

570

INDUSTRY PLANNING FOR CONTINUITY OF PRODUCTION

28 February 1957

CONTENTS

	<u>Page</u>
INTRODUCTION--Colonel T. L. Crystal, Jr., USAF, Member of the Faculty, ICAF.....	1
SPEAKER--Mr. John H. Redmond, Assistant Vice President and Manager of Operations, Tar Products Division, Koppers Company, Inc.....	1
GENERAL DISCUSSION.....	16

Publication No. L57-121

INDUSTRIAL COLLEGE OF THE ARMED FORCES

Washington, D. C.

Mr. John H. Redmond, Assistant Vice President and Manager of Operations, Tar Products Division, Koppers Company, Inc., has been with the Company since April 1948. A native of Columbus, Ohio, Mr. Redmond was graduated from Ohio State University in 1933 with a degree of bachelor of science in mechanical engineering. Upon graduation he spent one year in graduate work in Works Management with the Westinghouse Electric Corporation. His industrial experience has included assignments in both line and staff capacities in operations, cost analysis and control, and all phases of industrial engineering, safety, and security, while associated with the Westinghouse Electric Corporation, the Armstrong Cork Company, and the Koppers Company, Inc., where he is presently located. In September 1940, he was ordered to active duty as a first lieutenant in the Ordnance Department of the U. S. Army and was assigned to the Pittsburgh Ordnance District, where he served until November 1946 as chief of the inspection division, then as executive officer, and finally as contracting officer. During this time he received various promotions, rising to the rank of colonel. Upon discharge he accepted a commission as colonel in the Ordnance Corps, U. S. Army Reserve, in which he is still active. He is a registered professional engineer and a member of the American Society of Tool Engineers, and is active in the engineering field. He is vice president, Public Division, and a director of the Western Pennsylvania Safety Council; a safety consultant to the Department of Labor and Industry, Commonwealth of Pennsylvania; and a consultant of industrial security planning to the U. S. Department of Commerce. This is his first lecture at the Industrial College.

INDUSTRY PLANNING FOR CONTINUITY OF PRODUCTION

28 February 1957

COLONEL CRYSTAL: General Calhoun, Mr. Laslie, Fellow Members of the College: When President Truman announced in 1949 that the Soviet Union had exploded a thermonuclear device, as he called it, it marked, some people think, a new era. If you look at your history a bit, it actually marked the reopening of an era which had existed in our country up until about the War of 1812, because, once more we were vulnerable to attack by an enemy on our home front.

Now, prior to the announcement of any governmental planning or direction to handle this new development, American industry stepped in and did something. The Koppers Company of Pittsburgh, Pennsylvania, through its then president, the late General Brehon Somervell, directed the establishment of a program, a plan, and a study to see what they could do to continue production in the event of enemy attack.

The man to whom General Somervell turned to put in charge of this plan is our speaker for today, Mr. John H. Redmond, Assistant Vice President and Manager of Operations of the Tar Products Division of Koppers Company of Pittsburgh. I doubt that there is anyone in the country who has had longer, more intimate experience in this subject than he has.

We are very fortunate to have him, and I am very proud and pleased to introduce him to this audience. Mr. Redmond.

MR. REDMOND: Thank you very much, Colonel Crystal. It is a real pleasure for me to be with you this morning. I have had great admiration for the Industrial College of the Armed Forces and its program for a long time. I think the job of training selected members of the Armed Forces for broader service and greater leadership is a much needed contribution to the growth and security of our country.

You may wonder why I happened to be the one who is here today. When General Somervell first came with Koppers Company as its president, he had one of these offices that was longer than it was wide. Any time you received a call to go down to the general's office, you sort of shook a little bit and wondered what in the world you had done now. You walked down to his office and opened the door and walked in and sat down

in front of his desk. Staring you in the face from the wall directly in back of the general was a large fish that was mounted on a board. Underneath it was this significant little caption: "If I hadn't opened my big mouth I wouldn't be here." So I guess that's why I am here today.

Before we look at the current status of industry planning for continuity of production, let us sketch briefly some of the overall aspects of the problem.

In the event of a nuclear attack on the United States, there will be three types of communities existing after the attack.

First, we will have those communities in the target areas which are almost completely destroyed, with their very high toll of destruction of physical facilities and large number of dead.

