she speaks it is from the heart, almost never from a prepared text.

Addressing the crowd estimated at 20,000 which filled the park at Independence Hall today, Mrs. Meir spoke without notes. It was not one of her so-called tough speeches, but a sentimental one.

It was her 10th visit to the City of Brotherly Love and she told the applauding thousands, “We have no hatred for anyone. We want peace for everyone . . . there is no joy in war or winning the war. There is joy and peace in work . . . joy in what this city stands for, brotherly love.”

It was a speech that brought her a standing ovation and a kiss on the cheek by Philadelphia Mayor James J. H. Tate.

At home, Mrs. Meir loves to cook, but doesn't use the kitchen as an escape from state duties.

“She'll start a conference in the lounge, and as it runs into the night the group will follow her into the kitchen, talking around the table while she prepares omelettes at the stove,” Ben-Haim said.

When she relaxes, it is with a good book or classical music. She has a large collection of records.

Although she now lives in the Prime Minister's residence and enjoys the fringe benefits of that office, she keeps her own three room flat in the northern part of Tel Aviv. She and her husband moved to Palestine in 1921 and were subsequently separated.

As Prime Minister, she has a chauffeured car but prefers to sit in front rather than alone in the back seat.

During the period she was out of office, after resigning as foreign minister, she didn't have a car and was often seen standing waiting for the bus.

ADJOURNMENT

Mr. BYRD of West Virginia. Mr. President, if there be no further business to come before the Senate, I move, in accordance with the previous order, that the Senate stand in adjournment until noon tomorrow.

The motion was agreed to; and (at 5 o'clock and 10 minutes p.m.) the Senate adjourned until tomorrow, Friday, September 26, 1969, at 12 o'clock noon.

NOMINATIONS

Executive nominations received by the Senate September 25, 1969:

SUBVERSIVE ACTIVITIES CONTROL BOARD

Paul J. O'Neill, of Florida, to be a Member of the Subversive Activities Control Board for a term of 5 years expiring August 9, 1974, vice Leonard L. Sells, term expired.

IN THE MARINE CORPS

The following named officers of the Marine Corps for temporary appointment to the grade of captain:

Joseph C. Abrams
Bruce J. Acker
Gordon E. Ackley, Jr.
James F. Adams
Jack W. Allstock
Ervin E. Akers
Alfred B. Alberts
David G. Albizo, Jr.
Arthur I. Alexander
Frank A. Alexander
Homer L. Allen
James M. Allen
Paul W. Allen
Raymond K. Allen
Robert L. Allen
Ronald H. Alnutt
Henry D. Amos, Jr.
Robert D. Amos, Jr.
John J. Anaya
Marvin R. Andelin
Charles F. Anderson
Douglas E. Anderson
Melvin L. Anderson
Wilbur L. Anderson
William E. Anderson
James A. Andes
George E. Andrews
Donald F. Andrus
James E. Annis
Salvatore Anselmo
Anthony R. Arbisì
Robert J. Arboleda
Gavin C. Ardolino
Billy T. Arnold
Everett C. Arnold
George J. Ash
Calvin H. Ashley
Raymond F. Asselin
Robert O. Atherton
Michael J. Avellino
James A. Ayotte
Harry K. Azarian
Robert L. Bachstein
Peter R. Badger
Bernard J. Baeza
Charlie E. Bailey
George H. Bailey
Walter F. Bajkowski
Donald G. Baldwin
Grant H. Baldwin
Ernest N. Ballinasay
Ronald A. Ballus
John F. Baltes
Edward A. Banaszek
Henry F. Banaszek
Curtis J. Bare
Robert A. Baribeau
Richard L. Barineau
Charles P. Barker
Robert L. Barker
Glen E. Barnes
William P. Barnes

Robert K. Barnett
James W. Barotti
Hector Barrientes
Wade H. Barrier
Bonie P. Barron
James M. Barry
Lawrence E. Barry
James N. Bartlett
Robert C. Bash
Henry S. Bass
William E. Bass
Michael J. Bastyr
Salvatore A. Battista
William P. Bau
John W. Bauer
Robert E. Baurle
Francis J. Bausemer
Marvin H. Bechtel
Arthur R. Beck
Edgar L. Becker
Durham J. Belanger
Travis E. Belcher
George Beley
Augustus D. Belgotti
Thomas C. Belkonen
Walter H. Bell
Richard T. Bellis
Arthur J. Belleville, Jr.
Eugene R. Benjamin
Gilbert T. Benjamin
Thomas G. Benson
Anthony B. Benz
Bobby F. Bequette
Roger J. Berger
Bernard L. Bersano
William R.
Bertagnolli
Allan C. Bevilacqua
Raymond R. Bickel
III
Frederick S.
Beisinger
David D. Bigness
George A. Bille
Walter G. Bines, Jr.
Thomas F. Bingham
Donald W. Blair
Marvin S. Blair, Jr.
Robert W. Bland
Kenneth L. Blass
Otis W. Bledsoe
L. O. Belvins
William C. Blivin
Billy R. Blocker
Ray L. Bloxom
Oscar E. Bly
Robert A. Bock
Lee D. Bodkin
Gary M. Boggess
William R. Boggs
Robert A. Bogniard
Jackson D. Boley, Jr.

