REPORT OF THE STEEL TRIPARTITE COMMITTEE

HEARING

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

NINETY-SIXTH CONGRESS

SECOND SESSION

DECEMBER 4, 1980

SERIAL NO. 96-H60

Printed for the use of the Committee on Environment and Public Works

U.S. GOVERNMENT PRINTING OFFICE
70-966 O WASHINGTON : 1981

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

JENNINGS RANDOLPH, West Virginia, *Chairman*

MIKE GRAVEL, Alaska
LLOYD M. BENTSEN, Texas
QUENTIN N. BURDICK, North Dakota
JOHN C. CULVER, Iowa
GARY HART, Colorado
DANIEL PATRICK MOYNIHAN, New York
GEORGE J. MITCHELL, Maine

ROBERT T. STAFFORD, Vermont
HOWARD H. BAKER, JR., Tennessee
PETE V. DOMENICI, New Mexico
JOHN H. CHAFEE, Rhode Island
ALAN K. SIMPSON, Wyoming
LARRY PRESSLER, South Dakota

JOHN W. YAGO, JR., *Staff Director*
BAILEY GUARD, *Minority Staff Director*

CONTENTS

REPORT OF THE STEEL TRIPARTITE COMMITTEE

THURSDAY, DECEMBER 4, 1980

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, D.C.

The committee met at 1 p.m., in room 4200, Dirksen Senate Office Building, Hon. Jennings Randolph, chairman, presiding.

Present: Senator Randolph.

OPENING STATEMENT OF HON. JENNINGS RANDOLPH, U.S. SENATOR FROM THE STATE OF WEST VIRGINIA

Chairman RANDOLPH. Good afternoon, ladies and gentlemen. Before we get to the subject of this hearing I would like to take a moment to say that this will probably be the last meeting of this committee for the 96th Congress. I will not be the chairman, as you know, in the 97th Congress. I will be the ranking minority member of this committee.

We have a change of command, as it were, but the commitment will not be changed.

The members of this committee will approach the subject matter with the desire to be helpful, differences occurring, but not animosity surfacing whatsoever.

I have liked that about this committee in the 14½ years that I have been privileged to share, with others, the responsibility for our efforts.

Having said all of that, it might be good for just a moment—John, would you discuss, for the record, the makeup of our committee in the 97th Congress?

Mr. YAGO.[1] Yes, sir, Mr. Chairman.

As of now the committee overall will increase in size from 14 to 16 members. At this time there are scheduled to be nine of those members Republicans, and seven Democrats. The composition, retaining on the Democratic side, will be Senator Randolph, who will become ranking minority member, Senator Bentsen, Senator Burdick, Senator Hart, Senator Moynihan, Senator Mitchell, and we understand that Senator Baucus has been assigned as a member of this committee.

Chairman RANDOLPH. That is correct.

Mr. YAGO. On the Republican side, Senator Stafford will become chairman and others on the Republican side will be Senator Baker, Senator Domenici, Senator Chafee, Senator Simpson, Senator Symms, Senator Abdnor, Senator Murkowski, and Senator Gorton.

[1] John Yago, staff director, Committee on Environment and Public Works.

Chairman RANDOLPH. I would like to add to what you have said, John, in reference to the membership. I think it is noteworthy that during his tenure as the minority leader of the Senate, Howard Baker did not remove himself from membership on this committee. I am very happy to report that he will not remove himself now as you have indicated. He will, as the majority leader, continue to be a member of this committee. He has further said the only way that he would want to leave the committee is if the Senate rules themselves call for a change so that majority, and apparently the minority leaders could not serve as active members of the subcommittees.

So I am very happy that Senator Baker, now Majority Leader Baker, will continue to work with us.

Now to the matter at hand.

President Carter announced his program for the steel industry, its workers and communities on September 30. At that time I promised that this committee would consider the recommendations of the Tripartite Committee before the end of this year. This hearing is to examine the environmental aspects of the recommendations.

The purpose of the Tripartite Committee was to review and evaluate the future of the American steel industry and to recommend possible solutions to problems confronting the industry. It provided a public forum where the American steel industry, labor, and the Federal Government could engage in a three-way discussion of the problems affecting management, labor, and the public.

The Tripartite Committee was chaired by the Secretary of Labor and the Secretary of Commerce. It included representatives from the Department of the Treasury, Office of the Special Trade Representative, the Environmental Protection Agency, steel labor and steel management. I commend all members for their participation in this vital discussion of the steel industry, and for their working together to propose solutions to the problems of the steel industry.

The steel industry stands in a unique position with respect to environmental requirements. No other industry is so capital-intensive and so in need of capital-intensive modernization. Because of the nature and quantity of uncontrolled steel wastes and the physical magnitude of corrective actions needed, no industry has made or continues to face expenditures of such a magnitude and representing so great a percentage of its monetary needs. However, as the Tripartite Committee says in its report, resolution of the major environmental regulatory issues potentially affecting steel industry modernization will not alone achieve the goals of the Tripartite effort. The working group on environmental protection agreed that the proposals must be part of a broader revitalization policy designed to promote modernization of the steel industry.

Steel-producing facilities in West Virginia and elsewhere would be affected by the proposals of the Tripartite Committee. These proposals are designed to avoid seriously degrading air quality, while freeing urgently needed capital for use in the modernization of steel facilities. It is important that the benefits of modernization be enjoyed by the communities which will bear the burdens of a 3-year delay in the installation of air and water pollution control equipment.

The working group on environmental protection in the Tripartite Committee has proposed a series of recommendations. These include an amendment allowing the EPA Administrator to approve a 3-year delay of the December 31, 1982 deadline for compliance by a steel facility with Clean Air Act requirements. Such a delay must result in accelerated capital investment for modernization of steel-producing facilities within the company. The industry must come into full compliance before the end of the deferral period, the quality of the environment must not suffer any further degradation during the delay, and the delay is the minimum necessary to carry out the purposes of the amendment. The recommendations also include a similar proposal for an amendment to the Water Pollution Control Act giving extensions for compliance with the best available technology requirements. The group also recommended that current water discharge permits be extended until the best available technology regulations are established or at least the rulemaking procedure is well underway.

The last environmental recommendation is regulatory in nature. It involves an expansion of the bubble concept. The bubble concept evolved as a way to analyze a facility which may have several sources of emissions. Instead of each source being controlled separately, the facility is visualized as if it were under a large dome or bubble with one emissions plant. The agreement reached by the Tripartite Committee was that EPA should explore ways to make the bubble policy more available to the industry.

I look forward to the dialog with the panel of witnesses we have assembled today. Our first witness is Ms. Michele Corash who will testify on behalf of the Environmental Protection Agency Administrator Douglas Costle, who could not be here.

Michele, you are the General Counsel of the Environmental Protection Agency.

Would you summarize your statement, which will appear in the record?

STATEMENT OF MICHELE CORASH, GENERAL COUNSEL, ENVIRONMENTAL PROTECTION AGENCY

Ms. CORASH. With pleasure, Mr. Chairman.

I will try in a very few words just to summarize the remarks which I will be submitting for the record. (See p. 12.)

As you know, the President created the Tripartite Committee 2 years ago, made up of representatives of the industry, union, and the executive branch of the Government to advise him on steel matters. The EPA participated in the environmental working group which is one of the working groups formed from the Tripartite Committee as a whole. The result of that group's efforts has been a proposed amendment to the Clean Air Act, which we have been reviewing with many interested parties, and which we will be submitting to this committee when it is ready.

The concept of that amendment was a joint response of the members of the Tripartite Committee to the unique problems that face the steel industry, problems which no other industry faces in terms of both environmental controls and modernization and problems which have particular urgency. I was in the audience, Mr. Chairman, the night that the President announced the Tripartite

package to the steel caucus and heard your very eloquent description of the pressing problems which confront this industry and the importance of those problems to the Nation's well-being. I agreed with your assessment of the need for urgent action to address these problems and we at the EPA look forward to working with you as ranking minority member and with the members of your committee in addressing those problems and in implementing the recommendations of the Tripartite Committee.

Thank you.

Chairman RANDOLPH. Thank you very much, Michele. This is an example of the spirit of cooperation, is it not? Not a reluctant cooperation, but, speaking for your agency today, you are ready for the counseling process to go forward with the understanding that there is an urgent need to know exactly what we can and cannot do and see if we can do it in concert, rather than through competition. Is that right?

Ms. CORASH. Absolutely. I think we are all surprised and very pleased at the effective results of the Tripartite Committee's efforts and we think it will be a useful way to resolve some of these important issues in the future.

Chairman RANDOLPH. Just one further question. Do I understand that not every part of the draft legislation has the agreement of all parties; is that correct?

Ms. CORASH. That is correct, Mr. Chairman. I did provide your staff with the most recent draft of the legislation on which we have been working. I think it is fair to say that we are close to agreement, but we are still working on some aspects of that.

Chairman RANDOLPH. Thank you very much.

George Stinson, we are very happy that you sit with us again today. If it is provincial, I am delighted to explain it. I like National Steel because a part of National Steel is located in West Virginia. That is the subsidiary called Weirton Steel in the northern part of our State. We are not provincial as to the employees because they come down from Pennsylvania and come across the river from Ohio. But they do work in Weirton Steel in Hancock County, W. Va. How many are employed even now with all the problems we have at Weirton?

Mr. STINSON. Mr. Chairman, we have about 10,000 people on the payroll there at Weirton.

Chairman RANDOLPH. Sometimes it has reached what, 12,000 or more?

Mr. STINSON. Yes. It has. We are in the process of calling some of them back. Whether it will get back to 12,000 depends on how the market goes, but it will certainly be something above 10,000.

Chairman RANDOLPH. I thank you, Mr. Stinson. That is encouraging. It is helpful.

I want to say for the record, reflecting my personal viewpoint, a theme that I continue perhaps to drum too often, but it is that this Government under Republican leadership or Democratic leadership, the White House or on the Hill and vice versa, that we must realize that the strength of our country really exists at the highest level when men and women are at work because that is the only way that the dollars are produced. It is when taxpayers through

productive jobs are working that at least we have a base which is very sound and hopefully very solid for our future.

Mr. Stinson, would you wish to make a brief comment in reference to matters that we are talking about and then to have your complete statement included in the record? (See p. 32.)

STATEMENT OF GEORGE STINSON, PRESIDENT, NATIONAL STEEL CORP.

Mr. STINSON. Thank you very much, Mr. Chairman. I will hold my remarks to a very few brief observations. I am here as the industry vice chairman of the environmental working group of the Tripartite Committee and with me is Mr. Philip Masciantonio, vice president, environment and energy of the United States Steel.

We deeply appreciate your arranging this hearing today and for this reason. As Ms. Corash has indicated, there is, and as you have indicated even more pointedly, a need for prompt action and what is perhaps most important, action on the environmental part of this plan that was submitted by the President in September. A most critical part of this plan is to provide for a stretchout arrangement at the discretion of the Administrator of EPA, with a number of safeguards which have been carefully crafted into the arrangement and are being reflected now in the legislation that is being drafted with the help, I might say, also, of the representatives of various environmental organizations who are represented here today by Fran Dubrowski.

I want to say that in all of this we have the full agreement and commitment to serve the public health, either in the short range or in the long range. Our concern has to do with issues which are not directly related to public health.

Therefore, Mr. Chairman, it is very helpful to us to have this hearing and begin to make the record based on which action can be taken hopefully early in the year to provide this 3-year stretchout in case of the air deadline.

If it is delayed for any appreciable period of time into let's say the middle of next year, it will be very difficult for us to work out any benefit from the extension because we will already have been forced to move forward more quickly than this plan contemplates.

There are other issues, as you know, Mr. Chairman, beside the stretchout. With respect to them, however, since they do not seem to involve any necessity for action in the Congress, I would only observe that we have been moving along quite rapidly, the EPA and particularly Ms. Corash have been most helpful and cooperative in trying to make progress in these other indicated areas.

Finally, Mr. Chairman, let me say simply this: That we do come here as a unique case. We think this has been recognized by the EPA, as indicated by Ms. Corash's statement, it has been underlined by President Carter, it has been underlined now by President-elect Reagan, but we do not come here as a pleader who has done nothing to help himself. We have commissioned a study, which it is impossible for us to develop ourselves because of the antitrust laws, an appraisal of exactly where the industry is in its compliance with the environmental laws. So we have engaged an outside engineering firm, the prestigious and highly regarded Arthur D. Little firm,

to confirm how much money we have spent, how much remains to be spent, what has been accomplished up to this time.

We have not released that report because there is some disagreement that I, at least, would characterize as minor. We hope, however, to release that report in January, and I think it will show a highly credible effort based on which we feel that we can in good conscience come to the Congress with representatives of labor and the Government and the environmental community and ask for this assistance.

Finally, Mr. Chairman, just one word. I think that I would be remiss without saying for myself and I am sure I reflect the views of my colleague, that your service as chairman of this committee has been most distinguished and has served the best interests of the Nation in the highest degree. And we look forward naturally to working with those who will be in the majority position, but we will miss you, Mr. Chairman, very much.

Chairman RANDOLPH. Mr. Stinson. I will not try to thank you because if I said 1,000 "I thank you's" that would only mean that I am very grateful.

I do want to say that during these coming days and weeks and months and years I am not going to not be sitting on the bench. I am going to be coming up to bat and that is not that I am trying to defeat any other team. The team I speak of is all of us here today. We want that team, through understanding and rapport, with differences being brought to a consensus, and then we shall do what is absolutely necessary to be done.

I never saw too many battles won on Capitol Hill where cleavage was the marching word. It is only where finally there has been cooperation of one type or another to be sure sometimes hard to come by but I think it is absolutely necessary.

So we all share this commitment and because of what you have said here today, refreshing our minds as to what has been done and what must be done, that is the reason we are meeting here today, even though in a sense we would like to have met longer with more participation, more discussion, but we are actually keeping a commitment one to the other, frankly, the commitment of our Federal Government and the agencies within it, to realize that the steel industry is a basic industry and it must be treated with not the utmost disdain, but the utmost devotion.

Mr. McBride, your views? You have come before our steel caucus. You have helped us many times. We know of your valuable efforts in connection with the tripartite committee. Would you speak as have the others in somewhat the format that I suggested?

STATEMENT OF LLOYD McBRIDE, PRESIDENT, UNITED STEEL WORKERS OF AMERICA

Mr. MCBRIDE. I hear you and I understand you. And I will be brief. I do want to say, though, that I and the people I am privileged to speak for are deeply appreciative of your devotion to solving this problem and the time and the energy that you have devoted to helping us find a solution to a very serious problem.

I had briefed down the statement that has been presented and I am going to now brief it down again out of consideration for the points that you have made.

So I would simply say this: That our union is not seeking revisions to the air quality environmental standards applicable to the steel industry but rather an enforcement strategy designed to assist industry to modernize the facilities in the industry. The 3-year stretchout period for compliance with the Clean Air Act was consistent with the recommendations of the tripartite committee which have been accepted by President Carter and I too was there and I heard your comments and your determination to get the show on the road which we are now about doing.

The recommended environmental enforcement strategy is predicated upon a commitment by industry to invest in steel facilities and traditional steel communities and to comply with environmental standards. I want to say that other than the environmental recommendations of the tripartite committee, United Steel Workers is not seeking any further changes in environmental laws.

I would close by attempting to make one point. It seems clear to me that the clean air and clean water problems that have been posed by operations of the steel industry are going to be corrected. There is going to be a solution to those problems but I am concerned about how we solve those problems. It can be solved by modernization, by equipment, installing equipment that can be afforded and as the money becomes available put in place to clean up the air and the water as the pollution is contributed by the steel industry. There is another way that it can be cleaned up and that is simply by the continuing act of closing steel mills and unless the industry does continue to modernize, unless it has the cash flow in which to devote to modernization of the industry, some of which will come as a result of the legislation that is going to be considered here, unless it does modernize, then their contribution to pollution of the air and water will be eliminated, but only by dead plants, dead communities, and I do not think that should be allowed to happen. They can and through this process this will contribute to making the money available by stretching out the requirement to expend moneys on environmental problems. It will contribute to the solution of not only the environmental problems but the future welfare of the industry and this country. Thank you.

Chairman RANDOLPH. Thank you very much, Lloyd. How many steelworkers when the industry we will say is strong, using that word advisedly, are employed throughout the country?

Mr. MCBRIDE. In basic steel roughly half a million, something between 400,000 and a half a million.

Chairman RANDOLPH. How many States will be involved directly in that sort of program?

Mr. MCBRIDE. Almost every State would be involved, either in the production or distribution.

Chairman RANDOLPH. Thank you very much. We will have some written questions; would that be agreeable?

Mr. MCBRIDE. Fine.

Chairman RANDOLPH. Thank you very much.

Fran Dubrowski, will you talk with us now?

STATEMENT OF FRAN DUBROWSKI, STAFF ATTORNEY, NATURAL RESOURCES DEFENSE COUNCIL

Ms. DUBROWSKI. Yes, Mr. Chairman. I would like to say it is a pleasure to be here and testify today. The subject before this committee, pollution control requirements for the steel industry, is a matter of great concern to us. The industry is one of the country's largest sources of air pollution yet most of its plants are located in densely populated areas. Despite a decade of pollution control efforts, we have yet to attain minimum health standards in these areas. So whenever we talk about extending clean air deadlines for the industry it is important to ask the question, Is the extension adequately safeguarded?

The tripartite proposal which has been supplemented by discussions between environmental representatives, the industry, the union, and government, contains a number of safeguards which reduce the risk of delay to health and the environment. My testimony outlines the most important of those safeguards. There is no need to reiterate them here. The one thing I would emphasize is that this proposal is accompanied by a strong commitment on the part of the steel industry to meet clean air requirements. At a meeting which was actually suggested by Mr. Stinson we discussed with Mr. Stinson and David Roderick of United States Steel, Donald Troutline of Bethlehem Steel, and Bill De Lancey of Republic Steel, the subject of clean air requirements. They affirmed the industry's commitment to achieve primary ambient air quality standards. They acknowledged that the tripartite proposal if enacted into law would remove their desire for further steel specific amendments to alter clean air requirements and deadlines. Without these safeguards the tripartite proposal would be markedly different. It could precipitate unwarranted extensions of compliance deadlines. But with these safeguards the proposal preserves the goal of a clean and modern industry. That is the substance of my prepared testimony.

Chairman RANDOLPH. Thank you very much. You will follow what we have suggested for all witnesses in reference to responses to questions that we might ask so that the record, when next year comes and I hope it will not be April or March, I want it to be in early February, that we dig deeply into this subject matter.

Ms. DUBROWSKI. We will be happy to answer any questions.

Chairman RANDOLPH. Mr. Hirschhorn?

STATEMENT OF JOEL S. HIRSCHHORN, OFFICE OF TECHNOLOGY ASSESSMENT

Mr. HIRSCHHORN. Thank you. Again, for the sake of time, I would only emphasize a few of the findings of the OTA study on the steel industry that differ somewhat with respect to the tripartite committee. First, we found that by itself regulatory spending cannot explain the industry's declining profitability nor its capital problems. We think that the very legitimate modernization needs of the industry require more direct and effective policies such as accelerated depreciation than the delayed compliance proposal.

Again, we have in the formal testimony a more complete analysis, but we suggest that Congress may wish to examine a delayed compliance policy that links delayed compliance with research and

development on high-risk innovative steelmaking technologies, including pilot and demonstration activities. This type of policy option would deal with very chronic competitiveness problems of the industry. And our analysis shows that whereas modernization might be increased by 5 to 10 percent with the delayed compliance proposal, R. & D. spending could be increased by as much as 50 percent.

Thank you.

Chairman RANDOLPH. Thank you very much. Are you saying, in part, that within this country we have not done what perhaps other countries have done in connection with steel production in the ways we produce it, the methodology that we pursue? Are you saying that?

Mr. HIRSCHHORN. Yes, somewhat. There has been more emphasis on innovative technology in several of the major foreign steel industries. We think that is necessary in the long term for the health of the domestic steel industry which we think is critical to the Nation; the Nation's economic and national security depend on a healthy domestic steel industry.

Chairman RANDOLPH. May I ask you, Mr. Stinson, are you in agreement with what is said there?

Mr. STINSON. Not fully, Mr. Chairman. The matter of technology is at this point worldwide knowledge. It is a matter of not having capital to implement it. We have with our various units of our mills over the years been able to either equal or exceed the technology advances abroad. We simply have not in the last 10 years had the money to implement those advances much as we would like to. I differ somewhat in my view, therefore, as to the emphasis needed on R. & D., we have done the R. & D. We know what should be done. We simply do not have the capital funds to do it. This will help us a great deal, the stretchout that we talked about, since it will make available money to be spent right away in the stretchout period on modernization. But in addition to that, Mr. Chairman, as you well know there are other parts to the President's package which deal more directly with capital formation and those are an essential part of the package.

Chairman RANDOLPH. Mr. McBride, would you wish to comment?

Mr. MCBRIDE. There is some reason to believe that the reference to the use of technology is based now on some information that has been outdated. More recent information has come to light that shows that in terms of efficiency as reflected in man-hours to produce a ton of steel, that the American industry is far ahead of every place else in the world except Japan and with Japan we are at a parity in terms of efficiency as it relates to man-hours to produce a ton of steel.

The fact that a great deal of capacity has been eliminated by plant closures and the fact that those plant closures represent facilities that were obsolete and the older facilities that have not been modernized has tended to, I hate to say it, but has tended to eliminate more of the inefficient capacity, raising the average efficiency for the rest of the industry. It is my hope that through this process and the capital that will come from this part of our program will only be a part of it. It is not the total package and it will not represent success, but it will represent a major contribution to

modernizing that part of the industry that is still in existence and can become competitive and can remain competitive for the foreseeable future if the money is made available to make each one of these plants modern and efficient.

Chairman RANDOLPH. Thank you very much.

Ms. Corash, would you wish to comment? I think a good point has been raised here.

Ms. CORASH. I found, Mr. Chairman, in the year I have spent working on steel industry matters that it is impossible to talk about the steel industry without at least devoting some time to the sins of the past, whether they be those of the Government or those of the industry, or others who have dealings with the industry.

Chairman RANDOLPH. Do you include the Congress?

Ms. CORASH. I include the Congress. I am not saying that I initiate those, but that subject does seem to crop up whenever one talks about the steel industry.

When we did our tripartite work we tried very hard to focus on the problems of the present and the future and to put aside for purposes of this discussion whose fault it was that we found ourselves in the present circumstances. We focused on what we all needed to do, what industry needed to do, labor, and indeed the Government to correct those problems and to get this industry back into a position in which it could compete with its international competitors and could meet its environmental obligations and could provide a source of employment for American workers.

The sum and substance of it is that we did not endeavor to duplicate the kind of work that was done by the OTA study. We felt what we needed to do in the days ahead was to try to turn the situation around.

Chairman RANDOLPH. Thank you.

Ms. Dubrowski? Then we will all have spoken.

Ms. DUBROWSKI. The only other comment I would like to add is that in my prepared testimony I discussed one of the safeguards of the tripartite proposal and that safeguard would require the new facilities to meet the lowest achievable emission rate and the existing facilities to have reasonably available control technology installed. This will insure that at the end of an extension period the mill is in compliance with the clean air requirements and we believe it is a very important aspect of this proposal.

Chairman RANDOLPH. I thank you all.

As you leave this hearing, I want you to believe me that within our committee I speak not only for myself, I hopefully speak for the other members that we will be active in well-reasoned ways in the coming weeks and, hopefully, so will other Members of the Congress.

As I said earlier, this is the last meeting of the committee that I shall preside over as its chairman. I do so with the thought in my own being that through these 36 years on the Hill that I have tried to think as best I could that each and every problem was each and every challenge. It is in that spirit that I would want to close the hearing today and ask to be forgiven not because I am quoting, but to be thanked for the philosophy expressed for the man who said it long ago. Abraham Lincoln in the time of crisis, another type perhaps but very real, said: "The dogmas of the quiet past are

inadequate for the stormy present. We must disenthrall ourselves. The occasion," he continued, "is piled high with responsibility but," he concluded, "if we work together we can win."

I thank you for all your courtesies and cooperation with me. We will be around working in one capacity or another on this problem that hopefully is a challenge.

Thank you very much.

[Whereupon at 1:55 p.m., the committee was adjourned, subject to the call of the Chair.]

[Statements and other material supplied for the record follow:]

STATEMENT OF
MICHELE B. CORASH
GENERAL COUNSEL
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

DECEMBER 4, 1980

GOOD MORNING, MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE. I AM MICHELE B. CORASH, GENERAL COUNSEL OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY. WITH ME IS JEFF MILLER, ACTING ASSISTANT ADMINISTRATOR FOR ENFORCEMENT. DOUG COSTLE, THE ADMINISTRATOR OF EPA, HAD WANTED VERY MUCH TO BE HERE TODAY TO VOICE HIS STRONG SUPPORT FOR THE PROPOSALS OF THE STEEL TRIPARTITE COMMITTEE. HIS SCHEDULE MADE THAT IMPOSSIBLE AND HE HAS ASKED ME TO APPEAR IN HIS PLACE SINCE I CHAIRED THE ENVIRONMENTAL WORKING GROUP OF THE STEEL TRIPARTITE COMMITTEE. I WELCOME THE OPPORTUNITY TO DISCUSS WITH YOU TODAY EPA'S WORK AS A MEMBER OF THE STEEL TRIPARTITE COMMITTEE.

TWO YEARS AGO THE PRESIDENT FORMED THE STEEL TRIPARTITE ADVISORY COMMITTEE. THAT COMMITTEE, WHICH WAS ORGANIZED TO ADVISE THE PRESIDENT AND THE ADMINISTRATION ON MATTERS RELATED TO STEEL, IS COMPRISED OF REPRESENTATIVES FROM GOVERNMENT, MANAGEMENT, AND LABOR.

IN ADDRESSING THE FUNDAMENTAL PROBLEMS OF THE STEEL INDUSTRY, THE COMMITTEE DECIDED THAT FIVE AREAS SHOULD BE

REVIEWED: CAPITAL FORMATION, TRADE, ENVIRONMENTAL AND REGULATORY MATTERS, WORKER AND COMMUNITY ADJUSTMENT, AND TECHNOLOGY. ENVIRONMENTAL MATTERS WERE CONSIDERED BY THE ENVIRONMENTAL PROTECTION WORKGROUP, MADE UP OF REPRESENTATIVES FROM THE EPA, INDUSTRY, AND LABOR.