Second, we will have those communities which have been on the fringe of target areas. These will be partially destroyed and disrupted, with large numbers of injured and homeless to be cared for, fed, clothed, and housed.

Third, we will have those communities which are untouched by attack, and who must carry the brunt of solving the problems which will face the survivors.

The primary problems which will face the survivors are these:

First, we must repel the attack on the enemy and successfully mount the attack against him so that we win the war. This job is fundamentally the job of the Armed Forces of our country. They must be kept free of all other responsibilities to successfully accomplish this mission.

Second, there is the problem of maintaining order and effective government. There is the responsibility of Government at National, State, and local levels. Planning and action for the effective discharge of this responsibility is the responsibility of Government at these levels. There must be coordination from the bottom up and the top down if the job is to be done effectively. As I see the picture there can be no place for the use of the Armed Forces for maintaining order if the Armed Forces are to be free to discharge their responsibility of repelling the attack and of effectively mounting the attack against our enemy. Civil government must so effectively plan and so stretch itself at all levels that it will be equal to the unprecedented task of maintaining order and government in the event of nuclear attack.

Third, there is the job of disaster relief for the injured and homeless civilian population--the caring for the injured, and the feeding, clothing, and housing of survivors whose communities have been destroyed or damaged to the point where they cannot be used as homes. In our usual peacetime economy, this has been the job of the American Red Cross. I know of no reason why those who are gaining experience along these lines in peacetime should not continue to carry the same responsibility in wartime.

Fourth, industry must adequately support, with essential supplies and materials, the efforts of the Armed Forces, the activities of Government at all levels, and the essential needs of the surviving civilian population. Some of the items needed will have been stockpiled against the day of need and will be immediately available for use. But, in spite of the best planning, there will be unforeseen needs that will have to be manufactured quickly. There will be the problem of replenishing supplies and materials as they are used and the replacing of attack damage and losses. This is the job of American industry. Planning and action must have been carried far enough, both from the viewpoint of industry choice and Government permission and support, that industry is ready for the effective discharge of this responsibility. There must be continuity of production if we are to survive as a Nation.

What has industry done to meet this responsibility?

Industry has started planning for continuity of production. Progress in planning for continuity of production has been made in two ways: first through coordinated planning by industry groups, and, second, through the planning of individual companies.

Industry planning by industry groups has been vigorously encouraged by the Business and Defense Services Administration of the United States Department of Commerce. This program was initiated by the Business and Defense Services Administration under a delegation of authority received by the Department of Commerce from the Office of Defense Mobilization. It is a purely voluntary program and has made these valuable contributions to industrial defense planning.

1. It has provided a framework for companies within an industry to meet and advise on industrial defense matters.

2. It has provided a channel of advice to industry as to what are the most vital and critical industry facilities and products from the overall defense viewpoint.

3. It has provided a clearinghouse for suggestions from industry to Government.

4. It has provided an effective representation in the BDSA for presenting industry's point of view in defense policy problems requiring ODM decision.

As industry and the BDSA have worked together on those industrial defense problems requiring industry-wide solution, six industry plans have been developed. As these plans differ somewhat in approach, I will outline them briefly for each of the six industries.

A. The Electronics Industry

This industry is very loosely organized, possibly because it is a young industry and is expanding quite rapidly. It has not established an industry council to promote nonmilitary defense activities. It has requested the Electronic Division of the BDSA in the Department of Commerce to serve as the industry coordinating agency in these planning activities. Progress to date includes: (1) a discussion of the need for work in the area of industrial defense by representatives from the Department of Commerce, the Federal Civil Defense Administration, and the Department of Defense at the annual conference of the Radio-Electronics-Television Manufacturers' Association in 1953. (2) No task forces have been created to cover the electronics area, nor has any guide for planning been written for the industry. In the lack of a specific plan for this industry, it has been using plans developed by other industry groups and individual companies as general guides. (3) The preparation of individual company plans has been discussed with the larger electronics firms. As a result of these discussions, a certain amount of planning has been done by most companies but has not yet been carried to the point that is needed to have an effective solution for the problem which will face us in the attack period. (4) The Electronics Division of the BDSA has collaborated with other industry divisions of the BDSA in the preparation of additional Industry Evaluation Board studies of the vulnerability of specific plants. (5) There are certain problems peculiar to the electronics industry. Because of the nature of certain parts used in electronic products, production for these parts is seriously concentrated. These problems have been discussed with the individual members of the industry, but, in many cases, such problems cannot be helped by industry-wide meetings because of the special problems involved. I think you all know enough about the way electronic devices are manufactured to recognize what some of the problems are. Many of the component parts in electronic products, for example