Francis G. Bonin
Juan B. Bonini
James M. Bonneau
Michael J. Bornemann
Richard E. Bos
Leslie W. Boston, Jr.
Donald R. Botsford
John F. Bouldin
Leo C. Boutin
John H. Bower
Daniel C. Bowers
Ralph C. Bowers
John W. Bowman, Jr.
Lindy E. Bowyer
Robert C. Box
Richard R. Boyd
Everett J. Boyser, Jr.
Donald Brady
John A. Brady
Kenneth G. Bragg
Leo A. Brandenburg
Patrick M. Brey
Franklin D. Brier
Jerry J. Briggs
George A. Brock
Austin W. Bromley
Charles E. Brookfield
John V. Brooks
Ronald D. Brooks
Theo I. Brooks
Arthur C. Broska, Jr.
George H. Brouillette
Charles W. Brown
Edward H. Brown, Jr.
George R. Brown
Herbert D. Brown
Jerrell M. Brown
John P. Brown
Kermit E. Brown
Norman Brown
Richard M. Brown
Thomas L. Brown
William A. Brown
William A. Brown
Fred D. Broyer
George M. Bryant
James H. Buchholz
Edwin L. Buell
Delbert A. Bullock
Olin L. Bumgarner
Vernon B. Bunnell
Robert D. Bunner
Richard G. Burcham
James R. Burle
John R. Burke
Robert G. Burkhard
Harold G. Burley, Jr.
William R. Buringame
Earl V. Burnett
Robert D. Burnett
Robert J. Burns
Jack H. Burrell
Walter R. Burroughs
Harry E. Buser, Jr.
Brice L. Bussell
Stephen W. Butchko, Jr.
Erston Butler
Ronald L. Caldwell
Fred J. Call
Thomas E. Campbell
Thomas P. Candlen
Joseph A. Canonico
Robert L. Capeci
Robert A. Cardell
Floyd A. Carlson, Jr.
James D. Carman
George Carnako
Robert F. Carroll
H. C. Carpenter
Robert J. Carroll
Milton E. Carson
Joseph M. Carter
Tommy A. Carter
William L. Carter, Jr.
David B. Carver
Andy Casey
Howard L. Casey
Jackie V. Casey
Bert Cass

James E. Casti
James A. Cathcart
Norman C. Cefall
Herbert Chandler, Jr.
James M. Chapin
James L. Chapman
Daniel D. Chase, Jr.
Jerome M. Chase
Jerry D. Chase
Percy L. Chastang
Pedro Chavez
Earl F. Chin
Julian R. Choate, Jr.
Clayton C. Christensen
James K. Chun
Earl V. Church
Robert P. Cipriani
Richard G. Cirka
Curtis R. Clark
Donald J. Clark
Leonard T. Clark
Thomas J. Clark
Raymond C. Clausen
John P. Clelland, Jr.
Duane T. Clemens
Edgar L. Clemons
Harold K. Cleveland
David M. Clickner
Gerald R. Clifford
Charles S. Cline
Rollin W. Cline
Paul B. Clontz
Oliver P. Cobb, Jr.
Rex G. Coble
Ralph E. Cochran
Ernest Cockrell
Peter P. Coconis
Huey C. Coffy
Keith E. Coughenour
Robert E. Cole
Clinton R. Coleman
Harold J. Coleman
Charles B. Collins
Charles G. Collins
Donald C. Collins
William J. Colton
Charles G. Comer
Anthony R. Condroski
William R. Connell
Patrick J. Connor
John M. Conyers
Charles E. Cook
Dannie L. Cook
Freddy V. Cook
James A. Cook
Paul M. Cook II
Charles S. Cooley
Joseph R. Cooper, Jr.
Warren E. Cooper
Franklin L. Cornelius
Jose F. Cortez
Anthony J. Cotterell
Stanley E. Cottle
Robert J. Coulter
Ronald K. Coulter
Billy R. Courtney
Charles K. Cox
Kenneth L. Crabb
Gordon N. Crane
Ronald E. Crane
Chandler C. Crangle
Keith D. Creech
Billy D. Crews
Jack E. Crippen
Roger A. Critzer
Edward J. Croghan III
Richard A. Cronin
Robert Crosby
John T. Crowe
Norvin A. Croy II
Willard D. Crull
William L. Culp
Fledge E. Cummings, Jr.
Carl R. Curry
Albert Curtis
Otis F. Curtis IV
Richard M. Cushman
Homer S. Cutlip