THE WORK GROUP'S EFFORTS WERE PREMISED UPON A BASIC SET OF FACTS ON WHICH ALL OF ITS MEMBERS AGREED: THE STEEL INDUSTRY POSES AND FACES A UNIQUE PROBLEM IN TERMS OF POLLUTION CONTROL. IRON AND STEEL PRODUCTION ARE INHERENTLY DIRTY PROCESSES WHICH GENERATE VERY LARGE AMOUNTS OF AIR AND WATER POLLUTANTS. AS A RESULT, ENVIRONMENTAL CONTROL REQUIRES UNUSUALLY LARGE CAPITAL EXPENDITURES BY THE STEEL INDUSTRY. THE INDUSTRY HAS SPENT SUBSTANTIAL SUMS ON ENVIRONMENTAL CONTROLS IN RECENT YEARS. WHILE IN THE PAST THE STEEL INDUSTRY HAD MAJOR UNADDRESSED ENVIRONMENTAL PROBLEMS, IN THE LAST TWO YEARS IT'S MADE SIGNIFICANT IMPROVEMENTS. WHEREAS, IN JULY, 1978, ONLY 32% OF AIR POLLUTION SOURCES IN THE STEEL INDUSTRY WERE IN COMPLIANCE OR ON COURT ORDERED COMPLIANCE SCHEDULES, BY THE END OF THIS YEAR THAT NUMBER WILL BE UP TO 84%. BUT FULL COMPLIANCE WITH ENVIRONMENTAL STATUTES WILL REQUIRE LARGE ADDITIONAL EXPENDITURES, AT THE VERY SAME TIME THAT THE INDUSTRY MUST MAKE MAJOR EXPENDITURES TO ACHIEVE MODERNIZATION OF ITS PLANTS AND EQUIPMENT. PRESENTLY IT APPEARS THAT THE

70-966 O - 81 - 2

INDUSTRY MAY NOT HAVE SUFFICIENT CAPITAL TO DO BOTH AND MAY BE FACING A SERIOUS CAPITAL SHORT FALL. THAT IS A SITUATION WHICH POSES SERIOUS ECONOMIC AND ENVIRONMENTAL CONCERNS AND WHICH WAS THE BASIS FOR THE TRIPARTITE COMMITTEE'S RECOMMENDATION.

ALTHOUGH I THINK ALL OF US INVOLVED IN THE TRIPARTITE EFFORT BEGAN WITH SOME RESERVATIONS ABOUT WHETHER SUCH AN APPROACH COULD WORK, I THINK IT HAS WORKED VERY WELL IN PRACTICE AND COULD BE A MODEL FOR A NEW APPROACH TO SOME OF OUR REGULATORY PROBLEMS. THE KEY TO ITS SUCCESS HAS BEEN THAT THE VERY ACT OF SETTING UP SUCH A BODY PLACES PRESSURE ON ALL THE PARTICIPANTS TO COME UP WITH A RESPECTABLE PRODUCT AT THE END OF THEIR DISCUSSIONS. THAT IN TURN TENDS TO FORCE CONCESSIONS BY EACH OF THEM IN THE INTEREST OF A REASONABLE FINAL POSITION.

I BELIEVE THAT WE HAVE ARRIVED AT THAT REASONABLE FINAL POSITION AND THAT THE DETAILS OF OUR AGREEMENT DEMONSTRATE AS MUCH. MORE IMPORTANTLY, PERHAPS, IT IS A POSITION WITH WHICH EACH OF THE TRIPARTITE MEMBERS ARE REASONABLY SATISFIED. CENTRAL TO THE PROGRAM ARE COMMITMENTS FROM THE INDUSTRY TO MODERNIZE AND TO ACHIEVE COMPLIANCE WITH ENVIRONMENTAL REQUIREMENTS AND THE UNDERSTANDING THAT THE AMENDMENT WOULD RESOLVE THE SPECIAL PROBLEMS OF STEEL WITH

THE CLEAN AIR ACT, AND THEREBY REMOVE THE NEED FOR ANY ADDITIONAL STEEL-RELATED AMENDMENT TO THE CLEAN AIR ACT. SPECIFICALLY THE MEMBERS OF THE WORKING GROUP DISCUSSED THREE PRINCIPAL ISSUES: (1) WHETHER AND IN WHAT CIRCUMSTANCES STATUTORY DEADLINES FOR COMPLYING WITH AIR AND WATER POLLUTION CONTROL REQUIREMENTS SHOULD BE EXTENDED; (2) THE DEFINITION OF BEST AVAILABLE TECHNOLOGY ("BAT") FOR THE STEEL INDUSTRY UNDER THE CLEAN WATER ACT AND (3) WHETHER CURRENT RESTRICTIONS ON THE USE OF THE "BUBBLE" UNDER THE CLEAN AIR ACT SHOULD BE RELAXED.

WE HAVE REACHED AGREEMENT ON EACH OF THESE POINTS. THE AGREEMENT, WHICH HAS BEEN ENDORSED AND ADOPTED BY THE ADMINISTRATION, INCLUDES:

(1) AN AMENDMENT TO THE CLEAN AIR ACT. THIS WOULD PROVIDE A CASE-BY-CASE STRETCHOUT OF POLLUTION CONTROL REQUIREMENTS, IF NECESSARY, FOR STEEL INDUSTRY MODERNIZATION TO GO FORWARD.

(2) A COMMITMENT TO CONSIDER A SIMILAR CLEAN WATER ACT AMENDMENT.

(3) AN AGREEMENT BY EPA TO "ROLL OVER" WATER PERMITS UNTIL THE MIDDLE OF 1981, WHEN NEW WATER REGULATIONS ARE SCHEDULED TO TAKE EFFECT.

(4) AN AGREEMENT BY EPA TO ENCOURAGE EXPANDED USE OF THE BUBBLE CONCEPT.

THE CONCEPT OF AN AMENDMENT TO THE CLEAN AIR ACT WAS OUR JOINT RESPONSE TO THE UNIQUE PROBLEMS OF THE STEEL INDUSTRY. NO OTHER INDUSTRY FACES PROBLEMS RELATED TO ENVIRONMENTAL CONTROLS AND MODERNIZATION OF A SIMILAR MAGNITUDE OR URGENCY.

THE AMENDMENT WOULD NOT BE AN AUTOMATIC DEFERRAL OF COMPLIANCE DEADLINES. RATHER, IT WOULD BE A DISCRETIONARY CASE-BY-CASE STRETCHOUT OF COMPLIANCE REQUIREMENTS. WHEN A SOURCE OBTAINS A DEADLINE DEFERRAL, EFFORTS TO IMPROVE AIR QUALITY WILL CONTINUE. IN PREPARING THE AMENDMENT, WE ARE CONSULTING WITH OTHERS IN THE ADMINISTRATION AND WITH THE CONGRESS AS WELL AS WITH THE INDUSTRY, INTERESTED LABOR GROUPS, PUBLIC INTEREST GROUPS, AND THE NATIONAL COMMISSION ON AIR QUALITY.

SO THAT THESE SPECIAL NEEDS CAN BE ADDRESSED WITHOUT DISTORTING THE GENERAL DEBATE ON THE CLEAN AIR ACT, THE ADMINISTRATION WILL CONTINUE TO WORK FOR AND SUPPORT LEGISLATION TO DEAL SEPARATELY WITH THE UNIQUE SITUATION OF THE STEEL INDUSTRY.

I WOULD LIKE TO OUTLINE FOR YOU NOW THE GENERAL THRUST OF SUCH LEGISLATION.

THE AMENDMENT WOULD ALLOW THE EPA ADMINISTRATOR TO GRANT ONE OR MORE STEEL SOURCES AN EXTENSION FOR UP TO THREE YEARS OF THE DEADLINE FOR COMPLIANCE WITH THE REQUIREMENTS OF THE CLEAN AIR ACT. THE ADMINISTRATOR COULD GRANT THE EXTENSION ONLY WHERE THE FOLLOWING CONDITIONS ARE MET:

(1) THE EXTENSION IS NO LONGER THAN NECESSARY TO ALLOW THE COMPANY TO MAKE MODERNIZATION EXPENDITURES ON IRON AND STEEL FACILITIES, AND

(2) FUNDS WHICH WOULD HAVE BEEN SPENT TO COMPLY WITH THE DEADLINE WILL BE EXPENDED IN ESSENTIALLY THE SAME TIME PERIOD FOR MODERNIZATION IN EXISTING STEELMAKING COMMUNITIES; AND

(3) THE COMPANY WILL HAVE SUFFICIENT CAPITAL TO MEET REQUIREMENTS SET OUT IN THE NEW CONSENT DECREE(S) IN A TIMELY MANNER; AND

(4) THE COMPANY IS IN COMPLIANCE WITH EXISTING CLEAN AIR ACT CONSENT DECREES;

(5) THE EXTENSION WILL NOT RESULT IN AIR QUALITY DEGRADATION;

(6) THE COMPANY IS UNDER A COMPANY-WIDE JUDICIAL ORDER(S) WHICH

--ESTABLISH(ES) A PHASED SCHEDULE FOR EACH SOURCE TO COMPLY WITH AIR POLLUTION CONTROL REQUIREMENTS AS EXPEDITIOUSLY AS PRACTICAL, CONSISTENT WITH ANY EXTENSIONS GRANTED; AND

--ESTABLISH(ES) SCHEDULES FOR MODERNIZATION PROJECTS; AND;

--ESTABLISH(ES) PROVISIONS FOR STIPULATED PENALTIES, PERIODIC REPORTING AND PREVENTION OF AIR QUALITY DEGRADATION.

THOSE CONSENT DECREES ALREADY EXISTING WILL REMAIN IN FORCE UNTIL THE ADMINISTRATOR IS GRANTED THIS EXTENSION AUTHORITY AND USES IT IN PARTICULAR CASES.

THE PRESIDENT, IN RESPONSE TO ANOTHER RECOMMENDATION, PLEDGED THAT, UPON DETERMINATION OF THE LEVEL OF EXPENDITURE REQUIRED BY THE NEW CLEAN WATER ACT REGULATIONS FOR THE

STEEL INDUSTRY (THE BAT REGULATIONS), THE ADMINISTRATION WOULD CONSIDER WHETHER THERE IS NEED FOR AN AMENDMENT TO THE CLEAN WATER ACT SIMILAR TO THE ONE ENVISIONED FOR THE CLEAN AIR ACT, TAKING INTO ACCOUNT WHETHER SUBSTANTIAL ADDITIONAL EXPENDITURES WILL BE REQUIRED BY THE NEW REGULATIONS AND WHETHER THE OVERALL CAPITAL REQUIREMENTS OF THE INDUSTRY ARE AS HIGH AS PROJECTED.

BECAUSE THE BAT REGULATIONS HAVE NOT YET BEEN PROPOSED AND BECAUSE THE ADMINISTRATOR MUST CONSULT WITH VARIOUS CONCERNED GROUPS AND INDIVIDUALS BEFORE MAKING A DECISION ON THE NEED FOR A CLEAN WATER ACT AMENDMENT, WE ARE NOT YET IN A POSITION TO REPORT TO THIS COMMITTEE WHAT EPA'S RECOMMENDATION WOULD BE.

WE AT EPA ARE ALREADY AT WORK TO GIVE EFFECT TO THE REGULATORY RECOMMENDATIONS OF THE TRIPARTITE COMMITTEE REPORT. ONE RECOMMENDATION OF THAT REPORT WAS THAT STEEL COMPANY WATER DISCHARGE PERMITS BE ROLLED OVER UNTIL MID-1981. EPA HAS ALREADY ACTED ON THAT RECOMMENDATION BY SENDING A MEMORANDUM TO ALL EPA AND STATE PERMIT ISSUERS. A COPY OF THAT MEMORANDUM IS ATTACHED TO MY PREPARED STATEMENT.

IN ACCORDANCE WITH THE TRIPARTITE COMMITTEE REPORT, EPA HAS HELD MEETINGS WITH INDUSTRY REPRESENTATIVES CONCERNING

THE BAT REGULATIONS. THOSE MEETINGS HAVE TAKEN PLACE ON A REGULAR BASIS. THE DISCUSSIONS HAVE FOCUSSED PRIMARILY ON ONE SUBCATEGORY; HOT FORMING OPERATIONS. INDUSTRY REPRESENTATIVES BELIEVE THAT OF THE TWO TYPES OF STEEL PROCESSED AT HOT FORMING OPERATIONS (CARBON AND SPECIALTY), ONLY SPECIALTY STEELS CONTRIBUTE SUBSTANTIAL QUANTITIES OF TOXIC POLLUTANTS TO WASTEWATERS. THE DATA GATHERED BY THE AGENCY SHOW THAT CARBON STEEL HOT FORMING OPERATIONS CONTRIBUTE TOXIC POLLUTANTS TO WASTEWATERS IN SIGNIFICANT AMOUNTS. HOWEVER, THE AGENCY HAS AGREED TO CONDUCT A CO-OPERATIVE SAMPLING PROGRAM WITH INDUSTRY REGARDING THIS MATTER.

ANOTHER SUBJECT OF THESE MEETINGS HAS BEEN CENTRAL TREATMENT. THE INDUSTRY HAS ASKED EPA TO ESTABLISH A SEPARATE SUBCATEGORY FOR PLANTS WHICH TREAT WASTEWATERS FROM VARIOUS SUBCATEGORY OPERATIONS IN ONE TREATMENT SYSTEM. EPA IS LOOKING INTO THIS ISSUE.

ON THE SUBJECT OF MAKING THE BUBBLE APPOACH MORE ACCESSABLE TO THE STEEL INDUSTRY EPA IS MOVING FORWARD ON SEVERAL FRONTS. A BUBBLE INVOLVES ALLOWING A PLANT TO REARRANGE THE MIX OF CONTROLS ON ITS VARIOUS SOURCES OF AIR POLLUTANT EMISSIONS SO LONG AS THE NEW MIX OF CONTROLS IS ENVIRONMENTALLY EQUIVALENT TO THE OLD REQUIREMENTS. ONE

INDUSTRY COMPLAINT HAS BEEN THAT IT TAKES TOO LONG TO GET EPA APPROVAL FOR BUBBLES. TO DEAL WITH THIS PROBLEM EPA HAS DONE A STUDY AND DISCOVERED THAT A NUMBER OF TECHNIQUES ARE AVAILABLE TO REDUCE SUBSTANTIALLY THE TIME IT TAKES TO REVIEW BUBBLE APPLICATIONS (AND OTHER ACTIONS). THE RESULTS OF THIS STUDY ARE BEING CIRCULATED TO ALL EPA REGIONAL OFFICES. IN ADDITION, EPA WILL CONDUCT A PILOT PROGRAM AT ONE REGIONAL OFFICE TO ASSESS THE RESULTS OF IMPLEMENTATION OF THESE ADMINISTRATIVE TECHNIQUES.

ANOTHER OBJECTION VOICED BY THE STEEL INDUSTRY IS THAT EPA POLICY SHOULD CHANGE AND BUBBLES SHOULD BE ALLOWED AT PLANTS LOCATED IN NONATTAINMENT AREAS THAT LACK APPROVED SIPS MEETING THE REQUIREMENTS OF THE 1977 CLEAN AIR ACT AMENDMENTS. EPA IS CONCERNED ABOUT ALLOWING BUBBLES WHEN THE STRATEGY FOR TIMELY ATTAINMENT OF AIR QUALITY STANDARDS HAS NOT YET BEEN DEVELOPED AND APPROVED. HOWEVER, EPA IS CONSIDERING WAYS TO RELAX THIS RESTRICTION. AS A FIRST STEP WE ARE CONSIDERING ALLOWING BUBBLES WHICH INVOLVE PROCESS EMISSIONS IN SUCH AREAS IF THE MINIMUM LEVEL OF CONTROL REPRESENTED BY REASONABLY AVAILABLE CONTROL TECHNOLOGY CAN BE AGREED UPON AND USED AS THE BASELINE FOR THE EMISSIONS TRADES.

FINALLY, THE STEEL INDUSTRY BELIEVES THAT EPA SHOULD RELAX ITS RESTRICTIONS ON BUBBLE TRADES THAT INVOLVE OPEN DUST SOURCES SUCH AS ROADS AND STORAGE PILES. EPA NOW REQUIRES THAT THE ENVIRONMENTAL EQUIVALENCY OF SUCH TRADES BE DEMONSTRATED BY MONITORING AFTER THE OPEN DUST CONTROLS ARE IMPLEMENTED. EPA REMAINS CONCERNED ABOUT THE LACK OF ACCURACY OF PREDICTIONS OF THE EFFECTIVENESS OF OPEN DUST CONTROL AT STEEL MILLS. HOWEVER, EPA HAS ANNOUNCED THAT IT EXPECTS TO APPROVE THE BUBBLE APPLICATION OF ARMCO STEEL FOR ITS MIDDLETOWN, OHIO PLANT, WHICH INVOLVES OPEN DUST CONTROLS. THIS DEMONSTRATES THAT EVEN UNDER CURRENT POLICY OPEN DUST TRADES ARE POSSIBLE AT STEEL MILLS. EPA IS ALSO EVALUATING WHETHER THE MONITORING REQUIREMENT CAN BE REDUCED OR ELIMINATED.

EPA IS DETERMINED TO CONTINUE TO MAKE VIGOROUS EFFORTS TO MAKE THE BUBBLE APPROACH AS ACCESSIBLE TO ALL INDUSTRIES AS POSSIBLE. AND THE STEEL INDUSTRY IS IN FACT TAKING ADVANTAGE OF THIS TECHNIQUE. IN ADDITION TO THE ARMCO BUBBLE, MAJOR PROGRESS HAS BEEN MADE IN DEVELOPING AN APPROVABLE BUBBLE FOR U.S. STEEL'S FAIRLESS WORKS AND DISCUSSIONS ARE UNDERWAY ON A BUBBLE FOR SHENANGO STEEL IN PITTSBURGH. FURTHERMORE, EPA'S RECENT SETTLEMENT WITH U.S. STEEL RELATING TO ITS GENEVA WORKS IN PROVO, UTAH INCLUDED

BUBBLE-LIKE PROVISIONS. AN "INFORMAL BUBBLE" HAS ALSO BEEN DISCUSSED WITH U.S. STEEL WITH REGARDS TO ITS PITTSBURGH PLANTS. EPA HOPES THAT MORE BUBBLE APPLICATIONS WILL BE FORTHCOMING FROM THE STEEL INDUSTRY AND WILL DO ALL IT CAN TO ENCOURAGE THIS.

WE LOOK FORWARD TO WORKING WITH YOUR COMMITTEE TO IMPLEMENT THE RECOMMENDATIONS OF THE TRIPARTITE COMMITTEE. IT IS MY BELIEF THAT THE ENVIRONMENTAL ASPECT OF THE TRIPARTITE PACKAGE WILL GO A LONG WAY TOWARD REVITALIZING AN ESSENTIAL AMERICAN INDUSTRY AND PUTTING IT IN A POSITION TO MEET ITS ENVIRONMENTAL OBLIGATIONS. WE WILL ALL BENEFIT FROM THAT RESULT. I FEEL THAT THE PROGRAMS I HAVE OUTLINED HERE TODAY ARE CAREFULLY DESIGNED TO PROVIDE THE HELP THAT THE STEEL INDUSTRY NEEDS. THE BROAD BASED SUPPORT WHICH THE PROGRAM HAS RECEIVED SPEAKS BOTH TO ITS URGENCY AND ITS BALANCED APPROACH.

THANK YOU FOR THE OPPORTUNITY TO MEET WITH YOU. THIS CONCLUDES MY PREPARED STATEMENT. I WOULD BE HAPPY TO RESPOND TO ANY QUESTIONS YOU MAY HAVE.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 15 1980

MEMORANDUM

OFFICE OF ENFORCEMENT

SUBJECT: NPDES Permit Issuance
For Iron and Steel Facilities

TO: Enforcement Division Directors
State NPDES Directors

FROM: R. Sarah Compton
Deputy Assistant Administrator
for Water Enforcement (EN-335)

The purpose of this memorandum is to address methods for the issuance of permits for the iron and steel industry from the present until July 1, 1981. The preamble to the recently promulgated Consolidated Permit Regulations (45 FR 33340, May 19, 1980) sets out three possibilities:

1) Issue a short term permit, expiring no later than July 1, 1981.

2) Take no action, and therefore extend the present permit administratively, under applicable law.

3) Issue "in appropriate circumstances" a Best Professional Judgement (BPJ) Best Available Technology (BAT) permit, with a reopener clause to use after the guideline is issued.

Based on the fact that the iron and steel BAT guideline is scheduled to be promulgated July, 1981, and on my and the Administrator's discussions with the steel industry, we have decided that the expiring steel permits do not represent "appropriate circumstances" for the use of the third possibility, BPJ BAT permits with reopener clauses. Therefore, I am requesting that EPA Regional Offices not issue such permits prior to the July 1, 1981 deadline, and I recommend to NPDES states that they adopt a similar policy.

If you have any questions concerning this matter, please telephone me (FTS or Area Code 202, 755-0440) or Dr. Robert April of my staff (FTS or Area Code 202, 426-7035).

cc: Steve Shatzow
Alan Eckert

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 12 1981

OFFICE OF
GENERAL COUNSEL

Honorable Jennings Randolph
Chairman, Committee on Environment
and Public Works
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

I am in receipt of your letter of December 9, 1980, in which you posed some questions on the Steel Tripartite Committee Recommendations. Those recommendations were the subject of a December 4th hearing held by your Committee at which I represented EPA.

I appreciate the opportunity to provide these responses for your hearing record. The responses are enclosed with this letter.

I hope that these answers meet your needs. If I can be of further assistance, please contact me.

Sincerely,

Michele Beigel Corash
General Counsel

Enclosure

Follow-Up Questions for

Michele Corash

1. In the Tripartite Committee Report a condition for the extension of deadlines for compliance with the Clean Air Act is that the industry use the funds to modernize. How do you propose to enforce a company's commitment to modernize?

The draft amendment would provide for company-wide judicial decrees as one condition for obtaining deadline extensions.

In these judicial decrees each company would agree upon a schedule for its modernization projects as well as to certain penalty provisions. Like any other judicial decree, these decrees will be fully enforceable by the court in which they are entered. Periodic reporting provisions will guarantee that all parties, including the courts, are kept fully apprised of activities under the decrees and, in the event of any company's failure to act according to the terms of the decree, all parties will be able to take the appropriate actions, including seeking judicial enforcement.

2. Is the Administration's legislative proposal contingent on the steel industry's commitment not to seek additional amendments relaxing the Clean Air Act in the next session of Congress?

On September 30, 1980, President Carter announced his program for the steel industry. On the subject of an amendment to the Clean Air Act, he said:

> "In the Committee report, all parties--including the industry-- agreed that effective implementation of their recommendations would resolve the major health-related environmental regulatory issues concerning the steel industry.... I am accepting this and the Committee's other proposals because doing so will remove the need for further amendments to the Clean Air Act as it affects the steel industry during reauthorization by the next Congress. My decision is also premised on my understanding that the steel industry has committed to comply with the Clean Air Act. The conditions for obtaining extensions of deadlines will be strict, and I have been assured by the industry that when a source obtains a deadline deferral, efforts to improve air quality will continue. The amendments would only allow a stretchout--not a postponement--of investments on controls."

3. A criticism of the Tripartite Committee's proposal is that the compliance delays give relief to those companies which have been avoiding the law and penalizing those who have complied. What is your opinion of that criticism?

Under the draft language, in order to be eligible to apply for a stretchout, a company must be in compliance with any applicable judicial consent decree under the Act. In addition, the consent decree granted for purposes of the stretchout will make the company subject to a firm and enforceable commitment of compliance. A company already subject to an existing consent decree and compliance schedule is free to apply for a modification of the existing decree to obtain a deadline extension as long as it meets all the conditions included in the amendment. Therefore, the amendment is designed so that all companies can seek an extension as long as all applicable conditions are satisfied.

4. During the Tripartite Committee meetings, what other solutions were considered?

Aside from the amendment to the Clean Air Act, the only alternative that could provide meaningful relief to the steel industry that EPA considered was extension of the statutory December 31, 1982 deadline through administrative action. EPA rejected this alternative because we found that we lacked the legal authority to carry it out. The December 31, 1982 deadline is unequivocal and there is not a word in the statute giving EPA any authority to waive or extend it. We believe that if the deadline is to be extended in any way Congress is the proper body to decide the issue and amend the statute accordingly. The legislative amendment that I described in my prepared statement appears to us to be the proper and most effective course of action.

5. In your testimony, you acknowledged that there were some areas of disagreement in the legislative language being proposed by the working group on environmental protection. What are those areas of disagreement?

Since the day of the hearing, a number of discussions have been held and we are hopeful that there will soon be no remaining areas of disagreement over the draft legislative language.

6. Why do you feel that the steel industry is unique? Why will not other industries request compliance delays on the basis of their financial situation?

The steel industry needs this extension for a number of reasons. According to the consensus report of the Steel Tripartite Committee, the steel industry cannot fund for the 1979 to 1983 period the modernization expenditures necessary to maintain a competitive industry. According to the Committee's analysis, the steel industry will need approximately $26.1 billion to make necessary capital expenditures, pay dividends, and make adjustments to its working capital. The industry's sources of funds, including both internal and external sources, and an estimate of surplus funds available from nonsteel activities, is approximately $19.5 billion. The resultant shortfall range is approximately $6.6 billion in 1978 dollars.

By itself, the extension will not solve the industry's financial problem. However, the extension will have a significant effect on the problem. The extension is only one part of a larger effort to strengthen the condition of the industry and the economy. This effort also includes reinstatement of the Trigger Price Mechanism (TPM), replacement of the current depreciation system with a system providing for more accelerated depreciation, and making thirty percent of the investment tax credit refundable. Successful resolution of the industry's financial problem depends primarily on a long-run increase in the demand for steel and the prevention of unfair import penetration. We expect steel demand to improve significantly in the next few years along with the economy and we believe that reinstatement of the TPM will improve the situation.