37-1

subassemblies, are made by one particular firm for the entire industry. Up to the present time the industry or any individual company in that industry has not seen its way clear to economically set up additional points of manufacture or additional manufacturing facilities to manufacture these component parts, or these individual subassemblies, where production had been concentrated in one particular plant or company. (6) Excellent progress has been made in the protection of records and essential drawings and know-how. Many firms have made considerable progress in planning for continuity of management and, to some degree, continuity of production in the event of nuclear attack. (7) One of the very serious conditions which has made effective planning in this industry difficult has been the existence of a strong proprietary interest. The industry is young enough and many of the basic patents are recent enough that this creates a very real bar to effective industrywide planning. However, much can be done and is being done through continuing encouragement of effective and complete planning for each of the companies in this industry.

B. The Copper Industry

Industrywide planning in the copper industry was initiated in 1954 at a joint meeting of the copper industry and the Department of Commerce. Representation from the copper industry was quite broad, including primary copper producers, brass mills, wire mills, brass mill products distributors, brass and bronze ingot makers, copper-powder producers, copper and copper-brass scrap dealers, exporters, and custom smelters. At this meeting, the planning problems facing the industry were outlined and the status of Government planning with respect to these problems was summarized.

As a result of this meeting, the Copper Division of the BDSA has appointed a task group to study several aspects of the problem. In addition, the brass and bronze ingot makers, the brass mill industry, and the copper wire and cable industry have appointed task forces on industrialdefense planning. As a result of the work done by these task forces, considerable progress has been made in isolating problems which face individual companies and the industry as a whole. Areas where exchange of information and assistance between companies can be helpful have been outlined. While there is as yet no written plan for the industry as a whole, several of the companies have developed individual plans and progress is being made in the industry.

C. The Iron and Steel Industry and The Chemical and Allied Industries.

These two industry groups have made more progress than most industries in planning nonmilitary defense programs. In addition to industry meetings with the Department of Commerce and other Government officials, these industries have done these things of significance:

1. As a result of a five-months' study of existing programs and intensive development by a specially selected steel industry task force, a manual entitled "Industrial Defense Planning Manual--Iron and Steel" has been published. It is available on a cost basis to any interested company or individual from the American Iron and Steel Institute, New York, New York. This 52-page manual gives a step-by-step blueprint of the planning necessary to safeguard the people and plants in industry against disaster; outlines the means by which the disastrous effects of an attack might be minimized, lives saved, property protected, and production resumed with minimum delay; gives detailed information on how to organize the major phases of industrial defense planning; and discusses the Government's accelerated tax-amortization provision for funds spent for protective construction by defense plants in target areas.

All phases of planning for emergency, from the broad aspects of high-echelon management problems to the detailed training problems of industrial plant departments, are covered in the manual. Such items as continuity of management, safeguarding company assets, financial aid to employees, feeding and housing disaster victims, emergency casualty stations, shutdown procedure, and transportation are among those discussed in detail.

It is a most complete and effective planning manual and has been of considerable assistance to other industries and individual companies in initiating an industrial defense plan.

2. The Chemical and Allied Industries

A task group from the chemical and allied industries likewise made an extensive study of this problem and published a 50-page manual entitled "Emergency and Disaster Planning for the Chemical and Allied Industries." This manual is available from the U. S. Superintendent of Documents for 25 cents. This manual discusses the problem in two phases--plant level planning and companywide planning. An effective outline for planning at both levels is given with an informative discussion

of the considerations back of each planning measure proposed. As in the iron and steel industry plan, continuity of management, safeguarding company assets, aid to employees, emergency casualty stations, shutdown procedures, restoration procedures, and advanced planning in relation to plant restoration and rehabilitation are effectively covered.

In addition, the plan developed by the chemical and allied industries has a section devoted to the discussion of factors to be considered in the design and construction of future plants. This is one of the first approaches by any industry group to consideration of this problem and will undoubtedly prove to be a most vital contribution to planning in this field.