Karl W. Czapow
Raymond F. Czubachowski
Edwin L. Dailey, Jr.
Terrence R. Dale
Wayne R. Dale
James T. Daley
Carl B. Damon
Johnny L. Daniel
Joseph P. Darcy
James J. Dargan
Martin H. Darity, Jr.
Walter C. Daskan
Gerald B. Daugherty
Daniel Davis
David A. Davis
George K. Davis
Lawrence Davis
Louis L. Davis
Robert D. Davis
William J. Davis
Lester L. Dawdy
Charles L. Dawson
Richard Deaver
Anthony A. Degenaro
Paul L. Degrenier
Richard V. Degryse
Harold J. Deibert
James N. Deitrich
Vaughan E. Delk
Thomas R. Delux
Russell L. Demers
Marshall C. Dennison
James D. Depletro
Homer D. Detrich
Jewel L. Devereaux
William F. Dewert
Charles H. Dewey
Charles J. Dey
Herman W. Dial
Kenneth R. Diana
John A. Dianish
Kenneth W. Dias
James V. Dibernardo
Donald L. Dickerson
Thomas C. Dickey
Curtis Dillard, Jr.
John W. Dillinger, Jr.
Richard H. Dittman
Donald S. Ditto, Jr.
Jeff A. Dobbs
Billy W. Dockery
Dan P. Dollison
John J. Dolphin
Walter Domke
Albert A. Dornbach
William D. Doughty
III
Jesse Downey
Robert M. Downie
David B. Downs
Thomas J. Doyle
Charles L. Drew
Stuart H. Drew
John F. Driggs, Jr.
John F. Drivick III
Paul F. Drnec
Richard D. Duff
William E. Dunham, Jr.
Harvey Dunn
John F. Dunn
Richard L. Dunning
Roy G. Duran
Charles D. Duree III
Jerry W. Durham
Kenneth G. Durham
Sidney E. Durham
George H. Dustman, Jr.
H. L. Dykes
Robert E. Dzialo
Monte W. Eagle, Jr.
Jackie L. Eaton
Rex T. Eckley
Charles D. Eckman
Samuel N. Econom
Brian P. Egan
Lee K. Eggers
William A. Eichholz

Harold T. Elder
Victor B. Elder II
Ralph T. Eldon
Johnnie L. Eller
Thomas M. Elliott
Vernon R. Elliott
Roger J. Ellis
Calvin D. Emanus
Fred C. English
Leroy N. Enos
Thomas M. Ereth
John W. Erly
Morris L. Ervin
Sherman R. Ervin
Allen H. Eshleman
Donald V. Esmond
Vernon C. Estep
Robert J. Ette, Jr.
James L. Eute
Michael J. Evans
William R. Evans
John R. Everett
Walter R. Fabinisky
Alfredo Falcon
Roy F. Falgout
Victor H. Farles
Roland C. Farr
Robert C. Farrand
Richard A. Farrington
Wayne E. Faulkner
Keith L. Felderman
Theodore K. Felner
Mitchell M. Ferguson
Francis R. Ferrino
Joseph G. Ferrari
James E. Feryan
Marvin H. Fey
Bobby J. Fields
James E. Fields
Richard F. Finnie
Thomas G. Firth
Joseph V. Fisher, Jr.
Norman Fisher, Jr.
Don W. Fishero
Stephen A. Fitzgerald
Robert J. Fladd
Ronald D. Fleming
Freddie E. Fletcher
Morris O. Fletcher
Arturo Flores
Henry A. Floyd, Jr.
Johnny M. Floyd
Edward H. Flynn
Nicholas A. Foley
Ronald J. Forbell
Edwin C. Ford, Jr.
William G. Ford
William E. Forrest, Jr.
Donald L. Foss
Sterling J. Foster III
Charles W. Fox
Gerald E. Fox
Adrian X. Fraker
John H. Fraser
Roland A. Frech
Robert R. Frederickson
Mitchell C. Freem, Jr.
James E. French
Stanley L. French
Barton J. Friebolin
Donald H. Fritz
Daine L. Fulton
Richard D. Furbee
Buddy R. Furber
Arthur J. Furtney, Jr.
Frank R. Gamble, Jr.
John L. Gangwer
Charles P. Garber
James H. Garbier
Alfredo S. Garcia
Robert H. Garcia
Ralph G. Gardner
Richard G. Gardner
Ronald G. Garland
Charles D. Garrett
Joe D. Garrett
Robert Gaskill
Raoul J. Gaubert
Ray H. Gaul, Jr.
Logan T. Gay, Jr.
Carl O. Gearhart