We have compared the steel industry's financial condition with that of the chemicals, electric utility, nonferrous smelting, petroleum, and pulp and paper industries. The steel industry's situation is unique. The steel industry must devote a greater percentage of its capital to pollution control than any of these industries except for nonferrous smelting. The steel industry's ability to raise capital is worse than the other industries, as reflected by their bond ratings and debt to equity ratios. Its ability to increase prices to cover pollution control costs is worse than the other industries. Only the nonferrous smelting industry can say it has problems of a similar nature and their difficulties have already been addressed through the provision for nonferrous smelter orders in the Clean Air Act.

Statement by William J. De Lancey
Chairman and Chief Executive Officer
Republic Steel Corporation
Chairman and Chief Executive Officer
American Iron and Steel Institute
Before
The Senate Committee on Environment and Public Works
December 4, 1980

Mr. Chairman and Members of the Committee, I am William J. De Lancey, Chairman of Republic Steel Corporation and Chairman of the American Iron and Steel Institute.

This statement is submitted on behalf of the American Iron and Steel, a trade association whose 63 domestic member companies account for 92% of the Nation's steel producing capability. The American Iron and Steel Institute appreciates the Senate Committee on Environment and Public Works holding this hearing on the special problems of the steel industry and the environment.

AISI believes that America needs a strong healthy industry to provide a secure steel supply to meet the Nation's needs. The American steel industry is beset by serious difficulties, yet the domestic industry has the potential to surmount these difficulties and emerge healthy, strong, and vigorous. The American steel industry is efficient today and fully competitive in our own markets with its worldwide rivals. But, the industry in recent years has been losing its competitive edge. One of the factors contributing to this problem is the significant capital problem facing the industry. It is estimated that the U. S. steel

industry faces a minimum annual capital shortfall of $1.7 - 2 billion for the period 1980 to 1984 (in 1980 dollars) to meet modernization, environmental and safety requirements. A substantial portion of this shortfall is traceable directly to current and projected future environmental requirements.

Early in 1980, AISI published "Steel at the Crossroads: The American Steel Industry in the 1980s." This publication points to a number of Government policies which have contributed to the industry's major problems. Among other things, it singled out the need for changes in tax policy which would accelerate capital recovery; it called for modification of Government regulation, particularly in the environmental area; it urged an end to price controls in all forms; and it sought assurances that dumped and subsidized imports would not disrupt domestic markets.

One of Government's reactions to the difficulties facing the industry was the creation of the Steel Tripartite Committee to analyze and recommend actions to make possible the necessary revitalization of our industry. The Steel Tripartite Committee, made up of the Government, the industry, and the United Steel Workers, studied and discussed the industry for two years and in September, 1980, presented to the President a unanimous report recommending action in a number of areas.

Mr. George Stinson, Chairman, National Steel Corporation, will be presenting for you the details of the proposal in the environmental control area made by the Committee. As I am sure

he will note, the Committee report recognizes the need for (1) an extension of time for the steel industry in order to meet both the air and water compliance deadlines; (2) proper implementation of the "bubble concept"; and (3) equating BAT with BPT, where appropriate. We still embrace those findings as essential to further modernization of our domestic steel industry. These represent the first steps toward resolving many of the industry's environmental burdens.

Having said that, I hasten to add there are a number of other problems caused by the environmental laws, as well as the administrative interpretations thereof, which need to be addressed promptly. A serious and objective review of the air quality as well as water standards should be undertaken in light of the benefits to be achieved when compared to current and future economic, energy, and employment considerations. We believe modifications can be made in the laws and regulations which are fully consistent with protection of public health. Methods of research and the development of scientific data must also be closely evaluated to assure objectivity. Procedural changes in rulemaking and judicial review of environmental standards and regulations - in the interest of due process - are among some of the other areas which we trust this Committee will be examining in the next Congress.

The industry looks forward to working with this Committee and the Congress as well as the incoming Administration to effect changes in our environmental laws which will protect the health of our Nation and at the same time permit improvement of its economic well being.

STATEMENT BY GEORGE A. STINSON
CHAIRMAN, NATIONAL STEEL CORPORATION
ON
STEEL TRIPARTITE ADVISORY COMMITTEE
REPORT ON THE ENVIRONMENT
TO
PRESIDENT CARTER
TO
THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
DECEMBER 4, 1980

Mr. Chairman and members of the Senate Committee on Environment and Public Works, it is a pleasure to have this opportunity to appear before you today. I am appearing also as industry Vice-Chairman of the Environmental Working Group of the Tripartite Steel Committee. I am accompanied here today by Dr. Philip Masciantonio, Vice President-Environment and Energy, United States Steel Corporation. Following two years of intensive discussions between the United Steelworkers, the EPA, other representative agencies of government and the industry, the Steel Tripartite Committee was able to submit a unanimous report to the President on short-term issues facing the industry and its employees in the area of environmental control. This report was sent to the President by Secretary Klutznik on September 10, 1980.

On September 30 the President announced "A Program for the American Steel Industry, Its Workers and Communities," which included most of the provisions contained in the September 10 report. We have been informed by Secretary

KLUTZNIK AND MR. EISENSTAT THAT THIS ADMINISTRATION ENDORSES ALL OF THE RECOMMENDATIONS INCLUDED IN THE SEPTEMBER 10 REPORT. FOR THAT REASON I WILL DISCUSS ALL OF THE ENVIRONMENTAL RECOMMENDATIONS IN THE SEPTEMBER 10 REPORT IN MY TESTIMONY.

IN ORDER TO REACH AGREEMENT ISSUES WERE LIMITED TO THOSE OF MUTUAL CONCERN AMONG THE THREE PARTIES INVOLVED. IT WAS AGREED THAT LONGER RANGE ISSUES OF CONCERN TO THE INDUSTRY WOULD BE DEFERRED UNTIL THIS COMMITTEE CONSIDERS AIR AND WATER LEGISLATION IN THE NEXT CONGRESS.

ISSUES UPON WHICH AGREEMENT WAS REACHED COVER THE FOLLOWING:

1. THE PARTIES -- LABOR, MANAGEMENT AND GOVERNMENT -- AGREED THAT THE CONGRESS SHOULD BE URGED TO AMEND THE AIR AND WATER ACTS TO PROVIDE AUTHORITY FOR THE ADMINISTRATOR TO GRANT A THREE-YEAR EXTENSION TO 1982 AIR AND 1984 WATER COMPLIANCE DEADLINES. THE EXTENSION FOR WATER WAS QUALIFIED "TO THE EXTENT SUBSTANTIAL ADDITIONAL EXPENDITURES WILL BE REQUIRED TO MEET BAT." THESE STRETCHOUTS WILL REQUIRE THE COMPANY TO PERFORM THE FOLLOWING:
   A. SHOW THAT THE STRETCHOUT IS NECESSARY TO ALLOW THE COMPANY TO INVEST IN MODERNIZATION AND THAT THE DEFERRED FUNDS BE INVESTED IN MODERNIZATION DURING THE YEARS 1981 AND 1982.

B. Show that if the stretchout is granted, the company will have the funds needed to meet all pollution control requirements during the deferred period, including those being delayed.

C. The company agrees to a companywide consent agreement with EPA to comply with all requirements of the air or water acts by the end of the deferral period.

2. At the request of the Tripartite Committee EPA agreed to "roll over" all existing federal water discharge permits until June 30, 1981 and to urge States having permit authority to do the same. This will provide time for EPA to issue final BAT regulations for steel and permit conclusion of discussions between the agency and industry on the appropriate stringency of BAT for the industry on a subcategory-by-subcategory basis. It will also permit conclusion of discussions on the issue of central treatment facilities.

3. All parties agreed that the EPA Bubble Policy is an important and innovative development in environmental regulation that has the potential for significant cost savings without sacrifice of environmental objectives. It was also agreed that restrictions in the current EPA

BUBBLE POLICY MAKE IT IMPOSSIBLE FOR MOST STEEL COMPANIES TO AVAIL THEMSELVES OF THIS COST-SAVING TECHNIQUE. AT THE URGING OF STEELWORKERS AND INDUSTRY, EPA AGREED TO STRIVE TO FIND WAYS TO REDUCE CONSTRAINTS ON USE OF THE POLICY AND TO RENDER PROMPTLY ITS DECISION ON THIS MATTER.

WHAT HAS OCCURRED SINCE THIS AGREEMENT WAS REACHED ON SEPTEMBER 10? I AM PLEASED TO REPORT THAT A GREAT DEAL HAS HAPPENED. LET ME COVER EACH OF THE ISSUES IN THE AGREEMENT:

THE THREE-YEAR STRETCHOUT

NUMEROUS MEETINGS HAVE BEEN HELD BETWEEN LABOR, THE INDUSTRY, EPA, JUSTICE, AND THE NRDC REPRESENTING THE ENVIRONMENTALISTS, TO DRAFT A STRETCHOUT AMENDMENT FOR AIR WHICH CAN BE UNANIMOUSLY PRESENTED TO THE CONGRESS. OF SPECIAL SIGNIFICANCE, PRESIDENT-ELECT REAGAN ENDORSED A STRETCHOUT IN A PRESS RELEASE ON SEPTEMBER 16. QUOTING FROM THAT RELEASE, GOVERNOR REAGAN SAID: "THE STEEL INDUSTRY HAS WORKED HARD TO ACCOMPLISH THE VAST PORTION OF ITS CLEANUP TASK, AND WITHIN THE NEXT FEW YEARS WILL BE REMOVING EVEN MORE OF ITS POLLUTANTS FROM THE ENVIRONMENT. WHAT IS NEEDED IS TO STRETCH OUT THE TIME PERIOD FOR FURTHER CLEANUP." THE THREE PARTIES ARE IN GENERAL AGREEMENT ON SUCH AN AMENDMENT AND THE NRDC HAS BEEN COOPERATIVE IN PROVIDING SAFEGUARDS TO PROTECT THE PUBLIC INTEREST. IT IS OUR HOPE THAT THE MEMBERS OF THIS COMMITTEE COULD JOINTLY COSPONSOR AN AMENDMENT TO IMPLEMENT THE STRETCHOUT AS ONE OF THEIR FIRST ORDERS OF

BUSINESS IN THE NEXT CONGRESS. IF THIS AMENDMENT IS TO ACCOMPLISH ITS PURPOSE, THAT IS, ASSIST IN THE MODERNIZATION OF THE DOMESTIC STEEL INDUSTRY WHILE MAINTAINING AND ENHANCING ITS ENVIRONMENTAL ACCOMPLISHMENTS, IT MUST BE ENACTED EARLY IN 1981.

THE BAT/BPT ISSUE

DURING 1980 THE EPA RULED THAT BAT EQUALLED BPT FOR THE RUBBER INDUSTRY AND MADE A SIMILAR DETERMINATION FOR A MAJOR SUBCATEGORY IN THE ELECTRIC UTILITY INDUSTRY. SUCH DETERMINATIONS ARE PERMITTED UNDER THE WATER QUALITY ACT, WHERE THE IMPROVEMENT IN WATER QUALITY DOES NOT JUSTIFY THE COST OF BAT CONTROLS. OUR INDUSTRY MAINTAINS THAT SIMILAR CONSIDERATION EXISTS IN STEEL FOR MANY OF THE MORE THAN 50 SUBCATEGORIES ENCOMPASSED BY STEEL-PRODUCING OPERATIONS.

DISCUSSIONS BETWEEN INDUSTRY AND EPA EXPERTS ON THIS ISSUE HAVE BEEN ONGOING SINCE SEPTEMBER AND WILL CONTINUE UNTIL THE BAT REGULATIONS ARE PUBLISHED LATER THIS MONTH. FOLLOWING PUBLICATION WE WILL HAVE ADDITIONAL OPPORTUNITY TO MAKE PRESENTATIONS ON THE RECORD IN THE RULE-MAKING PROCESS.

ALTHOUGH NO FINAL DETERMINATIONS HAVE BEEN REACHED, WE ARE ENCOURAGED BY THE AGENCY'S WILLINGNESS TO EXAMINE THEIR DATA AND OURS WITH AN OPEN MIND. THEY HAVE ALSO SHOWN THE SAME OBJECTIVITY IN ATTEMPTING TO RESOLVE THE QUESTION OF

CENTRAL TREATMENT PLANTS. CENTRAL TREATMENT PLANTS HAVE BEEN INSTALLED BY MANY COMPANIES TO MEET BPT REQUIREMENTS AND NEED NOT BE VACATED BY SUBCATEGORY-BY-SUBCATEGORY BAT REGULATIONS.

THE BUBBLE

I MUST SAY THAT THE LEAST PROGRESS OF ALL HAS BEEN MADE ON THIS MOST IMPORTANT ISSUE. ALTHOUGH ON OCTOBER 20 THE EPA ANNOUNCED ITS INTENTION TO APPROVE A BUBBLE PROPOSAL FOR ONE OF OUR MAJOR STEEL COMPANIES, NO PROGRESS HAS BEEN MADE TOWARD RESOLVING THE ISSUES BEFORE THE TRIPARTITE COMMITTEE. AS STATED EARLIER, EPA HAS AGREED TO LOOK FOR ACCEPTABLE MEANS TO MODIFY CONSTRAINTS IN THEIR BUBBLE POLICY WITHIN THE LIMITS OF THE CLEAN AIR ACT. THE MOST SIGNIFICANT OF THESE CONSTRAINTS IS THAT THE BUBBLE CANNOT BE USED IN NONATTAINMENT AREAS OR IN STATES WHERE PART D STATE IMPLEMENTATION PLANS HAVE NOT BEEN APPROVED OR HAVE BEEN CONDITIONALLY APPROVED. THESE LIMITATIONS PREVENT USE OF THE BUBBLE IN MOST STEELMAKING LOCATIONS ACROSS THE COUNTRY.

THE QUESTION YOU RIGHTFULLY MUST ASK IS, WHY SHOULD THE STEEL INDUSTRY BE GIVEN A STRETCHOUT OR, FOR THAT MATTER, BE GIVEN ANY SPECIAL CONSIDERATION BY THIS OR ANY OTHER CONGRESS?

I SUBMIT THAT THE STEEL INDUSTRY IS UNIQUE IN ITS ENVIRONMENTAL PROBLEMS, AS STATED BY PRESIDENT CARTER IN HIS TRIPARTITE STATEMENT ON SEPTEMBER 30. HE SAID, "THE SITUATION OF THE STEEL INDUSTRY IS UNIQUE. THE MAGNITUDE OF THE EFFORT NECESSARY TO MODERNIZE AND REGAIN COMPETITIVENESS WILL REQUIRE THE FULL COOPERATION

OF THE INDUSTRY AND GOVERNMENT" I ALSO AGREE WITH GOVERNOR REAGAN, WHO SAID ON SEPTEMBER 16 THAT, "THE STEEL INDUSTRY MUST BE REVITALIZED, MUST BE MADE MORE COMPETITIVE WITH FOREIGN STEEL, MUST SERVE THE INTERESTS OF THE AMERICAN PEOPLE BETTER WITH LOWER COST, MORE EFFICIENT PRODUCTION." HE WENT ON TO SAY, "THE KEY TO THIS REVITALIZATION IS INVESTMENT ... IN MODERNIZATION AND EXPANSION." I AM ALSO AWARE OF THE EXCEPTIONAL ENDORSEMENT OF THESE BIPARTISAN VIEWS EXPRESSED BY THE SENATE STEEL CAUCUS, CHAIRED BY YOU, SENATOR RANDOLPH.

WHEN WE ADD TO THIS BIPARTISAN CONCERN FOR THE INDUSTRY THE KNOWLEDGE THAT THE TRIPARTITE COMMITTEE, FOLLOWING MANY MONTHS OF OPEN, CANDID DISCUSSION, REACHED THE CONCLUSIONS REPORTED HERE TODAY, WE BELIEVE OUR CASE IS WELL-FOUNDED AND WORTHY OF FAVORABLE CONSIDERATION BY THE CONGRESS.

THE INDUSTRY HAS BEEN BATTERED BY FORCES BEYOND ITS CONTROL. THESE INCLUDE AN INABILITY TO RECOVER INCREASED COSTS IN THE MARKETPLACE; FAILURE OF THE TREASURY DEPARTMENT TO ENFORCE ANTIDUMPING LAWS RESULTING IN LARGE SCALE, ILLEGAL IMPORTS OF STEEL; AND DEPRECIATION SCHEDULES WHICH MAKE IT IMPOSSIBLE TO RECOVER CAPITAL IN A PERIOD OF INFLATION. THESE NEGATIVE PRESSURES HAVE PLACED STEEL INDUSTRY PROFITS NEAR THE BOTTOM OF ALL U.S. INDUSTRY YEAR AFTER YEAR OVER THE LAST DECADE.

In spite of these problems the steel industry has made significant progress in environmental control to meet State and Federal laws. We have in place (in 1979 dollars) $4.3 billion worth of equipment to control air pollution and $3.1 billion for water pollutant control. In 1979, the industry removed 96% of the total suspended particulates from its air emissions and about 91% of the water pollutants from its effluent discharges. If there is no stretchout in air or water and if the BAT projected requirements are unchanged, we will have to spend an additional $3.6 billion for air and water quality control over the next four years. This will bring our total expenditures by 1984 to $11.0 billion. The environmental benefits for this $3.6 billion will improve air controls from 96% to 97% and water pollutants removal from 91% to 99%. If there is no extension of the 1982 air and 1984 water deadlines, the result could be to reduce our annual tonnage by two million tons, resulting in steelworker job losses of 9,000 employees. Steel related job losses could add another 25,500 lost jobs, for a total of 34,500 jobs due to short term environmental expenditures. (I should point out that this data is from a report on the industry by Arthur D. Little which has not yet been completed. There is some disagreement on the data with EPA, which is presently being resolved. The data, therefore, may differ somewhat in the final report from what I have given you today.)

THE TRIPARTITE COMMITTEE CONSIDERED THE SELF-LIQUIDATION OF ONE OF OUR MOST BASIC INDUSTRIES -- TOO GREAT A PRICE TO PAY FOR VERY MODEST ENVIRONMENTAL IMPROVEMENTS. FOR THIS REASON THEY RECOMMENDED A THREE-YEAR STRETCHOUT TO SPREAD THE $3.6 BILLION OVER SEVEN YEARS INSTEAD OF FOUR, A CAREFUL, OBJECTIVE STUDY OF PROJECTED BAT GUIDELINES TO DETERMINE WHERE BAT MAY EQUAL BPT BASED ON COST VERSUS BENEFITS, AND LIBERALIZATION OF THE BUBBLE POLICY WHERE SUCH LIBERALIZATION COULD REDUCE COST WITH NO ADDED ENVIRONMENTAL INSULT. THESE PROPOSALS APPEAR TO BE REASONABLE CONSIDERING THEIR MODEST ENVIRONMENTAL IMPACT AND THE TENUOUS POSITION OF THE INDUSTRY.

I THINK YOU GENTLEMEN WILL ALL AGREE THAT IT IS MOST UNUSUAL FOR THESE THREE PARTIES -- LABOR, MANAGEMENT AND THE EPA -- TO PETITION THE CONGRESS IN CONCERT FOR CHANGES IN ENVIRONMENTAL LEGISLATION. THE SIGNIFICANCE OF THIS EVENT CAUSES US TO BE OPTIMISTIC THAT YOU WILL ACT FAVORABLY ON THIS PROPOSAL.

A PART OF THIS PROPOSAL, THE THREE-YEAR STRETCHOUT, NEEDS YOUR LEGISLATIVE APPROVAL. THIS APPROVAL IS NEEDED QUICKLY IF WE ARE TO AVOID FINANCIAL COMMITMENTS EARLY NEXT YEAR WHICH CANNOT EASILY BE REVERSED. THE ENTIRE SHORT-TERM PROGRAM NEEDS YOUR ENDORSEMENT ADDED TO THAT OF LABOR, MANAGEMENT AND THE EXECUTIVE BRANCH OF GOVERNMENT. WE ARE HERE TODAY, ALONG WITH THE STEELWORKERS AND THE FEDERAL EPA TO URGE THAT ENDORSEMENT BY THIS COMMITTEE.

THANK YOU.

National Steel Corporation

GEORGE A. STINSON
Chairman
Phone 412-263-4211

DEC 30 1980

December 22, 1980

Honorable Jennings Randolph
U. S. Senate
Washington, D. C. 20510

Dear Senator Randolph:

Thank you again for the opportunity to present to the Committee on Environment and Public Works on December 4 the position of the steel industry on the Steel Tripartite Committee recommendations. We agree with you that these issues are very important to the economic health of the country and appreciate your statement that they deserve the special attention of the Senate.

In your letter of December 9, you raised a number of questions. Our answers to them are as follows:

1. Will the delays for compliance with the Clean Air Act free up enough capital to effectively modernize the steel industry?

The simple answer is no, but it certainly would help. The proposed amendment providing a three-year stretchout for achievement of air pollution control deadlines will not, in itself, provide enough capital for the modernization of our industry. The Steel Tripartite Committee report projected an average capital shortfall of $1.7 to $2 billion a year for the steel industry. Air pollution control capital requirements over the next couple of years are projected at $700 million per year. A stretchout of that air pollution control expenditure, thus, would not in itself be adequate to make up the capital shortfall of the industry. Nonetheless, it would provide a significant increment of that capital shortfall and, in combination with other changes in trade and tax policy, would contribute significantly to the capability to modernize our industry.

2800 Grant Building, Pittsburgh, Pennsylvania 15219

2. Why should the steel industry be granted a special delay for compliance with the environmental laws? What do we say to other industries who want similiar treatment?

The report of the Steel Tripartite Committee provides a partial answer to this question. It states, "The steel industry's capital position relative to environmental requirements is unique. No other industry is so capital intensive and so in need of capital intensive modernization. Because of the nature and quantity of uncontrolled steel wastes and the physical magnitude of corrective actions needed, no industry has made or continues to face capital expenditures of such a magnitude and representing so great a percentage of its capital needs." In the announcement of the program for the American steel industry on September 30, 1980 from the White House, the President said, "For all these reasons, the situation of the steel industry is unique. The magnitude of the effort necessary to modernize and regain competitiveness will require the full cooperation of the industry and government." Douglas Costle, Administrator of EPA, in a recent article in the "EPA Journal," said, "On the average, environmental spending next year for U.S. industry, measured as a percent of capital expenditure, will amount to something on the order of 3.9 percent, which is pretty modest. Now that figure masks the fact that in certain industries the percentage is much higher. Steel is a good example: it will run maybe about 20 percent. But that is an anomaly in a way. That is a very dirty industry with a huge capital investment to make, and in some respects the steepest hill to climb in a relatively short period of time."

The special case for steel has been made following long study by government, labor and industry. If similiar situations exist in other industries they certainly should deserve similiar consideration.

3. How will the Tripartite Committee recommendations protect against plant closing and lost jobs?

The report of the Steel Tripartite Committee specifically addressed this question. It said, "Inevitably, the modernization of the steel industry will lead to the closure of some outdated steelmaking facilities or to their replacement by new facilities. New jobs may replace older ones." "Still, some economic adjustment is unavoidable." "Government, management, and labor share an obligation to assist workers and communities to adjust to the dislocations associated with these

changes." Thus, it is clearly recognized that there will be some plant closings and some lost jobs. However, the whole program is directed to the revitalization of the industry to provide for the long-term a modern, stable, growing industry with the maximum employment consistent with such an industry position.

4. What is the industry commitment to communities affected by the modernization process?

Particularly with respect to the proposed three-year stretch-out of the requirements for capital expenditures under the Clean Air Act, the members of the Tripartite Committee, the government, industry, and the labor unions, have agreed that any money deferred from environmental spending will be invested in modernization of steel plants within existing steel communities. The real hope for these communities is that the companies can and will be able to modernize their plants in those communities, so that they can maintain the job opportunities and the tax base of those communities. Again to quote from the report of the Steel Tripartite Committee, "Of course, many workers and communities will benefit from the modernization of the industry. More efficient and competitive plants will provide more stable employment and more certain tax bases. Better plants should be cleaner plants." Thus, the amendment sought clearly will benefit the communities affected.

5. In your testimony you recommend an EPA ruling that BAT should equal BPT for the steel industry, and you compare that to a similiar ruling made for the rubber industry. After the installation of BPT, how do the discharges from the steelmaking process compare in the control of toxics with the discharges from rubber processing?

The steel industry has provided to EPA data showing that the same logic applied by the agency in its proposal for the rubber industry is applicable to the steel industry. Most of the toxics are not present in the effluent from BPT facilities; those which are present are there at extremely low levels. The degree of toxic removal in BPT facilities is high. EPA has acknowledged that these are facts and that this was their stated logic in proposing the rubber industry guidelines. EPA has pointed out, however, that there are quantitative differences among industries, and specifically between the rubber industry and the steel industry. They have said that the

quantities of materials discharged from the steel industry are much greater because the amount of water used in the steel industry is much greater. However, there have been further discussions between AISI and EPA on this issue. EPA has divided the iron and steel industry into a number of different subcategories and has said that, for some of these subcategories, they probably will set BAT equal to BPT. In what is probably the largest use of water in the steel industry, hot forming, EPA has agreed to enter into a cooperative test program with the industry to more completely evaluate the discharge of toxic materials. We anticipate that the result of that test program will be, for this major portion of the steel industry, an agreement by EPA that BAT should be set equal to BPT.

I hope these responses satisfactorily answer the questions you have raised. Should you desire further clarification of these or other issues, feel free to call on me.

Thank you again for the opportunity to participate in the hearing.

Sincerely,

George Stinson

George Stinson

TESTIMONY

BY

LLOYD McBRIDE, PRESIDENT
UNITED STEELWORKERS OF AMERICA

Our Union appears before this Committee not to seek revisions or changes in the air quality environmental regulations applicable to the steel industry but rather to emphasize, as did the White House announcement last September on the industrial policy for steel, that changes in environmental enforcement strategies can play an important role in the revitalization of the steel industry. While a portion of this role can be implemented administratively, legislative changes also are required.