This manual has likewise become a guide for other industry groups and individual companies who want to make a start in planning for industrial defense.

D. The Petroleum Industry.

The petroleum industry has long been organized on an industry basis for dealing with its industrywide problems. The National Petroleum Council has effectively represented the petroleum industry in its planning work and in its dealings with the Government. In World War II, the National Petroleum Council collaborated with the Department of Interior to organize and staff the Petroleum Administration for War, and again, in the Korean incident, set up and staffed the Petroleum Administration for Defense. In both cases, a most effective job was done. The National Petroleum Council has continued to collaborate closely with the Departments of Interior and Defense and the Office of Defense Mobilization. Recently a Military Petroleum Advisory Board was appointed by the Secretary of the Interior acting under the direction of the President. The purpose of this Board is to provide the Departments of Interior and Defense and the Office of Defense Mobilization with expert council, advice, and information on all oil and gas matters related to national security and defense.

In 1954, at the request of the Department of Interior, the National Petroleum Council set up a committee on oil and gas defense matters. This committee has been working on the various aspects of the defense planning problem and has submitted certain reports and recommendations. Eventually it is planned to publish manuals and advice covering the areas of maintaining company operations in the event of nuclear attack, and advance planning and action to be taken now to prepare for the problems which would exist should nuclear attack occur.

07-4

The most recent use made of the facilities of the National Petroleum Council has been its use in developing plans and a course of action to be followed in meeting the problems created by the Suez Canal incident.

E. The Life Insurance Association of America.

The industry groups previously discussed represent groups which are essentially producing industries, industries which supply vital materials and equipment in our defense effort. The life insurance industry represents another very different but equally vital phase of our economic life. The planning which they have done to date can serve as an example for many nonproducing segments of our economy and for the public at large in developing plans to contribute effectively to the overall defense problem.

The Life Insurance Association of America in 1953 appointed a committee to study civil-defense problems and make recommendations to the life insurance companies. The committee compiled a very comprehensive report on the general aspects of civil defense and has prepared a supplementary report dealing primarily with the life insurance aspects of civil defense.

In their first report, the items discussed included these:

The reality of the threat.

The nature of the nuclear threat.

Military preparations.

Preventive nonmilitary defense steps.

Recuperative nonmilitary defense steps.

Potential impact on industry and commerce.

Also included in this first report was an excellent and comprehensive bibliography of reference materials.

Four general conclusions were reached by this committee as to the contributions which could be made by the life insurance industry in planning for its own security and the security of the Nation.

1. Explore on an intercompany basis the problems involved in assuring the continuity of life insurance operations in the event of an enemy attack. Any of you who have life insurance policies, and I assume most of us do, can just imagine what would happen if no planning had been done by the life insurance industry and we had a nuclear attack on the United States. The insurance policies that we have at home might as well be thrown in the wastebasket, because we would have nothing but chaos facing us in trying to settle them. The problems in this area become exceedingly complex from the legal and financial viewpoint. Thorough consideration of the problem may even result in the initiation of appropriate legislation before an effective solution is found, because there are many complex legal and financial problems involved in preparing the life insurance industry to meet the problems of nuclear attack.

2. Develop plans on an individual company basis to assure the continuity of operation in the event of a nuclear attack. The provisions contemplated for company plans parallel very closely those developed by the task forces of the iron and steel industry and the chemical and allied industries groups for continuity of management and preservation of records and essential data.

3. Investigate the desirability of supporting and stimulating public demand for improved and more effective defense measures, and of helping to aid the public with respect to appropriate civil-defense measures. This involved the consideration of supporting the various measures that might be taken to minimize casualties, such as early warnings, effective military defense, dispersion of industry, protective construction, shelter programs, dispersal of population, and proper civil-defense preparations. While the primary responsibility in these areas lies with the Federal Government, the life insurance industry felt it could provide considerable help in supporting desirable measures, and particularly in informing the public about these measures through the extensive public information programs of the various life insurance companies.

4. Investigate the desirability of providing financial assistance to support the development of proper civil-defense measures. This might involve contribution of the industrial organizations and individual companies to worthwhile research projects connected with civil defense.

The supplemental report prepared by the Life Insurance Association of America currently developed recommended policies for the industry for these areas. Action under this report is still under consideration.