- Van F. Gearhart
 Robert B. Geddis
 Robert P. Gehrdes
 Paul Gehring, Jr.
 Oscar A. Gellenbeck
 Robert J. Georges
 Perry H. Gesell
 Gene R. Gibbs
 Haywood P. Gibbs
 William A. Gibney
 Horace M. Giles
 Sam A. Gill
 Ronald F. Gingras
 George A. Giroux
 Robert E. Glauster, Jr.
 Dearl A. Glenn
 Marvin S. Glidden
 Richard C. Gloady, Jr.
 John D. Glover
 Alfred M. Godin
 John B. Gogulski
 Edward J. Gomeau
 Heriberto Gonzalez
 Victor B. Gonzalez
 James E. Goodine
 Samuel L. Gordon
 George W. Gorman
 William M. Gorman
 George J. Gornic
 Joseph A. Gorzynski
 Frank Goshey
 Keith R. Gould
 Joseph A. Goulet
 Oliver F. Gour, Jr.
 Gerald L. Goyette
 Edward J. Grabus
 Terry P. Graham
 Leo J. Grassilli, Jr.
 Ainslie A. Gray, Jr.
 Earl L. Greathouse
 Lawrence K. Green-
 burg
 Russell E. Greene
 John W. Greenfield
 Robert K. Gretton
 Samuel E. Griffin
 Raleigh R. Griffiths
 Davis I. Grigg
 Richard H. Grunwald
 Phillip A. Grzanich
 David L. Guffey
 Doyal R. Guice
 Frederick A. Guille
 Alfred N. Gunkel
 William D. Guy
 Robert P. Gwinn
 Howard P. Hagan
 Stephen H. Hagan
 Robert L. Haines
 Jim B. Hale, Jr.
 Charles K. Haley
 Thomas L. Hall
 Thomas E. Hamic
 William M. Hamilton
 Edwin A. Hamlin
 William H. Hamlin
 Martin H.
 Handelsman
 Darrel W. Hanger
 Charles T. Hansen, Jr.
 Richard C. Hansen
 Clois L. Hanus
 Herman Harlan
 Kenneth D. Harmon
 Arnold C. Harrell
 Charles D. Harrell, Jr.
 Roosevelt Harrelle
 Billy D. Harrington
 James R. Harris
 Robert L. Harris
 John T. Hart
 Donald N. Hartman
 Joseph R. Harward,
 Jr.
 Gerald R. Harwood,
 Jr.
 Richard P. Haskell
 Ronald E. Hase
 Robert L. Haste
 Sidney T. Hastings
 Robert E. Hatadis
 Emmett L. Hatch
 William G. Haught
 Everett W. Haukaas
 Dale D. Hawkins
 Dicky E. Hawkins
 Emerson W. Hawkins
 Harold D. Headrick,
 Jr.
 Richard D. Heald
 Jewel M. Heard
 George Heatley
 Billy L. Heaton
 Kenneth J. Hebert
 Norman C. Hedgecock
 Donald E. Heim
 Gordon E. Heishman
 Solomon S. Hellinger
 Joel K. Helm
 James E. Helmick
 William C. Helton
 Michael J. Hemming
 Richard D.
 Henderson
 Wallace Q.
 Henderson
 William L. Hendrix
 Herman C. Henry
 Harley W. Herman
 Charles R. Hern
 Andrew G. Herold, Jr.
 David F. Herr
 John M. Herzog
 Robert J. Hester
 George A. Hiatt
 Virgil D. Hiatt
 Robert Hickerson
 William W. Higgs
 Gerald W. Hillard
 Roy L. Hilliard, Jr.
 James E. Hillman
 Howard R. Hines
 Rex L. Hinman
 James D. Hintz
 Robert C. Hitt III
 Clifton L. Hix
 Ellis R. Hobart
 George E. Hodge
 Joel A. Hodge, Jr.
 John A. Hodges
 Charles R. Hoffman
 George R. Hofmann,
 Jr.
 Richard J. Hogan
 Billy R. Holmes
 George A. Holt, Jr.
 Vernon P. Holter
 Richard F. Hoogerwerf
 Ronald E. Hoover
 John J. Hornak
 David L. Horne
 William D. Horsfall
 John W. Horton
 Howard L. Hostrander
 Thomas E. Howard
 William C. Howey
 Robert A. Hradsky
 Clarence Hudson
 Jimmy R. Hudson
 Jacob W. Hughes, Jr.
 Thomas Y. Hundley
 Homer G. Hutchinson,
 III
 Gary T. Huth
 Larry W. Hutson
 Edward C. Hyland
 Robert W. Imhauser
 Donald A. Innis
 Joseph W. Irvine
 Larry N. Israel
 Rolf R. Iversen
 James W. Ivey
 James E. Ivy
 Charles H. Jackson
 James W. Jackson
 Randall N. Jacobsen
 Danny D. James
 Richard C. Janssen
 Roland Jarrell, Jr.
 Ralph H. Jenkins
 Charles R. Jernigan
 Franklin E. Jessee
 Joseph M. Jewett
 Francis Jiminez
 Albert E. Johnson
 Bobbie J. Johnson
 Dale L. Johnson
 David F. Johnson
 Dennis W. Johnson
 George O. Johnson
 James A. Johnson
 Martin B. Johnson
 Paul C. Johnson
 Robert J. Johnson
 William D. Johnson
 Darrell G. Johnston
 George L. Joiner, Jr.
 James E. Joiner
 Kenneth D. Joles
 Charles S. Jolly, Jr.
 Allen L. Jones
 Charles T. Jones
 Earnest J. Jones
 Floyd S. Jones
 Jimmy C. Jones
 John A. Jones
 Kenneth W. Jones
 Linza J. Jones
 Lynn F. Jones
 Paul D. Jones, Jr.
 Richard W. Jones
 Walter K. Jones
 John E. Journey
 Richard P. Jozwiakow-
 ski
 John E. Julian
 Paul Julich, Jr.
 Herbert S. Kahl
 Roger E. Kammerer
 Lee D. Kane
 Robert J. Kane
 William J. Kane, Jr.
 Jacob Kappel, Jr.
 Brantley E. Kearney
 Joseph R. Keating
 Clyde E. Keeler, Jr.
 David R. Keene
 Eugene L. Keiter
 Harry L. Keller
 Daniel W. Kelly
 Joseph J. Kelly
 Samuel C. Kelly III
 Richard K. Kemmerly
 Edward D. Kemmis
 Bruce A. Kemp
 Peter C. Kendall III
 Delbert E. Kennedy
 James M. Kent
 Raymond L. Kentner
 Carl B. Kerpford
 Richard J. Kerch
 Arthur J. Kidd
 Raymond E. Kiemel
 James Kight
 Frank D. Kilbourn
 John J. Kiley, Jr.
 Bobby P. Killian
 John D. Kimberl
 Frederick L. Kingery
 George C. Kinslow
 Robert W. Kirk
 William S. Kirk-
 patrick
 Harold D. Klein
 John M. Knack
 Joseph G. Knagge
 John R. Knapp
 Coleman R. Knowles,
 Jr.
 Earl L. Knox
 John S. Kociolek
 Richard T. Kohl
 Theodore R. Kolb
 David L. Kolek
 Raymond S. Komo
 John G. Koran, Jr.
 Ambrose E. Korn, Jr.
 Leo W. Kraft
 Joseph S. Krajewski
 Frederick W. Krell
 Edward J. Kresty
 Roland L. Labarge