The focus, therefore, is on the need for a unique environmental enforcement program applicable to the special situation existing in the steel industry -- namely, that of an extensive modernization effort. The ambient air standards have been in place and industry in general, including some steel companies, is moving towards compliance by 1982. We do not question the ambient standards nor their technological and economic feasibility. We are convinced of their potential effectiveness to lessen the enormous environmental health hazards facing the country. It would be most untimely, inequitable and unfortunate to tamper with the ambient air health standards since we are so close to their attainment. We are pleased to join with industry and government in supporting the steel-specific enforcement strategy, endorsed by the Steel Tripartite Advisory Committee, which is designed to promote environmental compliance within the steel industry, at the same time encouraging modernization.

70-966 O - 81 - 4

I - MODERNIZATION STRATEGY

THE SHUTDOWN OF THE LYKES CORPORATION'S YOUNGSTOWN, OHIO, STEEL-MAKING FACILITIES IN THE FALL OF 1977 BROUGHT TO A CLIMAX THE PERSISTENT AND DISTURBING AWARENESS THAT THE DOMESTIC STEEL INDUSTRY IS IN DEEP FINANCIAL AND STRUCTURAL TROUBLE AND THAT WITHOUT THE DEVELOPMENT OF POSITIVE PUBLIC POLICY INITIATIVES FURTHER DECAY AND PLANT SHUTDOWNS WOULD BE INEVITABLE.

IN ORDER TO PROVIDE THE FRAMEWORK TO DEVELOP SUCH POLICIES, FORMER UNDER SECRETARY OF THE TREASURY, ANTHONY SOLOMON, RECOMMENDED THE ESTABLISHMENT OF THE STEEL TRIPARTITE COMMITTEE COMPOSED OF REPRESENTATIVES FROM INDUSTRY, LABOR, AND THE GOVERNMENT. IT IS IN SUPPORT OF THAT COMMITTEE'S ENVIRONMENTAL PROTECTION PROPOSALS, FINALIZED ON SEPTEMBER 11, 1980, THAT WE TESTIFY TODAY.

THE CRITICAL FINDING OF THE TRIPARTITE COMMITTEE WAS THAT THE INDUSTRY NEEDED TO INVEST IN MODERNIZATION AT A PACE MUCH MORE ACCELERATED THAN EVER BEFORE -- AT LEAST AT A FOUR PER CENT ANNUAL REPLACEMENT RATE OR $6 BILLION PER YEAR. WITHOUT NEW CAPITAL FORMATION OPPORTUNITIES, THE COMMITTEE FOUND THAT THE INDUSTRY WOULD FALL SHORT OF ITS GOAL BY $1.7 TO $2 BILLION PER YEAR DURING THE NEXT FIVE YEARS. IT IS THE NEED TO INCREASE THE RATE OF MODERNIZATION THAT CREATES THE INVESTMENT SHORTFALL. IF THERE WERE NO NEED TO ACCELERATE THEN THERE WOULD PROBABLY BE NO SHORTFALL BUT, MOST ASSUREDLY, THERE WOULD BE MORE SHUTDOWNS. THERE ARE TWO ASPECTS OF THIS ISSUE WHICH THE UNION WISHES TO EMPHASIZE.

1. MODERNIZATION IS NEEDED IN ORDER TO MAINTAIN A VIABLE DOMESTIC STEEL INDUSTRY. THE UNION IS CONCERNED THAT THE INDUSTRY MODERNIZE, OTHERWISE WE WILL EXPERIENCE MORE PERMANENT LAYOFFS AND COMMUNITY DISLOCATIONS. IN THIS RESPECT, WE SUPPORT THE CAPITAL FORMATION PROPOSALS OF THE TRIPARTITE COMMITTEE, PROVIDED THE FUNDS REALIZED ARE REINVESTED IN THE STEEL INDUSTRY AND TRADITIONAL STEEL-MAKING COMMUNITIES.

2. WITHOUT MODERNIZATION ACCELERATION THERE IS NO CAPITAL SHORTFALL. IF THERE WERE NO NEED TO ACCELERATE THE MODERNIZATION PROCESS, THERE WOULD BE NO NEED TO DEVISE A NEW ENVIRONMENTAL ENFORCEMENT STRATEGY FOR STEEL. IN OTHER WORDS, WITHOUT RAPID MODERNIZATION THE INDUSTRY WOULD HAVE THE FINANCIAL RESOURCES TO MEET ITS ENVIRONMENTAL OBLIGATIONS, ALTHOUGH LOW-PRODUCTIVITY FACILITIES WOULD BE PHASED OUT THEREBY REDUCING STEEL-MAKING CAPACITY. HENCE, THE RECOMMENDED ENVIRONMENTAL STRATEGY IS CONDITIONED UPON AN INDUSTRY DEMONSTRATION THAT FUNDS, OTHERWISE AVAILABLE FOR ABATEMENT PURPOSES, WILL BE EXPENDED IN MODERNIZATION PROGRAMS SO AS TO IMPROVE EFFICIENCY AND PRODUCTIVITY. THUS, THE STEEL-SPECIFIC INGREDIENT, WHICH FORMS THE BASIS FOR THIS SPECIAL ENFORCEMENT TREATMENT, IS THE COMMITMENT BY THE INDUSTRY TO MODERNIZE AND IS NOT JUST A DECLARATION OF FINANCIAL DISTRESS. IT IS MORE A CONDITION OF A CAPITAL SHORTFALL RATHER THAN A SITUATION OF A CAPITAL SHORTAGE WHICH REQUIRES ATTENTION.

THE TRIPARTITE COMMITTEE REALIZED THAT A COMPREHENSIVE APPROACH WAS NEEDED TO ADDRESS THE CAPITAL SHORTFALL PROBLEM -- AN APPROACH WHICH, IN ADDITION TO ENVIRONMENTAL RELIEF, REQUIRED ADJUSTMENTS IN TRADE, TAX, AND TECHNOLOGY POLICIES. THE POLICY

STATEMENT ACCEPTED BY THE PRESIDENT DECLARED:

> "ALL MEMBERS ALSO AGREE THAT RESOLUTION OF THE MAJOR ENVIRONMENTAL REGULATORY ISSUES POTENTIALLY IMPEDING STEEL INDUSTRY MODERNIZATION WILL NOT IN ISOLATION ACHIEVE THE GOALS OF THE TRIPARTITE EFFORT AND THAT THE AGREEMENTS REACHED BY THE WORKING GROUP ON ENVIRONMENTAL PROTECTION MUST BE PART OF A BROADER INDUSTRIAL REVITALIZATION POLICY DESIGNED TO PROMOTE MODERNIZATION OF THE INDUSTRY."

THE CHANGED ENVIRONMENTAL ENFORCEMENT STRATEGY WILL MAKE A SUBSTANTIAL CONTRIBUTION TO CLOSING THE SHORTFALL AND, THUS, SPURRING MODERNIZATION. THE OFFICE OF TEHCNOLOGY ASSESSMENT'S REPORT, TECHNOLOGY AND STEEL INDUSTRY COMPETIVENESS, NOTES THAT IN JAPAN THE FINANCIAL BURDEN OF POLLUTION ABATEMENT "HAS LED TO LOWER COSTS PER TON OF STEEL PRODUCED THAN THE RETROFITTING OF SUCH DEVICES ON OLD EQUIPMENT," BECAUSE "WHERE A LARGE PORTION OF CAPACITY IS OF RELATIVELY RECENT VINTAGE, ANTIPOLLUTION DEVICES COULD BE DESIGNED TO FIT THE NEW EQUIPMENT." THUS, THE FRONT END DIVERSION OF ENVIRONMENTAL EXPENDITURES INTO MODERNIZATION PROJECTS CAN, IN THE LONG RUN, RESULT IN MORE COST-EFFECTIVE ABATEMENT EXPENDITURES. IN COMPARING THE 1971-1976 JAPANESE OUTLAYS FOR ENVIRONMENTAL CONTROLS WITH THOSE OF THE AMERICAN STEEL INDUSTRY, THE JAPANESE STEEL INDUSTRY INVESTED SUBSTANTIALLY MORE: 16 PER CENT AS COMPARED TO 13 PER CENT OF TOTAL CAPITAL EXPENDITURES.*

---

* OAT REPORT

Table 146.—Steel Industry Environmental Control Investment Outlays: United States and Japan, 1970-71
(in millions of dollars and as a percentage of total capital expenditures)

	1977	1976	1975	1974	1973	1972	1971	1970
United States	$407.6	$489.2	$453.0	$198.8	$100.1	$201.7	$161.5	$182.5
	17.5%	15.0%	14.2%	9.4%	7.1%	17.1%	11.3%	10.5%
Japan	555.3	920.1	685.2	555.6	367.9	284.4	219.2	NA
	15.2	20.6	18.4	18.6	17.3	13.4	8.9	NA

However, this was a period of substantial installation of new equipment in Japanese steel mills which thereby tied abatement activity to modernization investment. It is precisely that linkage which the Tripartite agreement attempts to promote for the American steel mills.

While the immediate objective of the Tripartite environmental recommendations relates to the capital shortfall problem, the linkage between EPA enforcement and modernization is, therefore, more than just financial. Modernization also can be a method of compliance with environmental regulations as well as retrofitting existing facilities. The presidential announcement on September 30 stated: "Modernization is equally important to environmental objectives, since modern facilities are inherently much cleaner, and all parties (including the industry) have agreed they will use the most modern technology available."

The Union views the environmental recommendations of the Tripartite Committee as providing for a five-year optional compliance approach: either modernize or retrofit.

II - Environmental Enforcement Strategy

While the Tripartite Committee gave considerable attention to the statutory 1982 deadline in the Clean Air Act for compliance with the primary ambient air quality standard, the report also included other considerations:

- an expedited reevaluation of EPA's restrictive policy on the use of the bubble concept with regard to certain non-attainment areas and open dust trade-offs.

- EXTENSION OF CURRENT WATER DISCHARGE PERMITS UNTIL THE BEST AVAILABLE TECHNOLOGICALLY ECONOMICALLY ACHIEVABLE (BAT) REGULATIONS ARE PROMULGATED FOR 1984.

- DEFINITION OF BAT REGULATIONS ON A SUBCATEGORY BASIS SO THAT THE VARIOUS STEEL-MILL PROCESSES MIGHT HAVE THEIR OWN APPLICATION.

- EXTENSION TO 1987 OF THE 1984 CLEAN WATER DEADLINE FOR COMPLIANCE IF SUBSTANTIAL ADDITIONAL EXPENDITURES ARE REQUIRED TO MEET BAT.

THE COMMITTEE'S RESPONSE TO THE 1982 CLEAN AIR ACT DEADLINE FOR COMPLIANCE IS PERHAPS THE MOST IMPORTANT RECOMMENDATION REQUIRING LEGISLATIVE CHANGES.

WHILE THE RECOMMENDED ENVIRONMENTAL STRATEGY DOES NOT RELAX CLEAN AIR REGULATIONS, IT DOES INCLUDE AN ALLOWANCE FOR A CASE-BY-CASE, THREE-YEAR STRETCH-OUT PERIOD (UNTIL 1985) BEFORE THE STEEL INDUSTRY MUST ACHIEVE FULL COMPLIANCE. IT IS IMPORTANT TO NOTE THAT THIS IS NOT A POSTPONEMENT OF CLEAN AIR REQUIREMENTS BUT RATHER A STRETCHOUT OF ABATEMENT EXPENDITURES.

No Relaxation of Standards

THE TRIPARTITE COMMITTEE DID NOT RECOMMEND ANY RELAXATION OF THE ENVIRONMENTAL STANDARDS. OUR UNION HAS LONG RECOGNIZED THE CAUSAL LINK BETWEEN HAZARDOUS EMISSIONS FROM STEEL MILLS (ESPECIALLY SULFUR DIOXIDE AND TOTAL SUSPENDED PARTICULATES) AND THE ADVERSE IMPACT UPON PUBLIC AND WORKER HEALTH. INDEED, WE HAVE BEEN STRONG ADVOCATES OF A REGULATORY APPROACH TO OBTAIN BOTH ENVIRONMENTAL AND OCCUPATIONAL HEALTH. EMISSION CONTROL

MEASURES AND CONCERN FOR OCCUPATIONAL SAFETY AND HEALTH ARE INTERRELATED. THE TOXIC SUBSTANCES TO BE CONTROLLED ARE FREQUENTLY ONES WHICH CAN AFFECT THE HEALTH OF BOTH THE WORKERS AND THE COMMUNITY. ADVANCES IN ONE AREA OF CONTROL WILL ENHANCE THE ENVIRONMENTAL EFFECTS IN THE OTHER. WE CANNOT, THEREFORE, LOWER THE STANDARDS OR REGULATIONS DESIGNED TO OBTAIN PRIMARY (HEALTH) AMBIENT AIR QUALITY STANDARDS.

WHILE WE DO NOT SEPARATE OUR RECOGNITION OF THE LINKAGE BETWEEN ENVIRONMENTAL AND INDUSTRIAL HEALTH CONTROLS, IT IS WORTH NOTING THAT EXPENDITURES FOR ENVIRONMENTAL COMPLIANCE HAVE FAR OUTSTRIPPED THOSE FOR OCCUPATIONAL SAFETY AND HEALTH. ACCORDING TO THE OFFICE OF TECHNOLOGY ACCESSMENT'S REPORT:

> "DURING THE 1970'S THE STEEL INDUSTRY REPORTED SPENDING ON AVERAGE 13.1 PER CENT, OR $280 MILLION, OF ITS ANNUAL CAPITAL INVESTMENTS FOR ENVIRONMENTAL COMPLIANCE AND ABOUT 5.8 PER CENT, OR $85 MILLION, OF ITS CAPITAL INVESTMENTS FOR INDUSTRIAL HEALTH AND SAFETY PURPOSES."

NEVERTHELESS, AS WORKERS, WE ALSO ARE BENEFICIARIES OF THE ENVIRONMENTAL EXPENDITURES.

FURTHERMORE, WE DO NOT CONCUR IN THE PROPOSITION THAT IMPLEMENTATION OF THESE STANDARDS WILL PREVENT STEEL INDUSTRY MODERNIZATION IN NONATTAINMENT AREAS. THE 1977 AMENDMENTS TO THE CLEAN AIR ACT PROVIDED A TRADE-OFF SCHEME DESIGNED TO PRODUCE ENOUGH "AIR SPACE" FOR THE STEEL INDUSTRY TO ACCOMPLISH THE MODERNIZATION PROGRAM CONTEMPLATED BY THE TRIPARTITE COMMITTEE. ADDITIONALLY, THE REQUIREMENT THAT NEW FACILITIES MEET THE LOWEST ACHIEVABLE EMISSION RATES (LAER), WHICH INCORPORATES THE LATEST TECHNOLOGY, WILL PROVIDE ADDITIONAL OPPORTUNITY FOR FUTURE GROWTH IN THE TRADITIONAL STEEL-MAKING COMMUNITIES.

Stretchout of Compliance

An amendment to the Clean Air Act is necessary to stretch out to 1985 the 1982 compliance deadline. The Tripartite Committee is currently working to translate its recommendations into legislative language. There are a number of essential components to the proposal which are necessary to reflect the consensus of the Tripartite agreement:

- Deferral of abatement expenditures is conditioned upon a case-by-case (i.e., company-wide) demonstration that the money is necessary for a capital improvement program.
- Deferral of abatement expenditures is not a postponement of such expenditures but rather a phased stretch-out scheme designed to bring all existing facilities into compliance by the end of the deferral period according to either the requirements of an applicable state implementation plan or reasonably available control technology.
- The deferred abatement expenditures will be invested in the steel industry and in traditional steel-making communities.
- The deferred funds will be expended for identifiable modernization projects.
- The deferral decision will be in the form of a court enfocreable consent decree which will contain some of the following items:

(a) a schedule of the modernization projects to be undertaken,

(b) a schedule of the air pollution control facilities to be built,

(C) IDENTIFICATION OF THE INCREMENT REQUIREMENTS NECESSARY TO MEET FINAL COMPLIANCE AND PREVENT INTERIM INCREASES OF POLLUTION, AND

(D) A STIPULATED MONETARY PENALTY SYSTEM FOR NONCOMPLIANCE.

THE STRETCH-OUT STRATEGY IS A RECOGNITION OF THE TRIPARTITE COMMITTEE'S CONCLUSION THAT THE STEEL INDUSTRY DOES HAVE A CAPITAL SHORTFALL PROBLEM. IT IS THE INTENT OF THE AGREEMENT THAT EACH COMPANY SUBSTANTIATE THAT FINDING IN ITS OWN CASE WHEN IT PETITIONS TO ESTABLISH A SCHEDULE FOR COMPLIANCE EXTENDING BEYOND 1982 BUT ENDING NOT LATER THAN 1985. MOST IMPORTANTLY, THE NEW COMPLIANCE SCHEDULE IS CONDITIONED UPON AN INCREASE OF CAPITAL INVESTMENTS BY INDIVIDUAL STEEL COMPANIES IN TRADITIONAL STEEL-MAKING COMMUNITIES AND UPON CONTINUED INVESTMENT IN POLLUTION CONTROL AT ALL FACILITIES. THE CONDITIONAL ASPECT OF THE EXTENSION IS A CRITICAL PART OF THE RECOMMENDATION AND CONSTITUTES THE ESSENTIAL TRADE-OFF FOR THE NEW ENFORCEMENT STRATEGY. THE AGREEMENT, EVOLVING OUT OF THE TRIPARTITE PROCESS, ALSO REPRESENTS NOT ONLY THE INDUSTRY'S FINANCIAL COMMITMENT TO STEEL AND STEEL COMMUNITIES BUT ALSO ITS INTENTION TO PRODUCE STEEL IN A MANNER CONSISTENT WITH COMMUNITY HEALTH REQUIREMENTS. THE UNION APPLAUDS THIS TWOFOLD PRODUCT OF THE INDUSTRY'S DETERMINATION. IT IS, OF COURSE, THE BASIS OF OUR SUPPORT FOR THE STATUTORY CHANGES IN THE CLEAN AIR ACT AND THE FOUNDATION FOR THE WIDER CONSENSUS WHICH THE PROPOSAL HAS RECEIVED IN THE ENVIRONMENTAL COMMUNITY.

III - LEGISLATIVE STRATEGY

THE UNION APPLAUDS THIS COMMITTEE'S DECISION TO INITIATE THESE HEARINGS DURING THE LAME-DUCK SESSION. IT IS OUR HOPE THAT YOUR PURPOSE IS TO ACCELERATE LEGISLATIVE ACTION ON A STEEL-SPECIFIC AMENDMENT AS THE FIRST ORDER OF BUSINESS NEXT SESSION. CERTAINLY, THE AMENDMENT ITSELF, WHICH IS BEING DEVELOPED BY THE TRIPARTITE COMMITTEE MAY NEED TO UNDERGO FURTHER LEGISLATIVE DRAFTING. WE HAVE SUGGESTED THAT THE NATIONAL COMMISSION ON AIR QUALITY SHOULD REVIEW OUR PROPOSALS. WE WOULD SUGGEST, HOWEVER, THAT THE LIMITED AND CONDITIONAL INTENT OF THE TRIPARTITE AGREEMENT IS WORTHY OF CONGRESSIONAL APPROVAL. FROM THE UNION'S POINT OF VIEW, IT DOES NOT REPRESENT ANY RETREAT FROM ENVIRONMENTAL REQUIREMENTS. INDEED, A STEEL COMPANY, AS A CONDITION OF RECEIVING THE STRETCHOUT OF ITS ENVIRONMENTAL OBLIGATIONS, MUST AFFIRM ITS COMMITMENT TO MEET ALL REQUIREMENTS AT ITS FACILITIES.

FURTHERMORE, THE TRIPARTITE RECOMMENDATION REPRESENTS AN EXAMPLE OF HOW PUBLIC POLICY CAN BE MADE AMENABLE TO PRIVATE SECTOR CONDITIONS. BECAUSE MODERNIZATION MEANS A CLEANER STEEL INDUSTRY, ENVIRONMENTAL AND OCCUPATIONAL HEALTH CONCERNS WILL BE MORE ADEQUATELY PROTECTED. WHILE WE NOW HAVE AN INDICATION OF INTENT AND COMMITMENT BY THE INDUSTRY TO MODERNIZE, THE CONDITIONAL NATURE OF THE STRETCHOUT WILL PROVIDE AN OPPORTUNITY TO WITNESS THE FULFILLMENT OF THE CONDITIONS. AS A MATTER OF FACT, OTHER PARTS OF THE STEEL INDUSTRIAL POLICY INCORPORATE THE NOTION OF CONDITIONING RELIEF UPON EXPLICIT EVIDENCE OF CAPITAL INVESTMENT. OUR UNION HAS ALWAYS FELT THAT WHERE A COMPANY COMMITS FUNDS TO

MEET ENVIRONMENTAL OBLIGATIONS IS AN INDICATION THAT STEEL WILL CONTINUE TO BE POURED AT THAT FACILITY. CONVERSELY, ENVIRONMENTAL NONCOMPLIANCE COULD BE A SIGNAL OF DEEPER STRUCTURAL PROBLEMS. NOW THE LINKAGE BETWEEN ABATEMENT STRETCHOUTS AND MODERNIZATION EXPENDITURES MAKES EVEN MORE EXPLICIT THE CONTRIBUTION WHICH PUBLIC POLICY CAN MAKE TO A REINDUSTRIALIZATION PROGRAM.

WE ARE, OF COURSE, URGING EARLY ENACTMENT OF THE ENVIRONMENTAL RECOMMENDATIONS. FINAL DECISIONS REGARDING ABATEMENT EXPENDITURES TO MEET THE 1982 DEADLINE AND FOR CURRENT CONSENT DECREES ARE NOW BEING MADE. IF THE STRETCHOUT IS TO HAVE ANY VALUE, IT MUST BE AVAILABLE AS SOON AS POSSIBLE. SOME OF THE OTHER PARTS OF THE TRIPARTITE AGREEMENT SUCH AS THE ADMINISTRATIVE PROCEDURE FOR PREVENTING DUMPED FOREIGN STEEL ARE NOW IN PLACE. IT IS THE COMBINATION OF PROPOSALS WHICH WILL HAVE AN IMPACT UPON THE CAPITAL SHORTFALL AND THE SCOPE OF THE MODERNIZATION PROGRAM. RATHER THAN ANY ONE OF THE SECTOR POLICIES, IT IS THE COMBINATION OF ALL THE RECOMMENDATIONS WHICH WILL HOPEFULLY PRODUCE THE DESIRED RESULT; NAMELY, A MODERNIZED, COMPETITIVE STEEL INDUSTRY WHICH AFTER FIVE YEARS WILL NOT REQUIRE ANY SPECIAL STEEL-SPECIFIC PUBLIC POLICY CONSIDERATIONS.

WITH REGARD TO THE ENVIRONMENTAL COMPONENT OF THE TRIPARTITE AGREEMENT, IT IS THE UNION'S POSITION THAT NO FURTHER STEEL-SPECIFIC LEGISLATIVE CONSIDERATIONS ARE NECESSARY, EXCEPT FOR A POSSIBLE STRETCHOUT OF THE CLEAN WATER REQUIREMENTS TO 1987 IF THE BAT REGULATIONS INDICATE SUBSTANTIAL ABATEMENT EXPENDITURES COULD ALSO BE DIVERTED TO THE MODERNIZATION PROGRAM.

WE EXPECT A CONTINUATION OF THE STEEL TRIPARTITE ADVISORY COMMITTEE, AND AS A PART OF OUR FUTURE ACTIVITIES, WE WILL CONTINUE TO EXPLORE ENVIRONMENTAL IMPLEMENTATION PROGRAMS THAT ARE MORE COST-EFFECTIVE FOR THE STEEL INDUSTRY. FURTHERMORE, DEVELOPMENT OF ADMINISTRATIVE FLEXIBILITY, AVAILABLE UNDER REGULATORY PROGRAMS, WILL PROMOTE FASTER COMPLIANCE AND LESS NEED FOR LEGISLATIVE RELIEF. THEREFORE, THE UNION IS SEEKING ONLY LEGISLATIVE CHANGES NECESSARY TO PROVIDE DISCRETIONARY AUTHORITY FOR EPA TO GRANT STEEL-SPECIFIC STRETCHOUTS CONDITIONED UPON MODERNIZATION COMMITMENTS. THESE CHANGES WOULD REPRESENT A RESOLUTION OF THE SPECIAL CLEAN AIR PROBLEMS OF THE STEEL INDUSTRY.

******

Lloyd McBride
International President

Joseph Odorcich
International Vice President
(Administration)

Leon Lynch
International Vice President
(Human Affairs)

United Steelworkers of America
AFL-CIO-CLC

815 16TH ST., N.W. WASHINGTON, D.C. 20006

Suite 706

Phone: (202) 638-6929

January 23, 1981

The Honorable Jennings Randolph
United States Senate
Washington, D. C. 20510

Dear Senator Randolph:

In response to your inquiry to President Lloyd McBride relative to the December 4 hearings on the Clean Air Act amendment pertaining to the steel industry, attached hereto are his responses.

Sincerely,

John J. Sheehan
Legislative Director

JJS/pam
Attachment

QUESTION #1: Do you feel the Senate should act on the environmental recommendations independently, or should we wait for assurance that the tax and trade proposals will also be implemented?

RESPONSE: The environmental recommendations of the Steel Tripartite Advisory Committee (STAC) are part of a package of proposals that would assist the steel industry in accelerating its investment in modernization and restructuring. The Steelworkers do recommend that action on the environmental recommendations proceed independent of the other parts of the package. Since different committees handle various aspects of the total recommendations, it would be most difficult to obtain tandem action. Secondly, I should note that the trade proposals have already been put into effect. The only outstanding recommendation relates to the tax recommendations. If we wait until there is some indication of what might be happening in the tax field, we might be delaying action on the environmental recommendations long beyond a period during which their implementation would be beneficial to the steel industry. Specifically, the industry must begin now its abatement investments to meet the 1982 deadline. We need to make a legislative decision now as to whether we will stretch out that date.

QUESTION #2: In your opinion, how will the proposed solution protect jobs and guard against plant closings?