F. Individual Company Plans.

In addition to the planning activities of industries as a group, a number of companies have prepared and placed in operation their own industrial defense plans. Among the number that might be mentioned are the American Telephone and Telegraph Company, the Consolidated Edison Company of New York, Inc., the Standard Oil Company of New Jersey, the American Machine and Foundry Company, U. S. Steel Corporation, Jones and Laughlin Steel Corporation, my own company, Koppers Company, Inc., and many others. Most of these plans cover at least these general items--continuity of management; protection of essential corporate records, technical information and operating know-how; amplification of normal security and protective services; emergency shutdown procedures; evacuation procedures; provisions for emergency headquarters; coordination with civil defense in localities where facilities are located; and some provision for resuming production in the postattack period.

The Business and Defense Services Administration of the Department of Commerce is still doing an outstanding job of providing leadership for industrial defense planning by industry groups and individual companies. From time to time, meetings are held with individual companies and groups of companies in an effort to stimulate the selected companies to proceed with defense planning. The work already done by other industry groups and companies is suggested by BDSA as a guide.

On 5 February 1957, representatives from companies which had done an outstanding job of industrial defense planning met with the representatives of the BDSA to review the progress made, to develop, if possible, ways of generating interest in areas not yet covered, and in particular to develop a program for reaching the some 280,000 smaller companies who have not yet joined in this planning program. While this sounds like a tremendous job, more of a start has been made than most of us realize. In each company the existing safety and fire prevention program, combined with the usual planning for normal replacement of expected personnel losses, is a real start towards industrial defense planning. If we can only get each company to recognize this fact, and to see that all that is needed is some expansion of thinking and action in these areas and provision for safeguarding essential records, drawings, and technical know-how in a safe deposit box in a small-town bank, most small plants would be adequately covered from a planning viewpoint.

374

The need for industrial defense planning on this wide scale is comparatively new. In August 1945, the first atomic bomb was dropped, less than twelve years ago. However, it was not until the time of the Korean incident that there was much real interest in any phase of the defense problems forced on humanity by the possibility of nuclear attack. In my opinion, tremendous progress had been made in accepting the problem for what it is and in getting something done in the way of planning.

Any industry or company must first accept the fact that a real need for industrial defense planning exists before an effective planning job can be done. A report which is most helpful in evaluating the reality of the danger is that prepared by Admiral Ben Morrell, chairman of the board, Jones and Laughlin Steel Corporation, and entitled "What the H-Bomb Can Do To U. S. Industries." An excellent brief summary of this significant report appeared in U. S. News and World Report for 7 May 1954. While this report was prepared from the viewpoint of the steel industry, it presents in summary form the problem which faces every industry and, in turn, each individual company.

You may wonder how any company that wants to get started in industrial defense planning can make the start. There is help available for either any industry or individual company which desires to start planning for industrial defense. The manual which has been published by the Iron and Steel Institute is most helpful, as is also the manual published for the chemical and allied industries by the Superintendent of Documents in Washington, D. C. Any industry or company can secure additional worthwhile information and secure answers to individual questions by contact with the Business and Defense Services Administration of the United States Department of Commerce. This group has been most helpful to industry in getting industrial defense planning started and has, in fact, furnished much of the leadership given to date by Government in this most vital area.

Help can also be secured from those companies which have proceeded with individual planning. Most companies which have developed a plan for their operations are most willing to supply copies of their plan and discuss its features with any who have a sincere interest in the problem.

Some comments on the Industrial Dispersion Policy Directive issued by the President in 1951 may be of interest.

From an industrial defense viewpoint, I believe there is general agreement that this policy is most wise and most necessary. By dispersing our industry geographically, we make the problem of successful crippling attack by an enemy much more difficult. Dispersion means that, to cripple any one industry to the point where we cannot mount and sustain a successful counteroffensive, the enemy must get planes over many more targets. To do this, he must launch more planes from his bases, have many more atomic or H-bombs available for dropping on targets, and have many more trained personnel of all the many classifications necessary to build, fly, and maintain the highly complex modern aircraft necessary for any such attack.