 Robert D. Labash
 Don C. Lacey
 Horace W. Lacy
 Samuel G. Lada
 Robert W. Laferte
 Michael S. Lainhart
 Donald E. Lake
 Robert B. Lamborn
 Glynn P. Lambert
 Carl E. Lamey
 Henry J. Lamontagne
 Francis W. Lamotte,
 Jr.
 John C. Lamson
 Dale F. Landrum
 Benny W. Lane
 Gerald S. Lane
 Elbridge W. Lang
 Richard G. Lanthier
 Edward J. Larkin
 Allen W. Larrabee
 John H. Larson
 Thomas R. Larsson
 Fred C. Lash
 Jerry V. Lasher
 Leonard W. Latour
 Clarence C. Latshaw,
 Jr.
 Antonio Lauretta
 Michael R. Layman
 William H. Leach
 James P. Leathers
 Carl J. Leblanc
 Ralph Ledger
 John A. Lee
 Lendith Lee
 Thomas W. Lee
 Jack L. Leininger
 Theodore W. Lepak
 Larry G. Lephart
 Eugene S.
 Lewandowski
 Ralph Lewis
 Robert C. Lewis
 Brian K. Lile
 John M. Lilley
 John C. Lincoln
 Samuel E. Lindsay,
 Jr.
 Robert F. Linn
 Bobby M. Lisenbe
 Foster Little, Jr.
 Frank E. Littlebury
 Arthur I. Littlefield,
 Jr.
 Roy L. Littrell
 Robert A. Lloyd
 Charles E. Lockwood
 Arron K. Lockyer
 Robert L. Loeffler
 Garland A.
 Longhouser, Jr.
 John W. Lowe
 David J. Lucas, Jr.
 Harry A. Lucas
 Troy A. Lucas
 Dean C. Lucht
 Jimmie L. Lucy
 Allen J. Lum
 Kenneth O. Lutz
 John F. Lynch
 Peter Lynch
 Robert A. Lynch
 Donald E. Lyons
 Joseph E. Lyons
 Dana F. MacCormack
 Colin R. MacIver
 Jeff G. Mackins
 Jimmie E. Madden
 Donald P. Magers
 Norbert L. Majewski
 John T. Maloney
 Thomas D. Maloy, Jr.
 Arthur N.
 Mangham, Jr.
 John A. Manning
 James P. Mannion, Jr.
 Tommy E. Manry
 Joseph L. Marr
 James J. Marshall
 Herbert P.
 Martello, Jr.
 Bobby O. Martin
 James J. Martin
 Joseph L. Martin
 Kenneth W. Martin
 Louie G. Martin
 Nelson R. Martin
 Paul S. Martin
 Thomas D. Martin
 Carlos Martinez
 Richard L. Maruhn
 Lester E. Mashburn
 Michael R. Mason
 John W. Matchett
 Junior L. Matherly
 Joseph R. Matkowski
 Joseph C. Matte
 Leland J. Matte
 Roberto P. Mauriclio
 Don K. Maxon
 Daniel M. Maxwell
 Kenneth N. May
 Herman P. Mayfield
 Kenneth L. Maynard
 Harold D. Mayo, Jr.
 Phillip S. Mayo
 Arthur Mays, Jr.
 James J. McCabe
 Daniel N. McCain
 Alonzo B. McCall
 Jimmy E. McCall
 George J. McConnell
 Richard S.
 McConnell, Jr.
 James S. McCormack
 Edward F.
 McCourt, Jr.
 Thomas McCourt
 Cleo H. McCranie
 John W. McCue III
 Joe E. McDaniel
 Joseph A. McElroy
 Ronald R. McElvain
 Joseph McGann
 Milburn McGinniss
 Mack L. McGlumphy
 Alvin L. McGrath
 Jacy McKee, Jr.
 James J. McKnight
 Albenious P. McLean
 James W. McLellan
 Raymond J. McManus
 Harry D. McMenamin
 Jack L. McReynolds
 Bert L. McSpadden
 Donald G. McWhorter
 Charles E. Means
 Alfons J. Medinis
 Phillip E. Meek
 Joseph R. Meeks
 Bobby L. Meier
 Eugene G. Meiners
 David H. Melson, Jr.
 Edward F. Mercer
 John A. Merlino
 Robert G. Merrell
 Ward B. Meston
 William O. Meyer, Jr.
 Charles P. Micucci
 Arthur U. Middleton
 Walter M. Mielnicki
 Joseph A. Migliacci
 William R. Miles
 James C. Millard
 James E. Miller
 Ralph H. Miller
 Robert L. Miller
 Sherwood M. Miller
 Walter N. Miller
 William A. Miller
 James E. Milne
 Harry E. Minch
 James G. Mitchell
 John A. Mitchell
 Dale A. Moen
 Cecilio Montoya
 David Mook
 Bill Z. Moore
 Clarence G. Moore
 Frank O. Moore, Jr.
 Robert D. Moorhead
 Aurelio Mora
 Jimmy B. Morgan
 Pasquale J. Morocco
 Allan R. Morris
 Kenneth A. Morris
 Richard L. Morris
 Arthur E. Morrison, Jr.
 Irwin D. Morrison
 Joseph R. Morrissette
 Lawrence W. Moss
 William A. Mossor
 Dean V. Mott
 Dean L. Mottard
 Joseph Mouton
 Donald L. Mowatt
 Peter F. Mullins
 William R. Mulvey
 Warren E. Munn
 John E. Murray
 Earl G. Myers, Jr.
 Hugh G. Myers, Jr.
 Richard D. Myers
 Thomas E. Nadolski
 Gilbert L. Nason
 Frank Natt, Jr.
 Paul G. Nauth
 Gerard T. Neely
 Albert C. Nelson
 David E. Nelson
 Edward A. Nelson
 Thomas S. Nelson III
 John W. Nemeth
 Allen D. Nettleingham
 Billy R. Newman
 Denver L. Newman, Jr.
 Ronald J. Neyt
 James D. Nichols
 Scott G. Nickell
 John S. Nicolopoulos
 Joseph R. Nix
 William F. Nixon
 Gerald E. Norris
 Patrick T. Norton
 John J. Nozar
 James E. O'Brien
 James E. Odum
 Robert C. Ogg
 Patrick J. O'Leary
 Howard W. Olmsted
 Roy C. Olson
 Ruel E. Ordway
 Bobby L. Osborne
 Edward V. Osborne
 Hansel E. Osborne
 Stanley M. Osenkoski
 Yoneo Ota
 W. P. Overcash
 Albert A. Owen
 James R. Owens
 Charlie C. Owens
 Robert E. Owsley
 Frederick H. Page
 William R. Painter
 Rodney L. Palling
 George J. Papciak
 Robert T. Paris
 Joseph A. Parker, Jr.
 Howard G. Parrott
 Donald J. Parton
 Ronald J. Pascual
 Robert R. Pase
 Eugene L. Pate
 Hobart D. Patterson,
 Jr.
 James H. Patterson
 Robert E. Patterson
 Edward J. Paurazas
 Alfred J. Pavlik
 Walter A. Payne
 Charles P. Peabody
 Patrick A. Pearce
 James A. Peili, Jr.
 Robert H. Pendarvis
 Earl Pennington
 Huetta D. Perkins
 Richard P. Perry
 Sterling R. Peters
 William J. Peters
 Carl E. Peterson
 Robert A. Peterson
 Michael N. Petruna, Jr.
 Rudge Petry