RESPONSE: The STAC proposals, which are designed to protect jobs and guard against plant closings, would accomplish those objectives through modernization of current capacities. The possibility of implementing the modernization program is restricted by the lack of funds. The stretchout will alleviate some of the shortfall pressure so that the modernization program can reach the levels of investment that are necessary to protect against job loss and plant shutdowns. The Steelworkers do not relate environmental regulations as the cause of plant shutdowns. Actually, they are the result of obsolete and low productivity facilities which must be replaced through modernization or they will be shut down.

QUESTION #3: Why do you feel the steel industry should be given this special consideration: Why will not other industries seek relief on the basis of their financial situation?

RESPONSE: The steel industry should be given this special consideration because unlike other industries, modernization is at the same time a method of abating pollution. The older inefficient facilities which under a modernization program will be replaced, are those which do exceed emission levels and would have to be retrofitted in order to come into compliance with EPA regulations if they are not replaced. The issue, therefore, for the steel industry is whether these facilities should be retrofitted or modernized. The cause of pollution in steel is the very process of steelmaking itself.

Other industries are not in quite the same situation; namely, that the use of the retrofit funds for a modernization program would at the same time abate pollution. Additionally, there is no firm evidence that a rapid rather than a normal modernization program is necessary for other industries. The shutdown of steel facilities is imminent if modernization does not occur. The confluence of the need to modernize and the direct impact of such investments upon abatement is the singular feature unique to the steel industry and to our petition for a single industry stretchout of EPA requirements.

The Steelworkers are not, therefore, requesting relief for the steel industry based upon the fact that it is financially weak but, rather, that it should be able to divert its abatement retrofit investments into abatement modernization ones.

TESTIMONY OF FRANCES DUBROWSKI

SENIOR ATTORNEY, NATURAL RESOURCES DEFENSE COUNCIL

BEFORE THE SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE

I am pleased to be here to testify today. The subject before this Committee is pollution control requirements for the steel industry, a matter of great consequence to public health and the environment. The steel industry is one of the country's largest sources of air pollution. Many of its plants are located in densely populated areas, hence the industry's emissions affect the quality of life of literally millions of people.

While some progress has been made in reducing these emissions, we are still far from a clean and healthy environment for steel communities. The Report of the Steel Tripartite Advisory Committee states the case succintly: "Most steel facilities are located in areas where the federal ambient air quality standards for one or both of the principal pollutants emitted by steel mills (sulfur dioxide and total suspended particulate) are not being attained."

A decade ago, Congress ordered EPA to establish these national ambient air quality standards at a level necessary to protect health and the environment from harm. Originally, emission limits to achieve these standards were to have been

met by 1975, then by 1982. The proposal of the steel tripartite committee would permit extensions of this deadline under certain circumstances until 1985.

Because of the enormous health and environmental consequences of this proposal, it is important that this Committee ask the question: Is this extension adequately safeguarded? Or are we once again putting off the day when controls must be purchased, knowing that an end to the health and environmental risk is still in doubt?

The tripartite proposal, prepared by the Tripartite Working Group and subsequently enhanced by discussions among environmental, labor, industry, and government representatives, offers a number of important safeguards which reduce the risk further delays pose to health and the environment. I would like to focus on the five most important ones in my testimony today.

First, the proposal would not allow automatic extensions of compliance deadlines for all companies. The EPA Administrator would only be able to grant an extension on a case-by-case basis if he finds: a) that the money temporarily deferred from pollution controls will be spent for modernization of existing steel plants, and b) that this shift in funds is necessary to allow a company to

70-966 O - 81 - 5

undertake an expanded capital investment program for modernization. Existing consent decrees would remain in effect until the Administrator could make these findings and grant an extension. This would ensure that extensions are only granted to companies meeting the specified conditions. It would also facilitate an orderly transition from the present enforcement scheme.

Second, the proposal would require each company receiving an extension to demonstrate that it will have sufficient capital to both comply with clean air requirements and fulfill the elements of its modernization program by the end of the extension period. Thus, delay merely for the sake of delay would be prohibited.

Third, the proposal would not allow a company to postpone <u>all</u> pollution control expenditures until the end of the extension period. Instead, the company would have to make continual -- though reduced -- progress toward compliance throughout the extension period. EPA has coined the term "stretch out" to distinguish this more narrowly defined proposal from an outright postponement of compliance deadlines. In other words, if a company received a three year extension, it would have to satisfy at least one third of its outstanding pollution control obligations in dollar terms each year. It could always "front end" its investment by moving more quickly than this minimum schedule,

but it could not "back end" its obligations so that all investment occurred only in the third year.

Fourth, the company would have to agree to meet all applicable clean air requirements by the new compliance deadline. This would include attaining the lowest achievable emission rate (LAER) on new facilities and installing reasonably available control technology (RACT) on existing facilities. This agreement would have to be signed and enforceable by a court. And there would be stipulated monetary penalties for violation of the terms of the agreement, a continuation of EPA's current enforcement practice with respect to consent decrees.

Fifth, the tripartite proposal has been supplemented by a strong commitment from the Chief Executive Officers of the major steel companies to meet clean air requirements. At the request of George Stinson of National Steel Corporation, we met with Mr. Stinson, David Roderick of U.S. Steel Corporation, Donald Troutline of Bethlehem Steel Corporation, and William Delancey of Republic Steel and the American Iron and Steel Institute. Representatives of the federal government, including EPA also attended. At this meeting, the industry representatives affirmed their commitment to achieve compliance with primary national ambient air quality standards. They further acknowledged that the tripartite proposal would, if enacted into law,

remove their desire for further steel-specific amendments to the health-protective requirements and deadlines in the law. This is critical because it eliminates controversy over whether emission reductions to achieve the primary air quality standards are necessary or feasible.

Without these safeguards the tripartite proposal would be markedly different. It could precipitate ill-considered and unwarranted extensions of compliance deadlines with little to be gained in the way of better air quality or more productive facilities. With these safeguards, the goal of a clean and modern industry is preserved.

There are a number of drafting problems to be resolved before this proposal is reduced to statutory language. We are working with EPA, the union, and the industry to resolve those problems. We are also awaiting the input of the National Commission on Air Quality. We expect our discussions to be completed early next year.

Natural Resources Defense Council, Inc.

1725 I STREET, N.W.
SUITE 600
WASHINGTON, D.C. 20006
202 223-8210

New York Office
122 EAST 42ND STREET
NEW YORK, N.Y. 10168
212 949-0049

Western Office
25 KEARNY STREET
SAN FRANCISCO, CALIF. 94108
415 421-6561

January 6, 1981

Senator Jennings Randolph
United States Senate
Committee on Environment and
Public Works
Washington, D.C. 20510

Dear Senator Randolph:

Enclosed are the answers to the Senate Environment and Public Works Committee's written questions on the steel tripartite recommendations. We were pleased to be invited to testify and would be happy to provide any other information the Committee may need.

Sincerely,

Fran Dubrowski

Fran Dubrowski

ANSWERS TO THE COMMITTEE'S QUESTIONS

1. *What, if any, was the Natural Resources Defense Council's role in the formulation of these recommendations before us?*

The Natural Resources Defense Council was not a party to the Steel Tripartite Advisory Group and was not involved in formulating the recommendations contained in its report. We became involved in the discussions of the industry's problems after the Tripartite report to the President had become public.

As a result of our involvement, the recommendations forwarded to the Senate Committee on Environment and Public Works differ in some significant ways from those contained in the Tripartite report. For example, at the request of the environmental community, the Chief Executive Officers of United States Steel Corporation, Bethlehem Steel Corporation, National Steel Corporation, Republic Steel Corporation, and the American Iron and Steel Institute clarified the recommendations of the Tripartite group by emphasizing that a "stretch out" of compliance deadlines was all the relief the industry would either need or seek from the health protective requirements of the Clean Air Act. They confirmed their commitment to meet primary national ambient air quality standards and all other clean air requirements such as LAER related to those standards.

Second, all parties agreed that pollution control funds should only be deferred for modernization of existing steel facilities, not for investment in greenfield plants.

Finally, the drafting sessions leading to suggested legislative language removed ambiguities created by the Tripartite report and produced a more specific, more enforceable set of recommendations to this Committee.

These developments demonstrate that failure to include environmental representatives in the earlier deliberations of the tripartite group was neither efficient nor wise. It necessitated rethinking of some aspects of the group's report and delayed implementation of its recommendations. We have therefore recommended that environmental representatives be included in any future tripartite deliberations affecting either the steel industry or other industries. We urge the Committee in the interests of sound economic and environmental policy to support this recommendation.

2. *Do you feel the safeguards mentioned in your testimony are adequate to protect health standards?*

The safeguards require each company to meet all applicable clean air requirements by 1985; they will thus protect public health in the long run. They are not, however, adequate to protect public health in the short run, because they permit deadline extensions even in areas where health is being jeopardized.

This limitation goes to the heart of the tripartite recommendation. Steel mills are large sources of industrial emissions; many mills are located in areas where the minimum standards necessary to protect health are being violated. With the tripartite recommendations, EPA will have some ability to mitigate the adverse impact of a deadline extension. That is because under a "stretch out" as opposed to a postponement of pollution controls, substantial expenditures for control technology must be made each year. If these expenditures are directed on a priority basis to those plants located in very dirty air areas or to those sources, such as coke ovens, which produce highly toxic emissions, the toll on public health will be reduced.

But the tripartite recommendations are clearly a compromise between the need to protect public health and the desire for a strong and modern industry. Thus, the industry's commitment to refrain from seeking further relaxations of the Clean Air Act is critical. It signifies the existence of an agreed-upon process for producing a cleaner, more modern industry. Without this process, the compromise does not make sense.

3. *Do you feel the commitment expressed by the steel industry not to seek further amendments in the Clean Air Act for changes in health-protective requirements and deadlines is sufficiently binding?*

The commitment to refrain from seeking further changes to the health-protective requirements and deadlines in the Clean Air Act was made at the industry's highest level. We therefore expect the commitment to be honored. As expressed earlier, the commitment is essential to our support of the tripartite recommendations. It should also be a precondition for Congressional approval of relief to the industry.

The effort to control emissions from the steel industry has taken over a decade. Arguments initially raised against the need for control (i.e., that control is technologically impossible or economically infeasible) have been proven wrong. While the debate has dragged on, the cost to public health has been tremendous. It is long past time to end debate over the standards and get down to the job of cleaning up the air.

TESTIMONY OF DR. JOEL S. HIRSCHHORN, PROJECT DIRECTOR
CONGRESSIONAL OFFICE OF TECHNOLOGY ASSESSMENT
BEFORE THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
DECEMBER 4, 1980

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE,

THE OFFICE OF TECHNOLOGY ASSESSMENT APPRECIATES THE COMMITTEE'S INVITATION TO PARTICIPATE IN THIS HEARING. I AM JOEL S. HIRSCHHORN, I SERVED RECENTLY AS PROJECT DIRECTOR OF THE OTA ASSESSMENT ON THE IMPACT OF TECHNOLOGY ON THE INTERNATIONAL COMPETITIVENESS OF THE DOMESTIC STEEL INDUSTRY. I WILL SUMMARIZE THE MAJOR FINDINGS OF OUR STUDY, ENTITLED TECHNOLOGY AND STEEL INDUSTRY COMPETITIVENESS. I WILL THEN PROVIDE SOME COMMENTS ON THE PROPOSAL TO GRANT EXTENSIONS TO QUALIFYING STEELPLANTS FOR COMPLIANCE WITH THE CLEAN AIR ACT.

OTA FOUND THAT STEEL WILL PROBABLY REMAIN THE MOST IMPORTANT ENGINEERING MATERIAL FOR THE NATION; A HEALTHY STEEL INDUSTRY IS VITAL TO THE NATION'S SECURITY AND ECONOMIC PROSPERITY.

OUR DOMESTIC STEEL INDUSTRY, HOWEVER, CONTINUES TO EXPERIENCE LOW PROFITABILITY. NEVERTHELESS, THE AMERICAN INDUSTRY IS THE MOST PROFITABLE MAJOR STEEL INDUSTRY IN THE WORLD, BUT COMPARED TO OTHER DOMESTIC INDUSTRIES IT'S ECONOMIC PERFORMANCE IS POOR AND ITS RATE OF PRODUCTIVITY INCREASE SMALL. SOME POLICIES WITHIN THE INDUSTRY ITSELF AND SOME FEDERAL POLICIES HAVE CONTRIBUTED TO THE INDUSTRY'S PROBLEMS AND THE CONTINUED CONTRACTION OF U.S. STEELMAKING CAPACITY AND LOSS OF INTERNATIONAL COMPETITIVENESS.

THE INDUSTRY CAN BE REVITALIZED THROUGH INCREASED INVESTMENT IN R&D AND THE ADOPTION OF NEW TECHNOLOGY, THE RATES OF WHICH HAVE DECLINED IN RECENT YEARS. FOR REVITALIZATION TO OCCUR, HOWEVER, OTA ESTIMATES THAT STEELMAKERS MUST INCREASE THEIR CAPITAL SPENDING ON PRODUCTION FACILITIES DURING THE 1980'S BY AT LEAST 50 PERCENT ABOVE THE SPENDING LEVELS IN THE 1970'S. THIS IS A $3 BILLION MINIMUM ANNUAL SPENDING LEVEL WHICH OTA BELIEVES NECESSARY, COMPARED TO INDUSTRY ESTIMATES OF $4.9 BILLION ANNUALLY (BOTH IN 1978 DOLLARS).

A MAJOR REASON FOR THE LOWER OTA ESTIMATE OF CAPITAL NEEDS IS THE FINDING OF THE STUDY THAT TWO SEGMENTS OF THE INDUSTRY ARE RELATIVELY HEALTHY ECONOMICALLY AND TECHNOLOGICALLY. SOME COMPANIES IN THE NONINTEGRATED, SCRAP BASED SEGMENT AND THE ALLOY/SPECIALTY STEEL SEGMENT, IN FACT, ENJOY HIGH PROFITABILITY, HIGH GROWTH RATES, AND THE WORLD'S LOWEST MANUFACTURING COSTS. WE EXPECT THE PAST GROWTH OF THE NONINTEGRATED COMPANIES, OFTEN CALLED "MINIMILLS," TO CONTINUE THROUGH THE 1980'S, CONTINGENT UPON THE CONTINUED AVAILABILITY OF QUALITY FERROUS SCRAP. CAPITAL COSTS FOR CONSTRUCTING THEIR NEW PLANTS ARE A SMALL FRACTION OF THE COSTS FOR INTEGRATED PLANTS. THESE PLANTS ARE ALSO CLEANER ENVIRONMENTALLY. THE INCREASING MARKET SHARE OF THESE NONINTEGRATED COMPANIES REPRESENTS AN IMPORTANT SOURCE OF COMPETITION TO THE LARGE INTEGRATED COMPANIES, IN TIME PERHAPS, MORE SIGNIFICANT THAN THE COMPETITION FROM IMPORTS.

NEVERTHELESS, THE NATION WILL CONTINUE TO REMAIN DEPENDENT ON LARGE INTEGRATED COMPANIES FOR MOST OF THE NATION'S STEEL

NEEDS. THAT PORTION OF THE INDUSTRY HAS CONSIDERABLE PROBLEMS. UNLESS ACTION IS TAKEN, CLOSINGS OF OLDER AND INEFFICIENT PLANTS THROUGH THE 1980'S COULD ACCOUNT FOR MANY LOST JOBS AND STEEL IMPORTS COULD INCREASE TO 40 PERCENT OF THE DOMESTIC MARKET, COMPARED WITH RECENT LEVELS OF ABOUT 15 PERCENT.

FOLLOWING CHANGES IN MARKET SHARES AMONG INDUSTRY SEGMENTS TO PRESERVE COMPETITIVENESS, MODERNIZATION AND A SMALL EXPANSION IN THE 1980'S MAJOR NEW STEELMAKING INNOVATIONS APPEAR POSSIBLE. THEY COULD RESTORE AND SUSTAIN A COMPETITIVE INDUSTRY THROUGH THE 1990'S. HOWEVER, FEDERAL GOVERNMENT SUPPORT FOR MORE BASIC RESEARCH IN STEELMAKING, INCENTIVES FOR INCREASED INDUSTRY R&D, AND ASSISTANCE IN PILOT AND DEMONSTRATION PROJECTS IN THE 1980'S WILL BE REQUIRED. MAJOR PROCESS INNOVATIONS COULD BRING THE DOMESTIC INDUSTRY A COMPETITIVE ADVANTAGE, RATHER THAN MERE PARITY WITH FOREIGN INDUSTRIES. THIS IS THE TYPE OF LONG-RANGE STRATEGIC PLANNING AND EMPHASIS ON NEW TECHNOLOGY THAT THE INDUSTRY HAS NOT DONE WELL IN THE PAST.

NEITHER NEW TECHNOLOGY NOR AVAILABILITY OF INVESTMENT CAPITAL, NOR TRADE PROTECTION ALONE WILL SOLVE THE INDUSTRY'S PROBLEMS, HOWEVER. THE DOMESTIC STEEL INDUSTRY HAS BEEN HURT BY A LONG SERIES OF FEDERAL POLICIES THAT HAVE FREQUENTLY BEEN UNCOORDINATED, CONTRADICTORY AND INATTENTIVE TO CRITICAL ISSUES. A FEDERAL POLICY THAT COORDINATES THE INDUSTRY'S NEEDS, THE NATION'S INTERESTS, AND SPECIFIC TECHNICAL CONCERNS IS AN IMPORTANT OPTION. WHILE THE STEEL TRIPARTITE ADVISORY COMMITTEE HAS DEMONSTRATED THE USEFULNESS OF A JOINT

GOVERNMENT-INDUSTRY-LABOR APPROACH, IT IS DESIRABLE TO BROADEN THE MEMBERSHIP OF THIS TYPE OF GROUP TO INCLUDE REPRESENTATIVES FROM THE DIVERSE SEGMENTS OF THE STEEL INDUSTRY. IT WOULD BE WISE TO LISTEN TO THE VOICES OF THE MOST PROFITABLE, COMPETITIVE STEELMAKERS AS WELL AS THE LARGER INTEGRATED COMPANIES. IT IS ALSO NECESSARY TO HAVE SUCH A GROUP DEAL WITH MAJOR PROBLEMS IN AN INTEGRATED AND COMPREHENSIVE MANNER THAT WOULD FACILITATE COORDINATED POLICY FORMULATION, RATHER THAN DEALING WITH SUCH AREAS AS THE ENVIRONMENT AND R&D SEPARATELY.

NOW I WILL TURN TO ONE OF THE MAJOR PROPOSALS OF THE TRIPARTITE COMMITTEE WHICH PRESIDENT CARTER HAS ENDORSED. THIS PROPOSAL IS TO AMEND THE CLEAN AIR ACT TO ALLOW THE EPA ADMINISTRATOR TO EXTEND, ON A CASE-BY-CASE BASIS, THE DEADLINE FOR COMPLIANCE WITH THE ACT. SUCH EXTENSIONS ARE PROPOSED FOR AS LONG AS THREE YEARS. UNDER THE PLAN, WHEN A COMPANY MEETS A NUMBER OF SPECIFIED CONDITIONS, IT MAY OPT TO MODERNIZE EXISTING FACILITIES WITH THE FUNDS THAT WERE TO BE USED FOR COMPLIANCE.

IT IS POSSIBLE THAT THIS APPROACH MAY BE APPLIED TO OTHER TYPES OF ENVIRONMENTAL REGULATIONS AND TO OTHER INDUSTRIES. HOWEVER, RATHER THAN FOR USE IN MODERNIZATION, CONGRESS MAY WISH TO CONSIDER USING THOSE FUNDS (MADE AVAILABLE BY DELAYING COMPLIANCE) FOR R&D. REWORKING THE PRIORITIES IN THIS MANNER COULD OFFER A MORE ACCEPTABLE GAIN TO THE PUBLIC BY PROMOTING CLEANER, INNOVATIVE STEELMAKING TECHNOLOGY WHICH WILL ALSO ENHANCE INTERNATIONAL COMPETITIVENESS OF THE STEEL INDUSTRY.

OUR STUDY FOUND THAT COMPLIANCE WITH ENVIRONMENTAL

REGULATIONS HAS BEEN EXPENSIVE FOR THE STEEL INDUSTRY. HOWEVER, IT CAN BE VIEWED AS ONLY A CONTRIBUTORY FACTOR TO THE INDUSTRY'S PROBLEMS. BY ITSELF, REGULATORY SPENDING CANNOT EXPLAIN THE INDUSTRY'S DECLINING PROFITABILITY. DURING THE PERIOD 1971 TO 1978 POLLUTION ABATEMENT CAPITAL EXPENDITURES EQUALLED 14.5 PERCENT OF TOTAL CAPITAL SPENDING BY THIS INDUSTRY. IN THAT SAME PERIOD, SPENDING ON NON-STEEL ACTIVITIES (DIVERSIFICATION) AMOUNTED TO 16 PERCENT OF TOTAL CAPITAL SPENDING. BUT DIVERSIFICATION HAS NOT BROUGHT ABOUT REMARKABLE RESULTS FOR MOST OF THE STEEL COMPANIES USING THIS STRATEGY. MOREOVER, THE INDUSTRY HAS CONTINUED PAYING RELATIVELY HIGH DIVIDENDS TO STOCKHOLDERS REGARDLESS OF THE GENERALLY LOW PROFITABILITY, THE BASIS FOR PAYING DIVIDENDS. DURING THIS SAME PERIOD, DIVIDENDS AMOUNTED TO 46 PERCENT OF NET INCOME AND WAS EQUIVALENT TO 23.9 PERCENT OF TOTAL CAPITAL SPENDING. AS THE COSTS OF REGULATORY COMPLIANCE INCREASED DURING THE PAST DECADE, THE DISCRETIONARY USE OF FUNDS FOR R&D DECREASED PROPORTIONATELY.

DELAYED COMPLIANCE MIGHT GENERATE UP TO $100 TO $200 MILLION ANNUALLY, BUT THIS AMOUNT WOULD ONLY INCREASE STEEL INDUSTRY CAPITAL SPENDING BY FIVE TO TEN PERCENT. THE LEGITIMATE MODERNIZATION NEEDS OF THE INDUSTRY REQUIRE MORE DIRECT AND EFFECTIVE POLICIES, SUCH AS ACCELERATED DEPRECIATION.

OTHER PROBLEMS WITH THE PROPOSAL TO USE ENVIRONMENTAL POLICY TO PROMOTE MODERNIZATION INCLUDE THE FOLLOWING:

o THE LEAST COMPETITIVE FACILITIES WOULD BE ASSISTED. COMPANIES THAT HAVE DELAYED COMPLIANCE AND MODERNIZATION WOULD BE

REWARDED. PLANT CLOSINGS MAY ONLY BE DELAYED UNTIL AFTER THE EXTENSION PERIOD.

o THE THREE-YEAR PERIOD AND THE FUNDS MADE AVAILABLE ARE GROSSLY INSUFFICIENT FOR MAJOR FORMS OF MODERNIZATION.

o CASH FLOW FROM SUCH PLANTS COULD BE USED FOR FURTHER DIVERSIFICATION BY THE PARENT CORPORATION.

o THERE IS A NEED FOR UNAMBIGUOUS RULES FOR DETERMINING COMPLIANCE COSTS AND FOR USING SUCH FUNDS FOR DESIRED MODERNIZATION TO REDUCE COSTS AND POLLUTION RATHER THAN SUPERFICIAL CHANGES.

o DELAYED COMPLIANCE FOR THE CLEAN AIR ACT MAY ESTABLISH PROCEDURES FOR COMPANIES TO RESIST COMPLIANCE WITH OTHER REGULATIONS, SUCH AS FOR HAZARDOUS WASTES, TO PRESERVE CASH FLOW FOR OTHER PURPOSES.

CONGRESS MAY WISH TO EXAMINE A DELAYED COMPLIANCE POLICY THAT PROMOTES NEW TECHNOLOGIES WITH LESS POLLUTION OF ANY TYPE AND WITH SUFFICIENT ECONOMIC ATTRACTIVENESS FOR PRIVATE CAPITAL INVESTMENT. LINKING DELAYED COMPLIANCE WITH R&D ON HIGH RISK INNOVATIVE STEELMAKING (INCLUDING PILOT AND DEMONSTRATION ACTIVITIES) PROVIDES A POLICY OPTION THAT DEALS WITH CHRONIC COMPETITIVENESS PROBLEMS OF THE INDUSTRY.

FACTORS SUPPORTING THE USE OF THIS POLICY OPTION INCLUDE THE FOLLOWING:

o THE LEVEL OF R&D SPENDING IS CLOSER TO THE LEVEL OF

SPENDING ON COMPLIANCE. WHEREAS MODERNIZATION MIGHT BE INCREASED BY FIVE TO TEN PERCENT WITH SUCH FUNDING, R&D SPENDING COULD BE INCREASED BY AS MUCH AS 50 PERCENT.

o POLLUTION CONTROL CAPITAL SPENDING IN THE PAST HAS CAUSED A DECREASE IN R&D SPENDING.

o SEVERAL STUDIES HAVE SHOWN THAT PRODUCTIVITY INCREASES ARE DRIVEN MORE BY TECHNOLOGY-RELATED FACTORS THAN BY CAPITAL SPENDING, AND THAT, FROM BOTH COMPANY AND INDUSTRY LEVEL STUDIES, THE RATE OF PRODUCTIVITY INCREASE IS DIRECTLY RELATED TO R&D SPENDING.

o STUDIES ALSO SHOW THAT THE SOCIAL RATE OF RETURN OF TECHNOLOGICAL INNOVATIONS IS OFTEN GREATER THAN THE MORE EASILY CALCULATED RATE OF RETURN TO THE CORPORATE USER.

o SINCE THE PUBLIC IS BEING ASKED TO BEAR THE RISKS AND COSTS OF INCREASED POLLUTION FOR SOME TIME, THE LONG-TERM BENEFITS OF USING COMPLIANCE FUNDS FOR R&D RATHER THAN MODERNIZATION APPEAR TO OFFER A MORE ACCEPTABLE TRADEOFF.