There are certain natural factors which favor the acceptance of dispersion by industry. The very rapid growth in population in many sections of our country previously considered only as vacation lands has resulted in the development of large-volume industrial markets in new geographical areas. The growth of these markets makes it profitable for certain types of industry to locate plants in these areas to more effectively and economically serve these markets. As plants move into an area to produce products for the consumer market, an increased demand for other more basic materials, such as steel, aluminum, and basic industries to service the plants producing consumer products. This growth of our population and its relocation within the Continental United States in the period 1945 through 1965 will be a most strong force working to disperse industry rather effectively over most of our national area.

The industrial dispersion policy, as promulgated by the President, was an effort to encourage more rapid dispersion than would result from this natural trend. From the viewpoint of industry, the industrial dispersion policy, as it now stands, is quite acceptable as to objective, but somewhat difficult of early accomplishment. The particular problem which faces industry is that it must show sufficient profit to satisfy its stockholders that their money is being wisely used in the conduct of the business. Profits are also necessary for the continuity of production needed to provide steady employment with adequate wages and salaries for all the employees of each company. The primary means used to date by the Government to encourage industrial dispersion is the use of rapid or accelerated tax amortization.

In any case where dispersion is attempted by a company in advance of the development of markets, there usually are additional costs incurred which cannot be included in the cost of the product and still meet the

prices of competitors. This means that, if dispersion is attempted before the market in the new area can absorb the production of the proposed plant, these extra costs must come from what would otherwise be profit. The rapid amortization granted to industry also must come from profit. It is not a tax writeoff as it is sometimes called; it is only a tax postponement. It is accelerated depreciation which is deducted as an expense from gross income, thereby resulting in lower profit. The combined effect of additional costs due to dispersing to new areas before markets develop and the extra cost of accelerated amortization may cause a loss that can sink a new plant before it gets started.

In the case of accelerated amortization for protective construction, money spent for such items has no productive capacity whatsoever. It is an extra load assumed by industry without hope of earning any return on such expenditures. Any of you who have had to look stockholders in the eye know that most stockholder groups today are not willing to accept expenditures which are going to decrease the rate of return on their money. They want their money to go into increased productive facilities and increased sales so that there will be increased returns on the money which they have invested.

Actually, I believe this matter of industrial dispersion can be resolved this way: If we believe that attack is imminent enough that dispersion and protective construction must be accomplished in the immediate future, much stronger incentives are needed than exist at the present. If, on the other hand, we believe that attack is not imminent and may be delayed as long as 20 to 25 years, then the natural growth and relocation of our population now taking place, plus the development of large-volume markets in new geographical areas, will be a strong enough force to accomplish what we need in the way of industrial dispersion.

There are certain questions which need to be resolved if planning for continuity of production is to be adequately accomplished by industry.

1. Leadership and Overall Coordination.

As I understand the existing laws, Executive orders, and regulations, the Office of Defense Mobilization has been designated as the general planning agency for nonmilitary defense. However, this agency has no authority over the Federal Civil Defense Administration nor over the nonmilitary defense activities of the Defense Department. Neither is its relationship to other departments and agencies of the Federal Government clearly defined or thoroughly understood by many of these

agencies. The most urgent need is to establish clearly within the Federal Government the central point of authority and the form of organization which is to plan for and execute the nonmilitary defense of the United States. As I see it, the important thing today in this area is to come to grasp with the real heart of the critical problem and to establish a central point of organization to which everyone can look for the answers that need to be given to the questions that arise when we get into industrial defense planning and nonmilitary defense planning in its broad scope.

2. Manpower and Supplies

Can industry count on retaining needed manpower for the postattack problem? Key executives and personnel of many companies have served one or more assignments in Washington on loan to various agencies of the Federal Government. From a planning viewpoint, these agencies of the Government look on these men as a reserve available for assignment in any postattack period. The same men are looked on by their companies as key personnel absolutely essential to postattack resumption of activities by their companies. Some of these same individuals also hold commissions as Reserve officers and are considered as a part of the expansion pool available to the Armed Forces for expansion of the Armed Forces to repel the enemy attack and mount the attack which will be necessary against the enemy in order to win the war. There has been an unwillingness up to the present time by any group to face up to the reality of this problem and to come to any decision as to which assignment the man shall be slated for in the post-attack period. That problem has to be resolved if we are going to plan effectively for continuity of production.