- Otto W. Peyer, Jr.
Frank L. Pfeiffer
Francis L. Pfrimmer
Douglas R. Phelps
James L. Philipp
Lloyd G. Phillips
Kenneth W. Phipps
John J. Pieratt
Abel D. Pierson
Troy J. Pigeon
Jean Pinguet
Sam Pisacreta
Kenneth E. Pitcher
Michael G. Pitts
Robert S. Plaisance
Robert F. Plots
Erie L. Plunkett, Jr.
Willard D. Poe
Lawrence D. Poling
Stanley D. Pomichter
Paul E. Pope, Jr.
Raymond Post, Jr.
Ronzel E. Postalwait
Gerald T. Pothier
Donald D. Potter
William B. Powell, Jr.
John A. Preigovisk
Dwight L. Price
Fred R. Price
Jimmie Price
Ronnie K. Price
Thomas L. Price
William S. Price, Jr.
George W. Purnell
Joseph J. Quaglia, Jr.
Anthony P.
Quebodeaux
Richard R. Raffel
John C. Ralph
Nelson P. Ralph
David R. Randall
David S. Randall, Jr.
Geoffrey K.
Rasmussen
Donald Ratcliffe
Robert E. Ray
Ernest A. Raymond
Edward P. Ream
Robert R. Rebscher
James S. Rector
John L. Redifer
Robert E. Redlinger
Thomas F. Reed
Charlton L. Register
Lawrence M. Rehmann
James R. Reichler
Dewitt E. Reid, Jr.
Robert H. Rempel
Thomas T. Renau
Robert E. Renno
Trace J. Reynolds
David W. Rice
Robert E. Rich
Edward T. Richards
Kilburn E.
Richardson
Ollen R. Richey
Robert L. Richter
Lester Rickman, Jr.
Peter J. Ricks, Jr.
Charles N. Riley
Brian A. Rinot
Robert W. Rippl
Jerome E. Riser
Harry F. Roberts
Leo W. Roberts, Jr.
Thomas G. Roberts
George N. Robinson
Neil H. Robinson
Robert L. Robinson
David B. Robison
James J. Roche
Richard D. Rodriguez
Jerry D. Roe
Walter A. Rogers
William P. Rohleder
Thomas E. Rollins
Joseph F. Romeo
Warren H. Rooks
Clyde A. Roper
George R. Roser
- Richard E. Rote
Jack C. Rothrock
Claude T. Rudd
Eugene J. Ruder
Zebedeo L. Rush
Gerald A. Rushlau
Charles E. Russell
Vincent B. Russell, Jr.
John R. Ruth
Fernand H. Sabourin
Daniel M. Salazar
Gerard Salazar
John G. Saldivar
John B. Samples
Robert F. Sandmeyer
John Sandoval, Jr.
Mathew J. Sarin
Peter P. Sauger
William F. Sawyer
Kenneth W. Schenck
Melvin A. Scherer
John A. Scheurich
Robert L. Schlott
Lyle F. Schmehl
Gary M. Schmidt
Milford D. Schmidt
Ralph C. Schmidt
Elwyn K. Schoppaul
Michael L. Schott
Robert E. Schrader
Klaus D. Schreiber
Charles E. Schuette
Harold R. Schuster
Peter G. Schutz
Donald W. Schwanke
Henry J. Schwartz
John H. Schwelm
Billy H. Scott
James H. Scott
Wayne J. Scott
Arthur J. Seaman
Martin A. Selby
Walter S. Sellers
William H. Sexton
Gerald C. Seybold
Billy J. Shahan
Richard A. Shamrell
Joseph P. Shandor, Jr.
Donald R. Shaw
Oscar E. Shaw
John F. Sheehan
Lloyd E. Shelkey
Isham G. Shell, Jr.
Millard M. Shell
John L. Sheppard
Robert L. Sheridan
Leonard R. Shifflette
Thomas R. Shine
Henry D. Shiver
William E. Shoemaker
Russell E. Shroyer
Dean G. Shultis
Franklin D. Shupe
George Sickels, Jr.
Tony Silen
Clyde B. Simmons
Edward J. Simon
Jack Sims
Robert M. Slater
Bobby B. Sloan
Curry L. Smith
Donald W. Smith
Joe F. Smith
John E. Smith
Larry E. Smith
Lawrence W. Smith
Lloyd M. Smith
Michael Z. Smith
Ralph A. Smith
Charles W. Snedeker
Nathaniel L. Snodgrass
Russell A. Snodgrass
Aloysius N. Sobkowiak
Francis E. Sobotor
Charles R. Soldner
Martin Sorenson
Nell R. Sorenson
Jerry E. Sorrell
Martin D. Sosa, Jr.
Lawrence L. Spacek
Billy R. Sparks
- Winfield A. Spear
Roger V. Speeg
Charles W. Spencer
Robert A. Spiczka
Robert E. Spitze
Dennis E. Springer
Harold W. Stambaugh
Thomas B. Stamper
James E. Stant, Jr.
Lloyd E. Stanton, Jr.
Harold J. Stdenis, Jr.