IMPLEMENTATION OF POLICY THAT DIRECTS FUNDS TO R&D PRESENTS THE PROBLEM OF SETTING UNAMBIGUOUS RULES FOR APPROPRIATE USES. CONGRESS MAY WISH TO CONSIDER A PLAN THAT DIRECTS SPENDING ON THE DEVELOPMENT AND DEMONSTRATION OF, AS YET, COMMERCIALLY UNPROVEN INNOVATIVE STEELMAKING TECHNOLOGIES. THIS TYPE OF GOVERNMENT POLICY WOULD HELP MOVE INDUSTRY IN A DIRECTION AWAY FROM SHORT TO LONG-TERM INVESTMENTS AND REWARDS. AND THIS IS A DIRECTION THAT MANY BELIEVE SHOULD BE FOLLOWED TO STRENGTHEN AMERICAN INDUSTRY.

THAT CONCLUDES MY PREPARED STATEMENT, AND I SHALL BE HAPPY TO RESPOND TO ANY QUESTIONS WHICH MEMBERS OF THE COMMITTEE MAY HAVE WITH REGARD TO MY TESTIMONY.

FUTURE STEEL TECHNOLOGY AND THE ENVIRONMENT

Joel S. Hirschhorn

Office of Technology Assessment
United States Congress
Washington, D. C. 20510

ABSTRACT

According to the OTA report TECHNOLOGY AND STEEL INDUSTRY COMPETITIVENESS, there are considerable opportunities for major new steelmaking technologies to be created and introduced in the domestic steel industry during the coming decades. During the decade of the 1980's there will be continued increases in the use of scrap based electric furnace steelmaking by both nonintegrated and integrated steelmakers. Moreover, there will be substantial increases in the use of continuous casting of steel. One of the important impacts of these changes will be the need to use direct reduced iron as a complement to ferrous scrap in electric steelmaking furnaces. The shift to greater scrap use and the gradually increasing use of direct reduced iron signifies less dependence on ironmaking in blast furnaces fueled primarily by coke. Thus, pollution should be abated. Although there may be very limited introduction of coal based direct reduction during the 1980's in the United States, in the 1990's we may see large scale direct reduction plants based on coal gasification and more DR plants using coal directly. Federal policies shape the development and use of new technology. Those policies that aid and reward the companies with the poorest performance may be detrimental to a competitive domestic steel industry, such is the nature of President Carter's proposal to grant extensions to the compliance schedule for the Clean Air Act to certain qualifying plants.

70-966 O - 81 - 6

FUTURE STEEL TECHNOLOGY AND THE ENVIRONMENT

In his recently announced program[1] for the domestic steel industry, President Carter linked the goals of modernization and environmental protection in a more precise manner than ever before. The key proposal is an amendment to the reauthorization of the Clean Air Act which would allow the EPA Administrator to use discretion, on a case-by-case basis, for extending by up to three years the deadline for compliance with the requirements of the Act. A number of conditions must be met, with the key point being the requirement to modernize existing steel facilities with the funds that would have been spent to meet the original compliance schedule. Also included in this policy package for the steel industry is the acceptance of greater use of the "bubble concept" and the stabilization of discharge permits under the Clean Water Act until EPA's revised regulations take effect in 1981. How will changing steelmaking technology affect the environment, and how will these policy changes affect the introduction of new technology in the domestic steel industry? These are the key issues I would like to explore.

How Much of a Problem Have Environmental Regulations Been for the Industry?

The premise behind the new policy thinking described above is that compliance with environmental regulations is costly. As President Carter has said, "Full compliance will require large additional expenditures at the very time that the industry must also make major investments for modernization."[1] The implication is that the industry cannot do both modernization and compliance at the same time for all steelmaking facilities. Just how easy a case can be made by companies for specific facilities for extension of the compliance schedule is not entirely clear.

But based on the strong positions taken by individual companies and the American Iron and Steel Institute that insufficient profitability and capital formation have been debilitating, there is some indication that past industry interpretations of their financial problems will continue, and that many requests for compliance stretchouts would be made. To what extent have past environmental regulatory costs been a severe burden to the industry and an obstacle to modernization?

During the period 1971 to 1978 pollution abatement capital expenditures equaled 14.5% of total capital spending for the domestic steel industry according to AISI data. In that same period, using data from the same source, spending on non-steel investments (diversification) amounted to 16.0% of total capital spending.[2] Both diversification and reinvestment strategies have been used successfully and unsuccessfully to increase profitability. However, regulatory compliance investments have not been sufficiently large to prevent diversification when that was desired, nor have the considerable diversification efforts of the past decade brought about any remarkable improvement in steel industry profitability. Moreover, the industry has maintained paying relatively high dividends to its stockholders, regardless of the generally low profitability it has usually had. During this same period of 1971 to 1978 dividends amounted to 46% of net income and was equivalent to 23.9% of total capital spending. There is, of course, a responsibility to make a return on stockholders investments as well as to the public to maintain a clean environment. Nevertheless, steel industry management have perpetuated a climate in which the value of owning stock in most large steel companies is based on current return rather than on appreciation of the stock which is hinged to perceptions of future success. Both dividends and non-steel investments are discretionary uses of

available capital, and it is, perhaps, an ethical issue and a question of values as well as anything else as to whether these uses have priority over the corporate responsibility to refrain from polluting the environment.

Certainly, diversification is a rightful perogative of corporate managers, but interestingly Hall's recent study of eight mature domestic industries, including steel, revealed that diversification has not been successful because: "By waiting too long to begin diversification efforts, most lack the capital and managerial skills to enter new markets and/or to grow businesses successfully in these markets. Thus their diversification efforts to date have been too small or have been managed in too conservative a fashion to obtain sustainable performance improvements, as witnessed by the very minor performance contribution of U.S. Steel's diversification program into chemicals..."3 The exception for the steel industry has been Armco, the most diversified and profitable "steel company", which used a strategy of investment in low cost steel production in selected regional segments as well as early and well managed diversification. And it has been Armco which has lead the effort to use the "bubble concept" to economically meet emission standards for nontoxic pollutants.

Since the domestic steel industry makes much importance over comparisons between itself and the Japanese steel industry, it is interesting to note how to Japanese have responded to the social demands for a clean environment. During the period from 1971 to 1978 the Japanese spent 13.4% of their total capital spending on pollution abatement. Although this is slightly more than what the domestic industry spent as a fraction of total capital spending, it does not fully capture the difference between the industries. By normalizing actual pollution abatement spending on the basis

of the amount of raw steel produced during this period, it is possible to see that the Japanese have had a greater intensity of spending. The per ton (metric) capital spending on pollution abatement during this period was 50% greater for the Japanese as compared to domestic spending.[4] This was true even though the Japanese had the advantage of new plant construction, for the most part, as compared to retrofitting in the United States.

The Japanese have put much effort into pollution abatement technology because Japanese ambient air quality standards are generally more stringent than those in the United States. For example, the 24 hour SO_2 standard in Japan is 0.04 ppm, as compared to 0.14 ppm in the United States, the one hour standard for photochemical oxidants is 0.06 ppm in Japan and 0.12 ppm domestically, and the standard for particulate matter in Japan for 24 hours is 100 $\mu g/M^3$ and 260 $\mu g/M^3$ for the United States.[5]

There is no denying the reality that compliance with environmental regulations has been expensive for the domestic steel industry. However, it can only be viewed as a contributory factor to the industry's problems. By itself, regulatory spending cannot explain the industry's declining profitability. Thus, while Federal policies aimed at reducing the costs of compliance are useful and appropriate - if they do not also lead to significant health threats to the public and the workers of the industry - they are not likely going to lead to some swift or meaningful turnabout in the performance of the industry in general, or of the companies and facilities with the poorest technological and economic performance.

One factor generally overlooked when considering the burden of complying with environmental regulations is the substantial use of Industrial Development Bonds. Such financing reduces the need for

internally generated capital and makes large amounts of outside funds available at low cost and for long periods of time. Since State and local governments make tax-exempt revenue bonds available to companies, this is a form of public subsidy for what is reasoned rightfully to be a public good. During the past decade the domestic steel industry has used IDB's to generate nearly half the capital requirements for pollution abatement investments.6

In the AISI analysis of what the domestic steel industry's capital needs are for the next decade, the money needed for regulatory compliance ($800 million annually in 1978$) represents 12.3% of the total, the same as the fraction designated for diversification efforts. In actual fact $700 million of this is for pollution abatement (10.8% of the total) and $100 million is for meeting OSHA regulations. An EPA analysis forecasts about $500 million annually to meet pollution control needs during this period.7 Thus, with the likely lower level of environmental spending, diversification would outweight regulatory compliance.

Trends and Prospects for New Technology

During the past decade there have been two trends which undoubtedly will continue and which reduce pollution. These are the greater adoption of electric furnace steelmaking and the use of continuous casting.

The fraction of steel made in electric furnaces rose from about 15% to 25% during the decade of the 1970's. The greater use of domestic ferrous scrap in electric furnaces signifies that less primary ironmaking in blast furnaces and less cokemaking are going on. This shift form integrated to nonintegrated steelmaking reduces pollution and the costs of pollution

abatement substantially. Although there are limits to both the total amount of ferrous scrap available and to the amount of high quality scrap, there will be a continued increase in electric furnace steelmaking, probably to the 35% to 40% level in the 1980's.

The second most important trend is the greater use of the highly efficient continuous casting method of converting molten steel into solid shapes rather than the multiple step ingot casting approach. Continuous casting reduces pollution directly because of the elimination of soaking pits and furnaces, and indirectly because of the substantial increase in yield of the process. The increase in yield means that more finished steel is produced from a given amount of raw steel, usually in the order of 10% to 15% more finished steel. This means that less steel and less iron has to be made and thus pollution is reduced. During the past decade domestic use of continuous casting, although low compared to most other industries, has increased dramatically from just a few percent to over 15%. By the end of the decade it should approach 40% to 50%. Modernization of existing plants will be based on retrofitting existing facilities with continuous casting to a large degree because the many benefits of continuous casting, including reduced energy consumption, lead to return on investments of over 20%, and even more for alloy and specialty steels.

Both electric furnace steelmaking and continuous casting are well proven technologies. Considerable attention, both here and abroad, is being given to the development of truly new technologies that must be proven technically and economically on a pilot and demonstration level first. According to the recently completed study of the domestic steel industry by the Office of Technology Assessment, the most important new technology for

the domestic steel industry during the next several decades will be coal based direct reduction. Unlike natural gas based direct reduction which is undergoing phenomenal expansion throughout the world, coal based direct reduction has been used in only a few places in relatively small operations. Newer forms of direct reduction that can use cheap grades of coal and possibly coal gasification to produce either conventional direct reduced iron (DRI) or molten iron are being developed.

For the United States with abundant supplies of low grade coals, the prospect of coal based direct reduction offers a number of potential advantages. Capital and operating costs may be substantially lower than the blast furnace and coke oven route once the technology is fully developed. Most coal DR technologies are relatively simple, one step processes that offer a closed system approach with very little pollution. Moreover, like natural gas based direct reduction, a modular rather than economy of scale approach can be used. For the cyclic steel industry with capital problems as well as considerable uncertainties for demand, foreign competition and government policies, the ability to construct relatively small coal DR modules is most attractive.

Since the increasing use of electric furnaces will put much pressure on ferrous scrap supplies, in terms of quantity and quality, there will be an increasing need for direct reduced iron to be used as a complement to scrap. Although DRI is already becoming a world traded commodity because of the rapidly increasing DR capacity in natural gas rich nations, such as Mexico, Venezuela and Saudi Arabia, other factors are likely to make domestic DR plants economically viable. During the 1980's we will likely see several different coal based DR technologies both proven and adopted in the United

States on a small scale, possibly at nonintegrated steel mills or as merchant DR plants serving a geographical region with limited ferrous scrap availability and a relatively high rate of growth in steel consumption. During the 1990's it is quite conceivable that larger scale coal gasification DR plants will be constructed. The integrated plant of the future may be based on DR rather than the blast furnace.

Critics of DR rightfully note that at present large scale DR plants could not be justified. However, it is crucial to understand that coal DR technology is in its infancy and that many improvements are likely to result from the substantial amount of R&D activity in this area. The two most important driving forces for developing coal DR technology are the reductions in capital costs and pollution. Creating and adopting new technology is facilitated by both rapid company growth and profitability. In the United States there is a segment of the domestic steel industry which satisfies these conditions. This is the nonintegrated segment, the scrap based minimills, midimills or market mills which have undergone tremendous growth in the past decade, from only a few percent of the domestic market to about 15% today. The OTA study forecasts that by 1990 these companies could account for at least 25% of the market. Since the growth of these companies must depend on broadening the product mix to include higher quality steels, the need to introduce virgin iron in the form of DRI will be critical. And many of these companies have already demonstrated their inclination and ability to innovate quickly in new technology. Even with the increased capital costs of constructing DR facilities, the total capital costs for combined DRI-scrap based mills could be less than the costs for a conventional greenfield integrated plant or even the costs for extensive modernization of existing integrated plants. For example, according to the

OTA study, the capital costs of a combined DR-scrap plant would likely be approximately $500 per metric ton of annual steel product capacity, about one third that for a conventional greenfield integrated plant.

A number of other major changes in technology are likely to be developed commercially within the next decade, these include: formcoking, plasma steelmaking, direct casting and a host of relatively incremental technical improvements which when applied collectively to a particular plant represent a substantial overall improvement in efficiency. Virtually of these changes imply reductions in pollution because they make use of closed systems and reduce the dependence on conventional cokemaking, either directly or indirectly by improving efficiency and yield in the steelmaking portion of the mill.

Contrary to some concepts popularized about the steel industry, iron and steelmaking technology is far from static. Technology is a problem solving tool that bold and risk taking managers can use to deal with problems of limited capital availability, rising labor costs, environmental regulations and raw material constraints. Future steel demand is uncertain and any increase in demand will be small. Nevertheless, steel will remain an absolutely critical material for all societies. Recent oversupply conditions have taught valuable lessons to most steel industries, particularly those in Europe. There is a good possibility of a close match between world steel supply and demand leading to higher profits in the mid-1980's. It is this perception by many people both in the industry now and examining the industry from afar that is stimulating the development of new technologies, particularly those such as direct reduction that will make entry into the industry easier. All these changes, including the influx of

increasing amounts of foreign capital into the domestic steel industry, will likely lead to reduced environmental pollution in the years ahead.

Federal Policies Affect Modernization

Although Federal policies concerned with the environment may relieve some of the immediate problems of capital availability, they are not likely to serve as a major stimulus for modernization based on the most innovative technologies or for modernization of plants which are already relatively efficient.

Policies which more directly deal with capital formation, RD&D, and prices have greater ability to influence modernization based on new technology. With the exception of the growing nonintegrated segment of the industry and the highly efficient and competitive alloy/specialty steelmakers, the absence of a coordinated set of policies for the steel industry which leads to a substantial increase in profitability for the large integrated companies will likely result in the continued contraction of this segment of the industry. If the nonintegrated segment can compensate for the loss in capacity of the integrated companies, or even if greater levels of imports result, the net effect for the nation will be reduced pollution. There are, of course, a number of undesirable side effects of increased imports, including loss of employment and a threat to our national security should imports rise above about 20% of domestic consumption.

The important issue is not how to reduce pollution by reducing domestic steelmaking capacity and increasing our dependence on foreign steel. It is how do we both decrease pollution and maintain competitive and profitable

steelmaking capacity. The key here is a combination of Federal policies and changes in the industry itself which lead to the greatest use of the most innovative technology by the best managed companies rather than policies which tend to protect the poorest managed and performing companies.

If one object were to insure a viable competitive steel industry, then the President's idea of three year extensions for some plants could aid the wrong facilities, and the companies that have delayed compliance and modernization could be rewarded. There are, after all, a number of old inefficient and poorly located steel mills that are not truly competitive. The spectre of concentrated losses of jobs from plant closings could be dealt with by appropriate worker retraining and relocation programs. Like other policies, such as the recent EDA loan guarantee program, this regulatory approach tends to give advantage to those firms with the least competitiveness, rather than rewarding those better managed companies that would benefit from incentives for still greater risk taking and investments in the future. Greater application of the bubble concept appears to be a more acceptable approach to meeting the objectives of reduced pollution and freeing more money for modernization by companies.

The skewing of competitiveness by Federal policy is illustrated by the situation of Inland, Bethlehem and U.S. Steel, all with large integrated plants in the Chicago region. By investing in steelmaking, using innovative technology and having good strategic planning and management, Inland became the lowest cost domestic producer (or large integrated steelmakers) and reduced their pollution. But Bethlehem and U.S. Steel plants serving the same market are far less efficient and, if President Carter's proposal is accepted by Congress, they could use capital to invest in modernization

rather than pollution abatement at a time when they will receive even greater tax benefits from modernization capital investment than Inland did some time ago. Interestingly, the extension proposal asks only that "funds which would have been spent to comply with the deadline will be expended in the same time period for modernization," but there is little indication that such a level of spending would normally be sufficient to modernize qualifying plants to a significant degree. Moreover, the maximum of three years for extension is not long enough to plan and implement major forms of modernization. Cash flow from such plants could still be used for diversification out of steelmaking. Federal policy, such as the three year extension, therefore, gives Inland's higher cost competitors an advantage, but in the long run it cannot make these less efficient and more poorly managed plants independently competitive.

Moreover, Federal policies need more comprehensiveness. For example, although modernization is a worthy goal and new technologies may indeed reduce air and water pollution, we know that in many cases the pollution will merely be shifted to the solid waste category. The proposed policies may demonstrate to companies that they are better off in the long term by fighting compliance with RCRA and the regulations affecting hazardous wastes, and by using available capital for purposes such as diversification.

What is needed are incentives for developing, testing and adopting new technologies that offer less pollution of any kind (including noise for example) together with sufficient economic benefits to justify private investment. Rather than tying delayed spending on compliance to modernization, it may be useful to consider linking it to high risk R&D on innovative steelmaking (including pilot and demonstration activities). Two

reasons support this point of view. First, the level of R&D spending by the industry as a whole and by individual companies is closer to the level of spending on compliance with environmental regulations; that is, hundreds of millions of dollars annually for the industry for both cases, rather than billions of dollars needed every year for capital spending on modernization. Thus, the impact would be reater on R&D than on modernization. Second, as the OTA study showed, a relationship between environmental capital spending and R&D spending exists for the past decade. For example, from 1969 to 1973 the average ratio of R&D to environmental capital spending was unity, but from 1974 to 1978 the average ratio dropped to one-half. The increase in environmental capital spending from the earlier period to the later one was from an average of $157 million to $440 million annually. Environmental capital spending appears to be influencing the discretionary use of corporate funds on R&D in the domestic steel industry. R&D spending is not linked to total capital spending by the industry.

This policy approach of fostering R&D rather than modernization appears to have the disadvantage of shifting the use of funds from the plant to corporate level. However, by promoting intrinsically profitable, efficient and clean technology, it has the potential to foster legitimate, long term industry competitiveness. Using the bubble approach to deal with short term needs and the freeing of capital for modernization, and the compliance schedule extension for supporting long term R&D, federal policies could help the domestic steel industry in a fair and comprehensive manner.

References

1. "A Program For The American Steel Industry, Its Workers and Communities," The White House, September 30, 1980.

2. D. F. Barnett, "The American Steel Industry in the 1980's: Capital Requirements for Modernization," The Atlantic Economic Conference, October 12, 1979, Washington, D.C. (note: data reported are capital expenditures for productive steelmaking facilities; these have been used with AISI data on total capital spending and environmental spending to obtain the nonsteel spending.)

3. W. K. Hall, "Survival Strategies In A Hostile Environment," Harvard Business Review, September-October, 1980.

4. H. Mueller and K. Kawakito, "The International Steel Market: Present Crisis and Outlook for the 1980's," Middle Tennessee State University, 1979.

5. A. Mukaida, "Environmental Control Measures in the Japanese Steel Industry," Japan Steel Bulletin, vol. 4, no. 2, 1980.

6. Technology and Steel Industry Competitiveness, Office of Technology Assessment, Washington, D.C., June, 1980.

7. The Cost of Clean Air and Clean Water, Report to Congress, EPA, Washington, D. C. 1979.

Congress of the United States
OFFICE OF TECHNOLOGY ASSESSMENT
WASHINGTON, D.C. 20510

DEC 16 1980

JOHN H. GIBBONS
DIRECTOR
DANIEL DE SIMONE
DEPUTY DIRECTOR

December 15, 1980

Senator Jennings Randolph
United States Senate
Washington, D.C. 20510

Dear Senator Randoph:

Thank you for the opportunity to testify before the Committee on Envornment and Public Works on December 4.

Attached are my responses to your questions provided in your letter of 9 December.

Sincerely,

Joel S. Hirschhorn, Ph.D.
Project Director

QUESTION

Why do you feel that research and development is more important than immediate modernization at this time?

RESPONSE

Both modernization and research and development are equally important for the domestic steel industry. But to use delayed compliance to increase the extent of modernization in the near term is not very effective. So much money is needed for modernization that a more effective policy approach is needed to deal with the capital problem of the industry. Because of the low profitability of the industry, research and development has been neglected. The delayed compliance proposal could generate large enough amounts of money to make a very substantial impact on R & D efforts in the industry. These efforts are needed to maintain legitimate long term international competitiveness since many new advances are being made by foreign steel industries who place greater emphasis on technological innovation than the domestic steel industry.

QUESTION

Will not capital be needed for the equipment to implement the research and development?

RESPONSE

Yes, capital will be needed and I agree with the industry that Federal policy could be used to improve capital recovery through an approach such as accelerated depreciation. However, reduction of steelmaking costs by improved technology must also be used to improve profitability and capital formation. If the industry does not keep pace with the technological innovations of foreign steel industries, then it will never capture true international competitive advantage.

70-966 O - 81 - 7

QUESTION

Why should not the industry invest in the new processes already developed which are more cost effective and cleaner, which can be implemented now?

RESPONSE

They should. The OTA report emphasized that the most important technological change during the coming decade would and should be the greater adoption of already proven continuous casting technology. However, technology continues to advance as foreign steelmakers seek ways to reduce costs and make better products. The domestic steel industry can not achieve the highest levels of international competitiveness, profitability and independence from government support unless it too places emphasis on innovation. Our industry needs to get ahead of its competition rather than relying on buying the new technologies from foreign companies. By the time our industry puts such purchased technology in place and learns how to use it effectively, the foreign companies have already moved ahead with either incremental innovations or major substitutions of technology.

Congressional Research Service
The Library of Congress

Washington, D.C. 20540

SOME ENVIRONMENTAL ASPECTS OF THE STEEL REVITALIZATION PROPOSAL

Prepared at the Request of the
Senate Committee on Environment and Public Works

Joseph P. Biniek
Specialist in Environmental Policy
Environment and Natural Resources Policy Division
November 5, 1980

INTRODUCTION

The concerns of the U.S. steel industry during the past decade have centered on two external pressures, pollution abatement and competition from foreign producers. These two forces have engendered debates on: the efficiency of the steel industry; excessive Government control and regulation; Government interference in marketplace determination of price; and other issues. The Government is said to have contributed to the industry's plight, and now more government action has been requested to assist the industry to maintain its competitive position.

The American Iron and Steel Institute (AISI) recommends a number of governmental measures to encourage and permit the steel companies to achieve competitive rates of return, including: (1) modification of government-mandated regulatory programs, especially environmental, and (2) protection of industry from unfair volumes and pricing of foreign competitors. The industry emphasizes that effective measures are essential for revitalization and modernization of the industry.

To assist the Senate Environment and Public Works Committee, this report summarizes and reviews some of the basic statistics associated with the industry. It does not and cannot determine the role of the Federal Government in revitalization of the industry. Instead, the report raises questions and issues which, when answered, may be helpful in determining the appropriate Government role.

STEEL PRODUCTION

The United States steel industry maintained an unassailable lead in technology prior to and throughout World War II; however, post-war rebuilding and expansion of Japanese and European steel mills provided them with a significant technical advantage. World production figures (Table 1) show the dramatic decline in the relative share of the U.S. steel industry from 1956 to 1978. The U.S. share of world production declined from 36.8 percent in 1956 to 17.5 percent in 1978. Japan increased its share from 4.2 percent in 1956 to 14.3 percent in 1978.

TABLE 1. Raw Steel Production: Total World, EEC Countries, Japan, and the United States, 1956-1978

Year	Millions of tonnes				U.S. share of total world production (percent)
	Total world	EEC	Japan	United States	
1956	283.8	77.9	12.0	104.5	36.8
1957	291.8	82.0	12.5	102.2	35.0
1953	270.9	78.0	12.1	77.4	28.5
1959	305.8	84.0	16.6	84.7	27.7
1960	346.1	97.9	22.1	90.1	26.0
1961	353.8	96.1	28.3	88.9	25.1
1962	357.4	94.0	27.6	89.2	24.9
1963	382.9	96.5	31.5	99.1	25.9
1964	434.5	109.9	39.8	115.3	26.5
1965	456.3	113.8	41.2	119.3	26.1
1966	470.8	110.2	47.8	121.6	25.8
1967	496.7	114.5	62.1	115.4	23.2
1968	528.3	125.3	66.8	119.3	22.6
1969	573.2	134.7	82.1	128.2	22.4
1970	593.4	137.5	93.3	119.3	20.1
1971	580.4	128.2	88.5	109.2	18.8
1972	629.9	126.2	96.9	120.8	19.2
1973	697.1	150.1	108.2	136.8	19.6
1974	710.0	155.5	117.1	132.1	18.6
1975	645.8	125.3	102.3	105.8	16.4
1976	683.1	134.3	107.4	116.1	17.0
1977	673.9	125.3	102.4	113.1	16.7
1978	711.7	133.1	102.1	124.3	17.5

Source: Data published by American Iron and Steel Institute, and compiled by the Office of Technology Assessment for publication in Technology and Steel Industry Competitiveness. Washington. U.S. Govt. Print. Off., June 1980, p. 116.

The loss of the dominant position in the world market once held by the U.S. steel industry is only one facet of the problem. Data in Table 2 indicate

that the imports have been increasing steadily since 1961 when the negative balance of trade was 3.5 million tons. It had increased to 18.7 million tons by 1978.