This manpower and supplies problem is further complicated by some of the Civil Defense planning and legislation at State level. In some areas, planning contemplates the conscription by Civil Defense of manpower, equipment, supplies--in short anything which can be used. In some States, serious consideration is being given to legislation which will empower Civil Defense authorities to take anything they want in the postattack period. Under such conditions, there can be no continuity of production by industry no matter how complete the planning or advance preparation.

3. Stockpiling Policy

I believe there is very serious need for our stockpiling policy to be reviewed. We are today stockpiling primarily strategic

materials--to deal with World War II types of shortages. Such supplies are useful in a long war of attrition, such as World War II. They are not much use in a war launched with a large-scale nuclear attack.

There is need to reevaluate our stockpiling concept, giving consideration to such items as these:

- a. Reserves of finished war material so we may fight and attack without new production for several months after the initial enemy attack.
- b. Emergency supplies and equipment to care for the casualties that we would have from any nuclear attack.
- c. A few fully integrated, self-contained, fully protected underground plants for small but certain production of key military weapons systems without any assistance from the balance of the Nation's economy. Relocation of existing Government-owned and operated arsenals underground could accomplish this.
- d. Stored reserves of items of equipment (including spare parts) essential for the reconstruction of essential industry.

Are there any signs pointing towards a solution to the vulnerability of industry to atomic or thermonuclear attack?

I believe that we can say this: We are not in a position where we can say there will be no damage and there will be no disruption of production. We haven't progressed to the point where we can keep the enemy completely away from dropping some bombs on the targets and getting some sabotage effectively accomplished.

However, I think we can say that some planning is being done. Progress has been made, and the progress that has been made is reducing the probable hurt to industry and increasing our ability to mount and support the offensive.

I would not want to leave any impression that I believe the job is done or that we are even on the threshold of success. As I have indicated, there is much to do in the sprawling organizations of the National, State, and local governments to establish one clear point of responsibility and authority for industrial defense planning and to prepare government for the job

0702

of maintaining order and effective government in the postattack period. There is need for more information to be made available to industry and to the general public so that they may better realize the real and serious nature of the threat with which we are living. There is need for strong leadership in preparing all phases of our national economy to effectively meet the crisis that would be created by an enemy attack. There is a need to evaluate realistically the ideologies present in the world today and to recognize each for what it is. A most realistic appraisal and reappraisal of our neighbors in the world in which we live is in order. We need to recognize that there is a necessity and a compulsion for us to do something now about all phases of both military and nonmilitary defense if we are to survive.

I am reminded a little bit of the story of the young couple who were going to the hospital to have their first baby. As the nervous prospective father was helping his very anxious wife into the emergency room of the hospital he turned to her and he said, "Dear, are you sure that you want to go through with this?" I think that's about where we stand.

To me, this matter of industrial defense is not a tantalizing theory, nor an interesting speculation. It is a pressing problem--difficult--but very tangible--very real--and your survival, my survival, the survival of our children, and the survival of our country are at stake. Progress has been made. There is much yet to be done. My prayer is that God may grant us each the wisdom and the strength to do our part well, whatever it may be.

Thank you very much.

COLONEL CRYSTAL: Mr. Redmond is pleased to entertain your questions.

QUESTION: Sir, you have spoken about providing continuity of management. I assume the Koppers Company has plants scattered throughout the country. Now, let's assume that there is a bomb attack in this country and some plant is not damaged at all. Let's assume that your board of directors can't communicate with the plant manager in your Koppers plant. Does that plant manager now have the authority to accede to the wishes, let's say, of Civil Defense--and I would assume that there is no law which requires him to do so. Does he now have the legal authority to go ahead, perhaps, and stop producing what he is producing and produce something else?

5776

MR. REDMOND: He has absolute authority to do that. I have issued instructions to all my plant managers telling them that, in any emergency which cuts off communications with Pittsburgh, which is our headquarters location, they are on their own and they are to take over all phases of plant management, to cooperate with the local sales offices on sales problems, and to proceed to operate the plants as effectively as they can, using their best judgment as to what should be done. They have complete authority right now to do that.

QUESTION: Mr. Redmond, there is a deep, underlying theme all the way through what you say about construction--housing, civil defense, production facilities, and so on. You didn't mention the construction industry, however, when you went to your six representative groupings. I would like to have your view on that, please.