Jack L. Stebbins
Lloyd M. Steele
Richard A. Steele
William D. Steeves, Jr.
William J. Steffan
Bobby Stelman
Earl W. Sterling
Irvin J. Stevens
J. D. Stewart, Jr.
Robert E. Stewart
Frederick C. Stilson
Idus E. Stinson
James A. Stockdale
David S. Stoltzfus
Floyd L. Stolz
Gerald A. Stone
Terry W. Stone
Rawlin D. Strom
Richard H. Strong
Richard H. Struble
Donald R. Sturm
Raymond P. Sturza
Charlie F. Suarez
Charles A. Sullivan
Francis H. Sullivan
Charles T. Surles
Lawrence L. Sutler
Terry O. Sutton
James D. Svitak
Donald G. Swanson
Eugene Swidonovich
Larry C. Swinea
Dale C. Synnes
Loyce M. Tackitt
Togialuga Tafaofa
Theodore E. Tanzey
William H. Tawney
Charles R. Taylor
Steve F. Taylor
Thomas W. Taylor
Charles J. Templin
Delbert M. Tennant
Jack T. Terrell
Thomas J. Terrell
Gerard P. Tetu
Darrell L. Thacker
Paul Thobois, Jr.
John H. Thomas
Paul R. Thomas
William N. Thomas
Chester R. Thompson
James B. Thompson
Jerry C. Thompson
John L. Thompson
Arvin L. Thornton
David R. Thrasher
Randall K. Tickle
John Tidwell
Franklin L. Tims
Richard E. Toepfer
Owen J. Toland
Masao Toma
William G. Tomlinson
Brandon L. Tracy
Normand C. Tracy
Edward L. Trainor
William E. Treadwell
William W. Treon
Eugene M. Trippleton
Luis L. Trujillo
David C. Tunmire
William D. Turnbull
William F. Tyndall
Robert R. Tynnismaa
James J. Unger
Jerry Urtescu
Larry J. Urquhart
Michael F. Valdez
Stephen Valent
Arthur V. Van
- Ivan L. Vance
Marshall C. Vance
Richard C. Van Cott
Wallace E. Vandenberg
William E. Varnadore
Vincent J. Venanzi
David D. Vernon
Leroy Vigil
Michael D. Villarreal
Alan J. Vincelette
Donald D. Visnick
Eric P. Visser
Edward G. Volz
William C. Waggoner
Charles I. Wagner
Larry F. Wahlers
Charles L. Walker
Lowell A. Walker
William D. Walkup, Jr.
Charles E. Walsh
Clyde T. Walters
Bobby L. Wamble
Thomas R. Ward
Richard E. Warne
Jesse R. Wasson
James M. Watson
Gerald A. Watts
John R. Watts
Deland C.
Weatherford
Louis E. Weatherford
John M. Weathersby
Patrick J. Webb
Richard D. Webb
Ralph L. Webber
Robert J. Weeks
Allen E. Weh
Frank E. Wehrly, Jr.
Darvin A. Weikel
George J. Weilant
Charles J. Weins
Stanley R. Welch
Arthur J. Weldon
Noian W. Weidon
Daniel L. Welker
Herbert D. Wells
Howard R. Wells, Jr.
William L. Wenger
Howard F. Wesner, Jr.
Raleigh B. Westbrook
John K. Wetter
James M. Wheatley
John W. Wheeler
William L. Whipple
Herman White
Jacky I. White
Robert L. White
William A. Whiting
Thomas H. Whitlatch
Richard O. Widger
Thaddeus D. Wiener
William C. Wiggins
William A. Wiktoerek
James L. Wilding
Kenneth J. Wilkerson
Digby H. Willard
Michael W. Willett
Albert Williams
Joseph H. Williams
Marvin L. Williams
Ted E. Williams
Leon Williamson
Thomas W. Williamson
Carl E. Wilson
Eugene S. Wilson
Jimmie J. Wilson
Guy H. Winkleman
Harry L. Winters
Hershel E. Wisdom
Merton T. Witham
Michael J. Wittsell
Harry Witten
George H. Witthoeft
Pasquale
Wojciechowski
Charles M. Wood, Jr.
Millard W. Wood
- Samuel J. Wood
Elmo R. Woodland
Albert L. Woodral
Henry C. Woods
James M. Woods
Robert L. Woodward
Peter A. Woog
James E. Wooliever
Richard M. Wozar
Billy J. Wright
Burl M. Wright
Karl E. Wuest
Richard N. Wyant
- Thomas L. Yadon
Jere W. Yost
Arthur C. Young
Donald C. Young
Louis L. Young, Jr.
Theodore A. Youngblood
Nels C. Youngstom, Jr.
John M. Zalipski
John S. Zdanowski
Joseph A. Zeitvogel
Larry P. Zenns
Edward M. Zerbe