TABLE 2

Growth In the Domestic Market Has Been Lost to Foreign Steel Producers
(Million Net Tons)

Year	Domestic Shipments + Imports — Exports	Imports	Imports As % Of Apparent Steel Supply	Balance Of Trade (Exports Less Imports)
1950-55 Avg.	72.6	1.3	1.8%	+ 2.0
1956-60 Avg.	71.8	2.4	3.3	+ 1.0
1961-65 Avg.	82.5	5.9	7.2	— 3.5
1966-70 Avg.	101.5	13.5	13.3	— 9.9
1971	102.5	18.3	17.9	—15.5
1972	106.6	17.7	16.6	—14.8
1973	122.5	15.2	12.4	—11.1
1974	119.6	16.0	13.4	—10.1
1975	89.0	12.0	13.5	— 9.1
1976	101.1	14.3	14.1	—11.6
1977	108.5	19.3	17.8	—17.3
1978	116.6	21.1	18.1	—18.7

Source: American Iron and Steel Institute, Annual Statistical Reports.

FINANCIAL QUESTIONS

Generalizations about the steel industries of Japan and the European Economic Community (EEC) can be as misleading as generalizations about the U.S. steel industry. Nonetheless, it has been reported that many prominent elements of the Japanese and EEC strategies for steel production include direct financial support and other forms of guidance and assistance to enhance export benavior. 1/ Illustrative of this influence is the difference in investment funding between the Japanese and U.S. steel industries. The U.S. steel industry secures about 79 percent of its funds from retained earnings and other internal sources of investment, as shown in Table 3. In contrast, the Japanese industry's internal sources accounted for 28 percent, and external sources accounted for 72 percent during the 1961-1971 period. 2/

TABLE 3. Comparative Sources of Funds in Japan and the U.S. (1961-1971)

	U.S.		Japan	
	Internal	External	Internal	External
All Non-Financial Corporations	64%[1]	36%[1]	49%[2]	51%[2]
Steel Industry[3]	79%	21%	28%	72%

[1] *Economic Report of the President*, January 1977, page 285.
[2] 1965 only from the Bank of Japan, *The Japanese Financial System*, page 18.
[3] *International Iron and Steel Institute.*

Source: Putnam, Hayes and Bartlett, Inc. Economics of International Trade. Policy Implications for the United States. An analysis and forecast for American Iron and Steel Institute, 1977, p. 13.

1/ Putnam, Hayes and Bartlett, Inc. Economics of International Trade. Policy Implications for the United States. An analysis and forecast for American Iron and Steel Institute, 1977, p. 23.

2/ Ibid., p. 13.

The U.S. steel industry's long-term debt increased from $763.1 million in 1950 to $7,738.9 million in 1978, a tenfold increase (not adjusted for inflation). During the same period, stockholders' equity increased from $5,458.3 million to $18,403.3, a 3.3-fold increase, as shown in Table 4. 3/ Total revenues increased from $9.5 billion in 1950 to $46.8 billion in 1978, a fivefold increase. Net income increased from $766 million to $1.2 billion during the period, an increase less than twofold. Net income as a percent of total revenues declined from 8 percent in 1950 to 2.8 percent in 1978.

TABLE 4. Selected Financial Highlights, Iron and Steel Industry, 1950-78 (dollars in millions)

Year	Total revenues	Net income	Net income as a percentage of revenues	Stockholders' equity[a]	Net income as a percentage of stockholders' equity	Working capital ratio	Long-term debt	Capital expenditures
1950	$ 9,534.6	$ 766.9	8.0	$ 5,458.3	14.1	2.1	$ 763.1	$ 505.3
1951	11,845.0	682.2	5.8	6,037.9	11.3	2.0	1,029.6	1,050.9
1952	10,858.2	541.0	5.0	6,373.0	9.5	1.9	1,447.3	1,298.3
1953	13,155.8	734.9	5.6	6,780.9	10.9	2.2	1,485.7	987.8
1954	10,593.3	637.3	6.9	7,139.6	8.9	2.0	1,485.7	608.9
1955	14,049.3	1,098.6	7.8	7,920.2	13.9	2.0	1,546.5	713.7
1956	15,271.8	1,113.3	7.3	8,664.7	12.8	2.1	1,567.7	1,310.6
1957	15,592.1	1,131.6	7.2	9,465.6	11.4	2.3	1,801.5	1,723.0
1958	12,551.3	787.6	6.3	9,898.2	8.0	1.9	2,144.8	1,136.9
1959	14,233.3	830.6	5.8	10,248.4	8.1	2.0	2,303.2	934.3
1960	14,221.3	810.8	5.7	10,545.1	8.2	2.1	2,488.2	1,520.7
1961	13,295.4	689.6	5.2	10,646.9	6.5	2.7	2,968.5	959.5
1962	13,980.6	566.4	4.1	10,676.1	5.3	2.9	2,853.6	911.4
1963	14,612.6	782.0	5.4	11,008.3	7.1	2.7	2,694.8	1,040.0
1964	16,357.1	992.3	6.1	11,393.4	8.7	2.4	2,874.2	1,599.5
1965	17,971.7	1,069.3	5.9	12,031.9	8.9	2.4	3,120.1	1,822.5
1966	18,288.4	1,075.3	5.9	12,045.1	8.9	2.3	3,782.3	1,952.7
1967	16,880.4	829.8	4.9	12,168.5	6.8	2.2	4,205.3	2,145.7
1968	18,679.6	992.2	5.3	12,617.5	8.2	2.0	4,601.4	2,307.3
1969	19,231.0	879.4	4.6	12,836.0	7.0	1.8	4,608.2	2,046.6
1970	19,269.5	531.6	2.8	12,966.0	4.1	1.9	5,133.9	1,736.2
1971	20,357.8	562.8	2.8	13,281.4	4.1	1.9	5,144.4	1,425.0
1972	22,555.7	774.8	3.4	13,674.5	5.8	1.9	5,229.6	1,174.3
1973	28,863.2	1,272.2	4.4	14,513.5	9.3	1.9	4,962.9	1,399.9
1974	38,243.6	2,475.2	6.5	16,243.2	17.1	1.8	4,651.2	2,114.7
1975	33,676.3	1,594.9	4.7	17,192.2	9.8	2.0	5,705.3	3,179.4
1976	36,462.4	1,337.4	3.7	18,027.3	7.8	1.9	6,966.5	3,252.9
1977	39,787.4	23.2[b]	0.06	17,603.7	0.1	1.8	7,930.7	2,857.6
1978	46,877.3	1,291.9	2.8	18,403.3	7.3	1.7	7,738.9	2,538.3

[a]As of January 1 of each year. [b]Reflects substantial impact of Bethlehem Steel plant closings.

Source: U.S. Congress. Office of Technology Assessment. Technology and Steel Industry Competitiveness. June 1980, p. 120.

3/ U.S. Congress. Office of Technology Assessment. Technology and Steel Industry Competitiveness. Washington. U.S. Govt. Print. Off., June 1980, p. 123.

The debt-to-equity ratio increased from .13 in 1950 to .42 in 1978. This increase in the debt-to-equity ration, together with low profits significantly affects the industry's ability to issue new stock or increase its debt. 4/

To some degree, the industry's problems can be traced to low profits and the cyclical nature of its profits. A comparison of the industry's profit trends to those of other industries is shown in Table 5. The steel industry's explanation for low profits and the growing capital problem is the cost-price squeeze; that is, that costs of steel making inputs rise more rapidly than steel prices. (See Table 6.) The steel industry also contends that it has

TABLE 5. Trends in Steel Industry Profits, 1954-78

	Profits after taxes					
	Steel		Percent of stockholder equity[a]			
Year	Millions of dollars	Percent of revenues	Steel	All mfg.	Ratio of steel/mfg.	Prime interest rate (percentage)
1954	$ 637	6.0	9.4	12.4	75.8	3.05
1955	1,099	7.8	15.4	15.0	102.8	3.16
1956	1,113	7.3	14.1	13.9	101.4	3.77
1957	1,132	7.3	13.1	12.9	101.6	4.20
1958	788	6.3	8.3	9.8	84.7	3.83
1959	831	5.8	8.4	11.7	71.8	4.48
1960	811	5.7	7.9	10.6	74.5	4.82
1961	690	5.2	6.5	9.9	65.7	4.50
1962	566	4.1	5.3	10.9	48.6	4.50
1963	782	5.4	7.3	11.6	62.9	4.50
1964	992	6.1	9.0	12.6	71.4	4.50
1965	1,069	5.9	9.4	13.9	67.6	4.54
1966	1,075	5.9	8.9	14.2	62.7	5.63
1967	830	4.9	6.9	12.6	54.8	5.61
1968	992	5.3	8.2	13.3	61.7	6.23
1969	879	4.6	7.0	12.4	56.5	7.96
1970	532	2.8	4.1	10.1	40.6	7.91
1971	563	2.8	4.3	10.8	39.8	5.72
1972	775	3.4	5.8	12.1	47.9	5.25
1973	1,272	4.4	9.3	14.9	62.4	8.03
1974	2,475	6.5	17.1	15.2	112.5	10.81
1975	1,595	4.7	9.8	12.6	77.8	7.86
1976	1,337	3.7	7.8	15.0	52.9	6.84
1977[b]	22	.1	0.1	14.9	0.7	6.83
1978	1,292	2.8	7.3	15.9	45.0	9.06

[a]Based on equity at beginning of year [b]Data influenced by Bethlehem Steel's plant closing and large loss.

Source: Data from American Iron and Steel Institute, and Citibank Corp., compiled by the Office of Technology Assessment for publication in Technology and Steel Competitiveness. Washington. U.S. Govt. Print. Off., June 1980, p. 116.

4/ Ibid., p. 123.

TABLE 6. Index of Steel Industry Prices and Costs, 1965-78

Year	Consumer price index	Producer price indexes: Wholesale price index for industrial commodities	Steel mill products	Metallurgical coal (high volume)	Iron ore (pellets)[a]	Steel scrap	Electrical power	Fuel oil	Wages[b]
1965	94.5	96.4	97.5	96.8	NA	112.6	103.0	107.7	94.05
1966	97.2	98.6	98.9	98.4	NA	106.6	99.8	105.0	97.37
1967	100.0	100.0	100.0	100.0	NA	100.0	100.0	100.0	100.00
1968	104.2	102.5	102.5	101.8	NA	93.0	100.9	95.7	105.76
1969	109.8	106.0	107.4	110.2	100.0	110.8	102.2	93.3	112.97
1970	116.3	110.0	114.3	150.9	105.1	138.8	106.6	125.5	119.31
1971	121.3	113.9	123.0	185.3	111.1	114.6	115.5	166.0	131.59
1972	125.3	117.9	130.4	198.4	111.1	121.8	123.9	158.8	148.70
1973	133.1	127.0	134.1	216.5	116.4	188.0	132.6	190.4	161.43
1974	147.7	153.8	170.0	232.8	140.3	353.2	172.3	485.4	190.79
1975	161.2	171.5	197.2	622.1	181.2	245.6	193.2	495.5	222.57
1976	170.5	182.5	209.7	657.8	201.6	259.0	226.9	451.7	246.82
1977	181.6	195.1	229.9	671.3	220.2	233.7	257.2	521.4	273.76
1978	195.4	209.3	254.5	704.9	230.1	278.2	279.7	496.8	300.36

NA = Not available. [a]December 1969 base. [b]Including fringe benefits.

Source: Data from U.S. Dept. of Labor, and American Iron and Steel Institute, compiled by the Office of Technology Assessment for publication in Technology and Steel Competitiveness. Washington. U.S. Govt. Print. Off., June 1980, p. 122.

been a target of Government "jawboning" when it announced price increases, and, therefore, has not been able to raise prices to match cost increases. 5/ Dividend payments have been relatively stable, even in years of low profits (Table 7). In addition, capital expenditures, as a percent of internally generated cash funds have been relatively high.

Numerous factors influence industry investment decisions; some are quantifiable, while others are speculative. Market size; rates of growth; the relative costs of capital, labor, and fuel; and the cost of capital in relation to Government taxation and subsidy policies are among the factors that play a role in investment decisions.

U.S. industry's after-tax profits depend in part on the depreciation rate allowed by the Internal Revenue Service (IRS) on capital expenditures. Allowing

5/ Ibid., p. 119.

TABLE 7. Selected Financial Data, U.S. Steel Industry, 1954-78 (dollars in millions)

Year	Profits after taxes	Depreciation, depletion, etc.[a]	Gross cash flow	Cash dividends	Net cash flow	Capital expenditures	Capital expenditures as a percent of net internally generated funds
1954	$ 637	$ 703	$1,340	$343 (53.8)[b]	$ 997	$ 609	61.1
1955	1,099	783	1,882	437 (39.8)	1,445	714	49.4
1956	1,113	794	1,907	508 (45.6)	1,399	1,311	93.7
1957	1,132	816	1,948	566 (50.0)	1,382	1,723	124.7
1958	788	713	1,501	540 (68.5)	961	1,136	118.2
1959	831	653	1,484	553 (66.5)	931	934	100.3
1960	811	840	1,651	564 (69.5)	1,087	1,521	139.9
1961	690	749	1,439	557 (80.7)	882	960	108.8
1962	566	958	1,524	508 (89.8)	1,016	911	89.7
1963	782	1,034	1,816	433 (56.6)	1,373	1,040	75.7
1964	992	1,046	2,038	462 (46.6)	1,576	1,600	101.5
1965	1,069	1,117	2,186	468 (43.8)	1,718	1,823	106.1
1966	1,075	1,199	2,274	483 (44.9)	1,791	1,953	109.0
1967	830	1,444	2,274	481 (58.0)	1,793	2,146	119.7
1968	992	1,316	2,308	452 (45.6)	1,856	2,307	124.3
1969	879	1,173	2,052	489 (55.6)	1,563	2,047	131.0
1970	532	1,128	1,160	488 (91.7)	1,172	1,736	148.1
1971	563	1,123	1,686	390 (69.3)	1,296	1,425	110.0
1972	775	1,196	1,971	402 (51.9)	1,569	1,174	74.8
1973	1,272	1,329	2,601	443 (34.8)	2,158	1,400	64.9
1974	2,475	1,553	4,028	675 (27.2)	3,354	2,115	63.1
1975	1,595	1,591	3,186	658 (41.5)	2,528	3,179	125.8
1976	1,337	1,614	2,951	637 (47.6)	2,314	3,253	140.6
1977	22	1,888	1,910	555[c]	1,355	2,850	210.3
1978	1,292	2,010	3,302	533 (41.3)	2,769	2,538	91.7

[a]Includes changes in reserves.
[b]Numbers in parentheses are dividends as of percent of aftertax credits.
[c]The industry percent was 104, omitting Bethlehem Steel because of its extraordinary one-time loss. For Bethlehem itself, dividends represented 14.6 percent ($65.5 million) of the net loss ($448.2 million).

Source: Data from American Iron and Steel Institute, compiled by the Office of Technology Assessment for publication in Technology and Steel Competitiveness. Washington, U.S. Govt. Print. Off., June 1980, p. 121.

capital assets to be depreciated at a faster rate increases the deduction from gross profits and lowers the tax burden. IRS has required that capital expenditures in steel be depreciated over 15 or more years. In contrast, some U.S. industries are allowed to write off investments at a faster pace--for example, electronics in 8 years, and chemicals in 9.5 years, as shown in Table 8.

TABLE 8. Capital Cost Recovery Periods

Assets Used in the Manufacture of:	Guideline Lives—Years*
Electronic Equipment	8.0
Chemicals	9.5
Textiles, Yarns, Fabrics (Avg.)	9.0
Wood Products	10.0
Plastics	12.0
Electrical Equipment	12.0
Motor Vehicles	12.0
Fabricated Metal Products	12.0
Aluminum and Copper	14.0
Rubber Products	14.5
Steel	15.0
Cement	20.0
Average for All Manufacturing Industries	12.0

*Actual tax depreciation lives could vary plus or minus 20%.

Source: U. S. Department of the Treasury, Internal Revenue Service.

Source: Data from U.S. Dept. of Treasury, Internal Revenue Service, compiled by the Iron and Steel Institute and published in Steel at the Crossroads: The American Steel Industry in the 1980s. January 1978, p. 48.

PRODUCTIVITY

Although the performance of the domestic steel industry is relatively poor, when compared to other manufacturing sectors (see Table 5), its overall performance appears to be better than major steel producers in other nations, according to OTA. 6/ Another report by Iron Age indicates that integrated carbon steel production in 1978 was "a lot more efficient than European production and "somewhat more efficient" than Japanese production. 7/ Nonetheless, the competitive position of the U.S. steel industry has been declining, according to the American Iron and Steel Institute. Annual labor productivity improvements between 1959 and 1978 amounted to 2.2 percent in the United States, while Japan's productivity increase averaged 4.4 percent annually over the same period (Table 9). Except for France, other major producers had slower improvement rates than the United States or Japan.

TABLE 9. Manhours Per Ton of Finished Carbon Steel-Integrated Plants

	1959	1978	Annual Productivity Improvements
1. Based on Actual Operation Rates			
U.S.A.	9.6	7.8	2.2%
Japan	13.3	8.9	4.4
West Germany	11.6	10.7	.9
United Kingdom	20.6	21.1	(.3)
France	17.6	12.8	3.5
2. Based on Standard (90%) Operating Rates			
U.S.A.	9.6	7.7	2.4%
Japan	13.1	7.3	6.4
West Germany	12.4	9.4	3.1
United Kingdom	21.1	16.5	2.7
France	17.8	11.9	4.4

6/ Ibid., p. 123.

7/ McManus, George J. In Search of Excellence in Steel--the Star Performers. Iron Age, v. 223, September 1, 1980.

For the domestic market, the American steel industry has maintained a competitive advantage over major non-American producers, but now the industry expresses concern about losing that advantage. It contends that capital formation problems may reduce its capability. On the basis of production cost, the American steel industry supplied steel to domestic markets at lower cost than foreign competitors in 1978 (Table 10).

TABLE 10. Estimated Production Costs, Excluding Shipping*
(per net ton of finished carbon steel product)

	1978	1979 (1st Q)
United States	$359	$382
Japan	372	369
West Germany	386	426
France	414	416
United Kingdom	417	465

* Based on actual operating rates during the period. Excludes approximately $60 per net ton shipping and duty charges to the United States.

Source: Peter F. Marcus and Karlis M. Kirsis, Paine-Webber Mitchell Hutchins Inc., World Steel Dynamics. As published by American Iron and Steel Institute, in Steel at the Crossroads: The American Steel Industry in the 1980s. Washington, D.C. Jan. 1980, p. 7.

PROFITS

The U.S. non-integrated and alloy-specialty steel producers have exhibited much better performance than the integrated companies (Table 11). There is a wide variation in performance among all categories of steel producers.

TABLE 11. Steel Company Profitability by Industry Segment, 1977-78

Company	Steel shipped (thousand net tonnes)		Return on investment (percent)		Pretax profits from steel only (dollars per tonne shipped)	
	1977	1978	1977	1978	1977	1978
Integrated companies						
United States Steel	17,868	18,866	3.7	5.3	− 5.30	− 1.04[a]
Bethlehem Steel	11,251	11,859	(11.0)	9.3	− 10.48	28.60[a]
LTC	4,427	4,881	(0.4)	5.8	− 11.68	5.26[b]
National Steel	6,912	7,438	5.8	8.2	9.45	25.66[a]
Inland Steel	5,067	5,661	6.4	9.7	15.38	36.24[a]
Wheeling-Pittsburgh Steel	2,477	2,655	(2.0)	6.3	− 13.27	8.80
Kaiser Steel	1,440	1,443	0.6	1.6	− 8.40	− 12.25
McLouth Steel	1,286	1,468	(3.8)	5.2	− 18.73	7.36[b]
CF&I Steel	1,009	990	8.8	6.6	20.40	11.64
Interlake	738	787	5.9	3.7	4.18	− 31.64[b]
Average	—	—	1.4	6.2	—	—
Republic Steel[c]	6,038	6,501	4.2	10.4	6.36	23.35[a]
Armco	4,973	5,457	7.2	10.4	− 4.02	12.79[a]
Nonintegrated companies						
Northwestern Steel & Wire	763	1,077	7.2	13.9	33.38	53.33
Nucor	563	718	16.7	25.0	41.69	70.04
Florida Steel	418	600	4.8	13.8	8.54	27.27
Keystone Consolidated Industries	461	497	0.2	2.3	− 14.88	1.35[b]
Laclede Steel	397	471	4.2	9.4	− 0.99	16.64
Atlantic Steel	346	430	4.0	9.6	3.00	20.98
Average	—	—	6.2	12.3	—	—
Alloy and specialty steel companies[d]						
Sharon Steel[e]	965	1,055	10.6	15.3	29.38	57.83
Cyclops	776	886	5.5	10.3	16.13	41.11
Allegheny-Ludlum Industries	344	357	5.2	8.5	47.75	63.30
Copperweld	297	351	11.1	8.4	77.41	54.13
Washington Steel	42	45	9.3	11.6	150.29	190.29[b]
Carpenter Technology	—	—	16.8	16.9	NA	NA
Lukens Steel	—	—	10.0	9.6	NA	NA
Athlone Industries (Jessop Steel)	—	—	7.5	9.9	NA	NA
Eastmet (Eastern Stainless Steel)	—	—	6.0	9.0	NA	NA
Average	—	—	9.1	11.1	—	—

[a]Source: *World Steel Dynamics, Business Week* (Sept. 17, 1979) has given data on U.S. Steel indicating a 1978 loss of $15.00/tonne of steel shipped.
[b]From Steel Form 10-k reports. (U.S. Securities and Exchange Commission.)
[c]Alloy and specialty steels account for more than 10% of the steel shipments of these companies.
[d]Although Sharon Steel is integrated, most of its business is in alloy and specialty steels.

Source: Data from Iron Age, May 7, 1979, published by the Office of Technology Assessment in Technology and Steel Competitiveness. Washington, U.S. Govt. Print. Off., June 1980, p. 122.

For example, Interlake lost $31.64 per ton in 1978, while another integrated company, Inland Steel, had a pretax profit of $36.24 per ton. In the non-integrated group, Keystone Consolidated Industry's pretax profit was $1.35 per ton, in contrast to Nucor's pretax profit of $70.04 per ton. Cyclops, an alloy and specialty steel company, had a pretax profit of $41.11 per ton in 1978, while Carpenter Technology's pretax profit reached $190.25 per ton.

The wide variation in performance appears to reflect major differences in technology, age, and scale of facilities. Non-integrated firms have lower costs than integrated firms because they use ferrous scrap almost exclusively as raw material, make a smaller range of simpler products, and have lower marketing and overhead costs. The non-integrated and alloy-specialty firms tend to use more advanced and efficient technologies than the integrated firms. The alloy-specialty companies have comparatively high-priced products that have profit margins.

IMPORT/EXPORT

The U.S. steel industry's problems have been worsening since the 1950s, when the Nation was a net exporter of steel. Data in Table 12 show that steel imports rose from 1.2 million tons in 1956 to 19.1 million tons in 1978. Exports, however, failed to keep pace with the growing world demand. The Nation is now a net importer of steel.

TABLE 12. U.S. Imports and Exports of Steel Mill Products, 1956-78

Year	Millions of tonnes		Ratio of imports to apparent consumption (percent)
	Imports	Exports	
1956	1.2	3.9	1.7
1957	1.1	4.8	1.5
1958	1.5	2.5	2.9
1959	4.0	1.5	6.1
1960	3.1	2.7	4.7
1961	2.9	1.8	4.7
1962	3.7	1.8	5.6
1963	4.9	2.0	6.9
1964	5.8	3.1	7.3
1965	9.4	2.3	10.3
1966	9.8	1.5	10.9
1967	10.4	1.5	12.2
1968	16.3	2.0	16.7
1969	12.7	4.7	13.7
1970	12.2	6.4	13.8
1971	16.6	2.5	17.9
1972	16.1	2.6	16.6
1973	13.8	3.7	12.4
1974	14.5	5.3	13.4
1975	10.9	2.7	13.5
1976	13.0	2.4	14.1
1977	17.5	1.8	17.8
1978	19.1	2.2	18.1

Source: Data from the U.S. Dept. of Commerce, compiled by the Office of Technology Assessment and published in Technology and Steel Competitiveness. Washington, U.S. Govt. Print. Off., June 1980, p. 113.

The decline of the domestic steel industry's share of total world production (Table 1) suggests that it did not capitalize on the burgeoning post-World War II demand for steel. World steel exports have increased tenfold, but U.S. exports have remained almost constant during the past 30 years (Table 13). In 1955, the United States exported 4.6 percent of its production, but exports

dropped to 2.5 percent in 1978. In contrast, about 54 percent of West Germany's production was exported in 1973; 36.8 percent of Japan's; 37.6 percent of Italy's; and 21.5 percent of the United Kingdom's.

TABLE 13. Selected Countries' Steel Exports* as a Percentage of Their Total Raw Steel Production, 1955-78

Year	Total world	EEC	Japan	United States	Rest of world	Selected EEC countries		
						West Germany	Italy	United Kingdom
1955	13.0	30.3	25.0	4.6	6.8	16.2	8.5	17.1
1956	12.8	30.1	12.9	5.0	6.9	20.4	15.4	16.0
1957	14.1	31.6	9.4	6.3	7.9	26.3	14.7	18.1
1958	14.4	32.9	17.3	4.6	7.4	26.7	17.4	17.4
1959	14.1	36.1	12.0	2.5	7.4	28.2	17.3	18.6
1960	15.0	34.7	13.5	4.0	8.4	30.6	17.6	16.9
1961	14.5	36.3	10.6	2.8	8.0	32.8	12.9	19.0
1962	15.9	36.5	18.4	2.8	10.5	33.1	13.3	20.0
1963	15.8	36.2	22.5	2.7	10.3	33.0	11.6	19.8
1964	16.1	36.1	21.9	3.6	10.4	29.6	18.5	18.7
1965	17.3	39.8	30.8	3.5	9.8	34.5	25.7	19.2
1966	16.6	39.9	26.4	1.7	10.3	36.5	20.7	19.1
1967	16.9	42.3	18.7	1.8	10.7	43.5	16.6	21.3
1968	18.4	42.7	25.5	2.2	11.0	41.4	19.3	22.1
1969	18.7	40.8	25.3	5.0	11.1	37.4	15.5	19.9
1970	19.0	39.0	25.2	7.1	11.3	35.9	13.7	19.9
1971	21.4	46.8	34.9	3.2	11.8	43.7	24.0	27.3
1972	20.7	47.6	28.7	2.9	12.2	42.3	25.7	24.3
1973	20.8	48.2	27.8	3.6	12.0	46.5	22.1	21.4
1974	23.5	53.2	36.6	5.4	11.2	55.7	26.7	19.8
1975	22.5	54.1	37.7	3.4	11.5	53.7	38.2	21.5
1976	NA	NA	44.7	2.8	NA	47.2	43.8	21.6
1977	NA	NA	41.9	2.2	NA	53.2	37.8	21.5
1978	NA	NA	36.8	2.5	NA	53.7	37.6	21.5

NA = Not available.