The following-named officers of the Marine Corps for temporary appointment to the grade of first lieutenant:

- James L. Anderson
Ronald H. Asmus
John J. Asta
James E. Bailey
Henry W. Baldwin
Deryll B. Banning
Albert E. Bauman, III
Charles E. Beard
James A. Belfiore
Charles R. Bell, Jr.
Luther A. Bolenbarker
Dennis L. Boudreaux
Gary L. Brandt
Boyd Brummett
Gerald S. Bucklin
Marcus J. Bumm, Jr.
Allen F. Burton
James J. Burton, Jr.
Carl F. Cain, Jr.
Everett J. Campbell, Jr.
Donald K. Carman
William W. Chapman
Thomas L. Clemons
Kenneth V. Cole
Michael L. Cook
Edwin M. Cooper
James W. Coward
Daniel D. Critchfield
John W. Curry
David D. Dail
Charles A. Dankmyer, Jr.
Oscar Delagarza, Jr.
Armand H. Desjardin
David B. Dorn
David C. Duberstein
Gordon L. Duke
William L. Dunn
Eugene H. Dunning
George E. Dyer
Claude M. Elliott
Peter M. Farris
Donnie L. Fauver
Clyde L. Fisher
Edgar Franklin, Jr.
Paul L. Frederick
Steve M. Fuqua III
Anthony L. Gasper
Leon E. Gingras
Richard F. Golec
Paul D. Gordon
John P. Graff
William W. Green
John W. Guild
Gene H. Haga
John D. Hamm
David L. Harris
Thomas W. Hayes
Richard A. Hedin
Patrick H. Hill III
Ernie W. Howe
- Donald W. James
James R. Jennings
Robert D. Jones
Richard H. Kayser
Richard L. King
Bruce B. Knutson, Jr.
Ernestine A. Koch
James A. Kuch
Ralph V. Lanning
Richard L. Lewis, Jr.
William M. Liebenow
Joseph R. Linko
Thomas C. Lish
Redmond J. Loftus, Jr.
Howard Lovingood
William J. Lucas
Patrick J. Lynch
Thomas W. Mackie
Orbia B. Martin
Salvador Martinez, Jr.
James F. Mazur
Billy R. McCrary
Thomas J. McIntyre
David D. McNally
Linwood H. McNeill
Robert M. Miller
Thomas S. Miller
Kenneth L. Mitchell
John V. Morris
William A. Mullins
Melvin P. Neu
James R. Oldham
Elhanan Pennington
John D. Perry
Johnnie E. Phillips
Robert K. Potter
John H. Quackenbush
Billy G. Ratcliff
Virgil G. Rhoads
Gerald L. Rodden
Duane L. Rose
John F. Rush
Ray H. Scott
Richard E. Scott
John R. Shultz, Jr.
Joseph A. Silvoso
Danny L. Simpson
James L. Thompson
George J. Trautman
John F. Velardo
Durward C. Waddill
William J. Walker
Frederick M. Waller, Jr.
Lawrence Ward
Loyd T. Weeks
James H. Weigert
Herbert J. Werner
Frederick A. Wilson
Larry L. Wine
John D. Wright

INTERSTATE COMMERCE COMMISSION

Robert Coleman Gresham, of Maryland, to be an Interstate Commerce Commissioner for the remainder of the term expiring December 31, 1974, vice Wallace R. Burke, deceased.

DEPARTMENT OF DEFENSE

Robert Louis Johnson, of California, to be an Assistant Secretary of the Army, vice Russell D. O'Neal, resigned.