* Semifinished and finished steel exports converted to raw steel equivalent by dividing exports by 0.75. Data include intra-EEC exports for EEC and European nations. For EEC in 1978, exports outside the member nations amounted to 25 percent of raw steel production, and imports from outside member nations were 13 percent of exports.

Sources: U.S. Congress, Senate Committee on Finance, Steel Imports, Dec. 1976; American Iron and Steel Institute, Annual Statistical Reports; and U.N. Economic Commission for Europe, The Steel Market.

ENVIRONMENTAL CONTROLS

The steel industry is one of the largest sources of pollution in the Nation, with the integrated section of the industry accounting for about 20 percent of all domestic industrial pollution. The environmental capital expenditures required to control pollution are necessarily high. The industry has expended significant funds for pollution control but fewer than half of its plants are currently in compliance with environmental requirements. 8/

Pollution control capital investments ranged from 6.7 to 18.0 percent of total investments between 1969 and 1979. Table 14 shows differing estimates of pollution control capital investment by the Department of Commerce and the American Iron and Steel Institute. Part of this difference can be attributed

TABLE 14. Total and Regulatory "Current Capital Costs" for the U.S. Steel Industry, 1969-79

Year	Total capital investment		Net income	Pollution control capital investment		Pollution control as percentage of capital investment		Pollution control as percent of net income	Occupational health capital investments	
	Commerce	AISI	AISI	Commerce	AISI	Commerce	AISI	AISI	(million)	Percent of total
1969	NA	2,046.6	$ 879.4	NA	$138.0	NA	6.7	15.69	—	—
1970	NA	1,736.2	531.6	NA	182.5	NA	10.5	34.33	—	—
1971	NA	1,425.0	562.8	NA	161.5	NA	11.3	28.69	—	—
1972	NA	1,174.3	774.8	NA	201.7	NA	17.1	26.03	193.0	12.3
1973	$1,407	1,399.9	1,272.2	$234	100.1	16.63	7.1	7.86	121.0	6.9
1974	2,030	2,114.7	2,475.2	245	198.8	12.06	9.4	8.03	92.0	3.5
1975	2,926	3,179.4	1,594.9	396	453.0	13.53	14.2	28.4	70.0	1.9
1976	2,954	3,252.9	1,337.4	146	489.2	15.09	15.0	36.57	34.0	0.9
1977	2,815	2,319.3[a]	377.3[a]	470	407.6	16.7	17.5[a]	108.0[a]	41.0	1.2
1978	2,622	2,538.3	1,291.9	441	457.9	16.8	18.0	35.44	41.0	1.2
1979	NA	NA	1,297.2	NA	650.9	NA	NA	50.17	NA	NA

[a]Excluding Bethlehem Steel, which incurred a $355 million loss in 1977 due to plant closings.
NOTE: AISI estimates are for the steel industry proper. Commerce Department estimates are for all environmental expenditures by steel companies, including for occasionally substantial nonsteel expenditures.

Sources: Data from Dept. of Commerce, Survey of Current Business, June 1978 (survey started in 1973, solid waste for all years); AISI, Annual Report, (air and water only); McGraw Hill, Annual Surveys of Investments in Employee Safety and Health, vols. 1-7, 1973-79; compiled by the Office of Technology Assessment and published in Technology and Steel Industry Competitiveness, Washington. U.S. Govt. Print. Off., June 1980, p. 346.

8/ Technology and Steel Industry Competitiveness, op. cit., p. 333.

to inconsistent reporting procedures, varying assumptions and definitions of what is or is not a purely regulatory investment, lack of access to independent industry data, and differing assumptions on allocation of joint costs for productive and control equipment.

According to AISI, approximately $3.7 billion were expended for pollution abatement between 1951 and 1979, $1.5 billion for water quality improvement, and $2.2 billion for air pollution controls. Table 15 implies that approximately $3.3 billion were expended for pollution control between 1970 and 1978.

TABLE 15. Estimated Capital Expenditures for Environmental Control Facilities,* With Projection for Future Years (in millions of dollars)

Year Facilities Began Operations	For Water Improvement	For Air Improvement	Total
1951-1965	$ 209.6	$ 238.8	$ 48.4
1966	18.8	37.6	56.5
1967	54.7	39.4	94.1
1968	61.5	20.2	101.7
1969	71.0	67.1	138.1
1970	110.0	72.6	182.6
1971	73.4	88.2	161.6
1972	57.0	144.8	201.8
1973	34.7	65.4	100.1
1974	79.4	119.4	198.8
1975	131.8	321.3	453.1
1976	158.7	330.5	489.2
1977	205.7	329.1	534.8
1978	180.8	277.2	458.0
Total 1951 — 1978**	1,510.2	2,223.1	3,733.3
Authorized for 1979 and Later	430.7	560.6	991.3

*Between 1951 and 1974 capital expenditures were for facilities placed in operation. Effective with 1975, the data represents actual capital expenditures made during the year.

**Includes capital expenditures in years prior to 1975 for facilities not placed in operation as of January 1, 1975: $63.1 million for water, $51.4 million for air, $114.5 million in total.

Source: Data from American Iron and Steel Institute, compiled and published by the Office of Technology Assessment in Technology and Steel Industry Competitiveness, Washington. U.S. Govt. Print. Off., June 1980, p. 346.

Arthur D. Little, Inc., estimates that these investments increase the cost of steel by $10 to $18 per ton in the Stage I phase (1975 primary air quality

standards and 1977 water guidelines), and $18 to $29 per ton for the Stage II (fugitive emissions and 1983 water guidelines). 9/ Temple, Barker, and Sloane arrive at somewhat different impacts: $7.24 per ton of steel in 1977, and $16.75 per ton in 1983. 10/ In both studies, the price impacts reflecting air and water pollution control result in a price increase of 2 to 5 percent in 1977, and 4.8 to 8 percent in 1983.

It is frequently argued that the U.S. steel industry's competitive position is hampered by high pollution control costs. Nonetheless, available data indicate that the Japanese steelmakers have been subjected to similar or higher costs (Table 16). Over the 1971-1977 period, the Japanese steel industry outlays for environmental controls reportedly were higher than U.S. outlays, and

TABLE 16. Steel Industry Environmental Control Investment Outlays: United States and Japan, 1970-71
(in millions of dollars and as a percentage of total capital expenditures)

	1977	1976	1975	1974	1973	1972	1971	1970
United States	$407.6	$489.2	$453.0	$198.8	$100.1	$201.7	$161.5	$182.5
	17.5%	15.0%	14.2%	9.4%	7.1%	17.1%	11.3%	10.5%
Japan	555.3	920.1	685.2	555.6	367.9	284.4	219.2	NA
	15.2	20.6	18.4	18.6	17.3	13.4	8.9	NA

NA = not available.

Sources: Data from American Iron and Steel Institute, Annual Statistical Report, 1978; Hans Mueller and Kiyoshi Kawakito, The International Steel Market Present Crisis and Outlook for the 1970s, 1979, p. 27; compiled by the Office of Technology Assessment and published in Technology and Steel Industry Competitiveness, Washington. U.S. Govt. Print. Offl, June 1980, p. 351.

the percentage of capital expended for pollution control by Japan was higher, except in 1971, 1972, and 1977. Since the U.S. steel industry is in the early stages of compliance with environmental regulations, its expenditures are expected

---

9/ Arthur D. Little, Inc. Steel and the Environment: A Cost Impact Analysis, 1975, p. VI.39.

10/ Temple, Barker, and Sloane, Inc. Analysis of Economic Effects of Environmental Regulations on the Integrated Iron and Steel Industry. July 1977.

to remain high. The impact of environmental controls on the U.S. steel industry is likely to increase as it approaches full compliance. In contrast, Japan's expenditures for pollution control reflect installation in an expanding industry. As Japan approaches completion of its last expansion of production, environmental control expenditures will probably decrease.

REVITALIZATION

The President's plan for revitalization of the steel industry reflects many program elements in the recommendations of the Tripartite Advisory Committee, which was established on July 26, 1978, to ensure a continuing cooperative approach to problems and prospects for the American steel industry. Committee deliberations led it to emphasize a program with the following objectives:

1. Modernization of the industry;
2. Reduction of the burden of adjustment;
3. Response to import competition;
4. Improvement of environment and health;
5. Adoption of the best technology;
6. Determination of capacity according to competition;
7. Integration of long-term approach; and
8. Cooperation among labor, management, and Government.

In the opinion of many, dismal trends in the steel industry over the past 30 years demonstrate the need for revitalization. However, the proposals of the Tripartite Committee and the steel industry, perhaps constructively, raise as many issues as they solve. 11/ For example, the "modernization of the industry" objective of the Committee fails to suggest or illustrate the nature of the industry following "modernization." Mr. Edgar B. Speer, Chairman, American Iron and Steel Institute, in testimony before the Subcommittee on Trade, of the Committee on Ways and Means, responded to Congresman Vanik in January 1978 hearings as follows:

11/ American Iron and Steel Institute. Steel at the Crossroads: The American Steel Industry in the 1980s. Jan. 1980.

Mr. VANIK. Mr. Speer, I just want to say that one final thing occurs to me.

What was the nature of the agreement, if any, made by the steel industry to commit the increase in cash flow to stepped-up modernization for steel plant and equipment?

Was there any understanding you arrived at with the administration?

Mr. SPEER. No.

There was no understanding that I know of that the industry has with the administration on stepped-up modernization.

Mr. Chairman, I would like to make one point, if I might. You know, there has been a lot of discussion about old plants. There has been a lot of discussion about the steel industry not having kept up, and that we are not modern, and that we are paying too much for labor and they are not productive even with the price that we are paying them, and this is a fiction.

This is the farthest thing from the truth that I can think of.

The steel industry, as you look at it today—now, you can pick out certain parts of it and I can take you to Japan and show you the identical thing or to Germany or England or to Italy—there is always a certain percentage of your productive capability that is older than the others. There is no question about that.

You have your Youngstown works and Campbell works and Youngstown Sheet & Tube and Republic's facilities in Youngstown, you have the Johnstown works that Bethlehem has, it is an old plant, money has not been put into it.

Where the money has been invested is where the marketplace is.

You trace the steel investment and you will see that the money is being put into those facilities where there is market growth, and the unfortunate thing is that, you know, as you take a look at the history of this thing the steel industry began its origination in New England and you can't find a steel plant in New England today and the reason you can't find a steel plant in New England today is because the market has kept moving west.

Twenty years ago the central location for steel was in Pittsburgh, Pa.; today, it is in Cincinnati, Ohio.

As those markets move, the industry has moved with it as you would expect them to and, consequently, the plants in New Haven, Conn., and Worcester, Mass., and all the way up and down the coast, they dried up and the money investment has gone with the marketplace.

The same is true today.

You can pump as much money, sir, as you want to pump into Youngstown, Ohio, but it isn't going to bring the market closer to Youngstown, Ohio and it won't make the raw material assembly cost any cheaper for Youngstown, Ohio.

With the cost of transportation there is no way to put money in Youngstown, Ohio, making any sense for steel. If there is any money to be put in Youngstown, Ohio, in the Mahoning Valley, it should be put up against the private enterprise in projects that are realistic, that are economical to produce there, where there is a market for them, where the project makes good financial sense. 12/

Mr. Speer's statement suggests that the steel industry cannot be assumed to be a static industry. Changing markets, cyclical demand, and general economic

---

12/ U.S. Congress. House. Committee on Ways and Means. Subcommittee on Trade. Administration's Comprehensive Program for the Steel Industry. Hearings Jan. 25 and 26, 1978, 95th Cong., 2d sess., Washington, D.C. U.S. Govt. Print. Off., 1978, p. 95.

conditions impact on the viability of specific firms. Competition for markets, whether domestic or international, is a key to success. Capital investments must be targeted to facilities that have potential for market growth.

The AISI and the Tripartite Committee recommend enactment of capital recovery legislation, particularly the "10-5-3" depreciation proposal, and delay of compliance with the Clean Air Act. Major issues arise:

1. To what extent would these provisions extend useful life of plants? To what extent would such extension conflict with the goals of the Clean Air Act?
2. To what extent would these provisions put new plants in new locations?
3. What plants would become most likely candidates for closure?
4. What plants are likely to be enlarged?
5. What impact would enlargement, closure, and new facilities have on local air quality?

Both AISI and the Tripartite Committee have identified continuous casting as the single most important step in modernization. The process provides savings through yield increases of 10 to 15 percent, energy savings of 1.5 to 2 million Btu per ton of steel, and reduction of labor. S. William Verity, Chairman of the Board, Armco, Inc., cautions:

> Continuous casting will not work miracles for the U.S. steel industry, but it does offer many economic advantages. Continuous casting increases productivity, improves quality, reduces energy consumption, is a definite environmental plus, and preserves the jobs of American steelworkers. 13/

13/ U.S. Congress. Senate. Committee on Banking, Housing, and Urban Affairs. Subcommittee on International Finance. Trade and Technology Hearings. 96th Cong. 1st sess. Washington, D.C. U.S. Govt. Print. Off., 1980, p. 65.

Recognizing the absence of miracles, issues still remain:

1. To what extent can retrofitting with continuous casters be applied to the existing industry?
2. What environmental improvements, if any, will accrue if continuous casters are installed?
3. Optimistically, what percent of the industry or volume of production can be converted to continuous casting?
4. How much will environmental control costs decrease as a result of continuous casting?

SUMMARY

The U.S. steel industry production was not keeping pace with world demand even prior to the enactment of major environmental laws. Nonetheless, environmental regulations have placed an additional burden on the industry; however, some other steel producing countries are subject to similar or more stringent requirements. Some steel plants have been closed because of environmental requirements, but in most cases, the plants were old marginal plants that did not warrant investments that would not enhance their production.

The revitalization plans proposed by the steel industry and the Tripartite Advisory Committee call for programs that would assist in capital formation; these include rapid depreciation of investments, and delays in compliance with environmental requirements. They also recommend modernization, protection from foreign competition, and assistance in R&D efforts.

From the environmental perspective, many issues remain unanswered:

1. The location and size of installations planned for "limited life" have not been identified.
2. No assessment has been made of the potential degradation of local air quality as the industry relocates, enlarges, or closes plants.
3. New technologies, such as continuous casting and formcoking, are recommended. Both technologies show promise for reducing pollutants; however, studies do not identify locations, the configurations of industry, or the likelihood of retrofit. Application of these technologies could increase the competitiveness of some plants; and again, the industry could have a portion of its production that is uneconomic and unable to meet environmental regulations. What is the size of the problem? Would "limited life" provisions be required again?

REFERENCES

American Iron and Steel Institute. Steel at the crossroads: the American steel industry in the 1980s. Jan. 1980, 92 p.

Little, Arthur D., Inc. Steel and the environment: a cost impact analysis. May 1975.

McManus, George J. In search of excellence in steel: the star performers. Iron age, v. 223, Sept. 1, 1980.

Mueller, Hans and Kiyoshi Kawahito. Steel industry economics. International Public Relations Co., Ltd. New York, Jan. 1978.

Putnam, Hayes and Bartlett, Inc. The economic implications of foreign steel pricing practices in the U.S. market. A report for the American Iron and Steel Institute. Newton, Mass. Aug. 1978.

------ The economics of international steel trade: policy implications for the United States. An analysis and forecast for American Iron and Steel Institute. 1977.

Temple, Barker and Sloane, Inc. Analysis of economic effects of environmental regulations on the integrated iron and steel industry. July 1977.

U.S. Congress. Office of Technology Assessment. Technology and steel industry competitiveness. Washington, D.C. U.S. Govt. Print. Off., June 1980.

------ Benefits of increased use of continuous casting by the U.S. steel industry. A technical memorandum. Washington, D.C. U.S. Govt. Print. Off. Oct. 1979.

U.S. Congress. House. Committee on Small Business. Subcommittee on General Oversight and Minority Enterprise. Productivity and the U.S. economy. Hearings. 96th Congress, 1st session, March 14, 1979, Washington, D.C. U.S. Govt. Print. Off., 1979.

U.S. Congress. House. Committee on Ways and Means. Subcommittee on Trade. Problems in the U.S. steel market. Hearings, 96th Congress, 1st session, Washington, D.C. U.S. Govt. Print. Off., 1980.

------ Administration's comprehensive program for the steel industry. Hearings. 95th Congress, 2d session. Washington, D.C. U.S. Govt. Print. Off., 1978.

U.S. Congress. Senate. Committee on Banking, Housing, and Urban Affairs. Subcommittee on Industrial Finance, Trade and Technology. Hearings. 96th Congress, 1st session. Washington, D.C. U.S. Govt. Print. Off., 1980.

U.S. Congress. Senate. Committee on Environment and Public Works. Subcommittee on Environment and Public Works. Subcommittee on Environmental Pollution. Enforcement of environmental regulations. Hearings. 96th Congress, 1st session. Washington, D.C. U.S. Govt. Print. Off., 1979.

a CBE COMMENT

COMMENTS ON THE

TRIPARTITE COMMISSION PROPOSALS

FOR THE STEEL INDUSTRY

before the

SUBCOMMITTEE ON ENVIRONMENTAL POLLUTION

of the

ENVIRONMENT AND PUBLIC WORKS COMMITTEE

of the

US SENATE

BY

CITIZENS FOR A BETTER ENVIRONMENT

prepared by

ROBERT GINSBURG, Ph.D.
STAFF CHEMIST/TOXICOLOGIST

ROBERT YUHNKE, ESQ.
ATTORNEY FOR CBE

on

DECEMBER 11, 1980

citizens for a better environment

aCBEComment

Citizens for a Better Environment (CBE) is a not-for-profit organization involved in environmental research, advocacy and litigation over national, regional and/or local pollution and health problems. CBE has identified the abatement of steel mill air pollution as one of the top three environmental priorities for the Chicago Metropolitan area. Steel mill air pollution is responsible for the continued exposure of over a million people in the Chicago area to severe violations of the primary National Ambient Air Quality Standards for particulate matter (6). Nationally many millions more are affected since air pollutants emitted by the steel industry as a whole account for about 25 per cent of all particulate pollution from stationary sources in the United States (7). Every steel town in the country suffers the ill effects of this pollution. Because of our efforts to achieve expeditious abatement of this long-term threat to public health, we have given careful attention to the proposals of the Tripartite Commission on the Steel Industry in general and especially those sections which involve extension of deadlines for steel industry compliance under the Clean Air Act (CAA).

We are very concerned that the Tripartite Commission Proposals (Proposals) make no provision for the prevention or even limiting of the industry-wide loss of jobs due to the proposal or from modernization. Implicit in these Proposals is a massive reduction in the size of the workforce in steel. Based on analogous situations in other countries the reduction could eventually approach 50 percent of the present workforce. Such a reduction would, in our opinion, be a social and economic disaster in steel cities such as Chicago. Furthermore the resulting localized unemployment would severly exacerbate the public health problems in those areas by decreasing access to medical facilities, increase the use of public health facilities and increase the incidence of disease by increasing the stress level of the population in those areas.

CBE has a number of concerns regarding the details of the compliance "stretch-out" plan which is central to the Proposals. The most serious concern relating to the CAA is that the "stretch-out" will allow additional public exposure to the particulates and highly toxic organic compounds emitted by coke oven batteries. For the reasons discussed below we urge that any legislative action on the CAA implementing the Proposals be sure to exclude coke ovens from any stretch-out provisions. If the costs of currently scheduled coke oven compliance will seriously interfere with industry modernization in any given case, then we also propose that alternate methods of financing be explored to supply the capital needed for the installation of coke battery emission controls in accordance with existing compliance schedules.

Coke ovens, which convert coal to coke, have long been known to emit a highly complex mixture of toxic organic compounds. Coke oven emissions contain significant quantities of polycyclic aromatic hydrocarbons (PAHs) such as benzo(a)pyrene (BaP), 7,12-Dimethylbenzanthracene (7,12 DMBA) and 3-Methylcholanthrene (3-MC) (1). These compounds have clearly been shown to be mutagenic and carcinogenic in animal studies and are generally

considered to be potent human carcinogens (2). Coke oven workers, who are directly exposed to these emissions have more than 7 times the incidence of of lung cancer than the general population. This confirms the highly dangerous nature of coke oven emissions (3).

According to numerous studies, coke oven emissions are considered to be one of the most significant sources of PAHs in the urban environment (4). Cities which contain coke ovens can have 50-100 times the concentration of these pollutants in the air near coke plants compared to cities without coke ovens (4). Recent research has provided the first definitive, though preliminary at this time, links between coke oven pollution (containing specific PAHs) and an increase in lung cancer mortality in communities surrounding coke plants as compared to areas further removed from the plants (5). Previous epidemiological studies have failed to provide such an environmental correlation because of the difficulty in determining the appropriate exposed population or populations of appropriate size, inadequate exposure data especially in terms of actual concentrations of specific PAHs and, finally, potential synergistic interactions between various carcinogenic and co-carcinogenic compounds such as the PAHs, sulfur oxides and particulates which could obscure any existing correlation. Furthermore the health effects may not show up as cancer but as increased general mortality rates and birth defects. Such increases above the national average are seen in many steel cities but have not yet been correlated with steel or coke oven emissions. Many independent experts believe that there is such a correlation.

Both EPA and OSHA have collected and evaluated the available information on coke oven emissions and have determined that these emissions should be controlled and decreased. They estimate that nearly 5 per cent of the US population or 15 million people live within 10 miles of coke plants and that they are exposed to a significant and excess public health risk. EPA analyses indicate that up to 100 people (excluding those who work inside the plants) will die from lung cancer each yearbecause of exposure to the carcinogenic coke oven emissions (4).

The Proposals before Congress would postpone the steel industry's obligation under the CAA to clean up the pollution from coke plants and other steel-making facilities until December 1985. The rules which now govern air pollution from the steel industry were adopted by the states in 1972 under the 1970 CAA. Less than one-third of steel industry air pollution sources havae come into compliance with the CAA. Another one-third are on compliance schedules and the remainder are not yet being brought into compliance. Big Steel has successfully avoided or refused to clean up most pollution sources for eight years, regardless of whether the balance sheet was written in red ink or black. Now, in the guise of funding modernization, the industry and the present (and future?) administration are asking the 15 million people who are exposed to the steel industry's pollution to bear the personal and social costs of air pollution for another five years.

The communities closest to the mills suffer most, both from the pollution and the economic weakness of the industry. These communities are typically made up of wage-earners, the aged and the poor. These residents are often trapped, without the option of escape. These proposals force them to pay for their jobs with their health, with no guarantee that it will save their jobs. It is not right or reasonable to ask those who must suffer from pollution to sacrifice their health and their lives in the interest of either the illusion of a healthier economy or the balance sheets of Big Steel.

Finally, the CAA extension in the proposals is estimated by the present administration to account for only about $200 million of the total package or less than 3 percent of the funds needed for modernization. How many lives is $200 million worth? Some, who are being asked to risk their lives, answer: none.

In conclusion we urge the Congress to reject the Clean Air Act extensions contained in the Tripartite Commisssion proposals, especially for coke plants.

REFERENCES

1. Coke Quench Tower Emission Testing Program; EPA-600/2-79-082 April, 1979.

2. a) "Preliminary Assessment of the Sources, Control and Population Exposure to Airborne Polycyclic Organic Matter (POM) as Indicated by Benzo(a)pyrene (BaP)," Energy and Environmental Analysis, Inc., November 10, 1978
   b) "An Assessment of the Health Effects of Coke Oven Emissions Germane to Low-Level Exposures," US EPA, Office of Research and Development, November, 1978
   c) "Health Assessment Document for Polycyclic Organic Matter," US EPA Office of Health and Environmental Assessment, December 1979.

3. a) Lloyd, J.W. (1971). Long-term mortality study of steelworkers. V. Respirator, cancer in coke plant woekers. Journal of Occupational Medicine,13, 53-67
   b) Redmond, C.K., Ciocci, A., Lloyd, J.W., &Rush, H.W. (1972). Long-term mortality of steelworkers. VI. Mortality from malignant neoplasms among coke oven workers. Journal of Occupational Medicine,14, 621-629

4. a) "CAG Preliminary Risk Assessment for Ambient Coke Oven Exposures," Carcinogen Assessment Group, US EPA, March 24, 1978
   b) "Human Population Exposures to Coke Plant Atmospheric Emissions Resulting from Quench Towers and Battery Waste Gas Stacks, " SRI International, May 1979
   c) "Human Population Exposures to Coke Oven Atmospheric Emissions," SRI International, May 1979
   d) see Ref. 2(a)
   e) "Trends in Benzo(a)pyrene, 1966-77." R.B. Faoro and J.A. Manning, Council on Environmental Quality, June 21, 1980
   f) "Factors Affecting Ambient Concentrations of Benzo(a)pyrene," Mark Beard, US EPA, August 1979

5. Ward, J.R. and Nagda, N.L., "Studies of Ambient Carcinogens and Respiratory Cancer in High Risk Communities," presentes at The Fifth International Clean Air Congress, October 20-26, 1980, Buenos Aires, Argentina

6. Illinois SIP Revision submitted to US EPA , April 1979, Volume 2

7. Legislative History for the 1977 Clean Air Act Amendments