MR. REDMOND. You have asked me a good one, as you well know. There has been no industrywide planning by the construction industry, and my personal opinion on this area is this: We are not going to have available in the immediate postattack period the materials nor the manpower to devote to any extensive construction program. I know that, in the Government planning that has been done, very serious consideration has been given to this particular area; and I believe that the direction that they are leaning toward in their conclusions is that there is going to have to be very careful consideration of what should be rebuilt, and that the amount of rebuilding that is going to be possible is going to be extremely small in the immediate postattack period.

Housing is for the people who don't have houses. It may become very, very primitive. If any of you want to read some of the reports that have come out of the experience of Europe in the period they went through in World War II, and the experience of the Japanese in what they went through as the amount of damage and destruction began to pile up, you will find that it wasn't the type of destruction that you are going to get with a nuclear attack. What you are willing to accept in the way of living quarters and accommodations is a much lower standard than what you are used to in a peacetime economy. So there are going to be very severe compromises. I personally don't see how you are going to be able to devote either manpower or material to reconstruction. I think that most of your reconstruction is going to have to be deferred.

You will be able to do repair and rehabilitation, but even there I believe it is going to have to be on a fairly well controlled scale. Otherwise you could dissipate what is available in the way of equipment and

spare parts and material and manpower in facilities that are not going to make a proportionate contribution to success in the immediate post-attack period.

QUESTION: Sir, in your industry planning it is quite natural that you must have some sensing of the risk involved in both the specifics of the particular kind of weapons we might expect and the probability of where these weapons might be placed. In your experience, do you feel that industry gets enough timely information with regard to this, or do you feel that security unnecessarily holds back timely evaluation of the risk?

MR. REDMOND: I very definitely feel that there is overconsideration of security aspects in the release of information that is needed both by industry and by the general public and by government at local and State and Federal levels in trying to plan for and meet the problems that we are going to have. I understand that sometimes you men here are somewhat insulted by the fact that, even though you have a very high classification clearance, some of your speakers refuse to answer a question on the basis that it would be a violation of security.

I believe it is time for us to look more realistically at this matter of security of information. I personally don't think we are taking any degree of risk today in what is released, and I believe that the releasing of information should be advanced to the point where we are actually taking some slight degree of risk in what is released. I don't see how an effective job of planning at any level is going to be possible until that is done.

QUESTION: Sir, you mentioned this business of underground plants. I wonder if you would comment a little further. There are a couple of ideas in the back of my mind that bother me about that idea. Number one, the people would still have to be living on the surface. If they are in the fallout area, where are your workers going to come from for the underground plants? Secondly, in considering the American industry today and its complete dependence on raw material and components from an assembly point of view, where would that material come from?

MR. REDMOND: If you recall the comment I made on that, what I suggested was that consideration should be given to relocating the Government-owned arsenals underground. We have looked, in our planning in the past, on the Government-owned arsenals as the hard core of retention of skill and retention of manufacturing capacity for some of the

specialized equipment that is needed by the Armed Forces. It seems to me that we have reached the stage in the development of the technological capability of attack and destruction in modern war where we should take another look at our Government arsenal program and consider it from the viewpoint of whether we have reached the time in history when those plants must be moved underground.

I don't believe that American industry as such can today afford to put a plant underground. There is some very intensive study going on in that area and, as some of you may know, plants are being built underground in the Scandinavian countries. We are looking closely at their experience and at their cost and it may be that, out of the work that is being done there, we will be able to get enough information to properly evaluate which way we should go on that particular question.

QUESTION: Mr. Redmond, in recent months, as the result of the Holifield Committee report, there has been a good deal of public discussion pro and con on a civilian shelter program. You mentioned that the iron and steel and the chemical industries have in their plans provisions for the protection of personnel. Can you indicate whether or not shelters are part of this planning, and, if so, whether there is any limitation? Can you tell us what industry feels about this generally?

MR. REDMOND: In general, industry has not provided for shelters for personnel. Some planning has been done, and some actual plans have been reduced to the blueprint stage and cost estimates have been made of what it would take to construct shelters for what you would call the shutdown force, who would be the last ones to evacuate your plant. In case the warning time was not sufficient, they might not be able to get out of the plant before attack occurred. But, up to the present time industry has not seen its way clear to the building of any protective shelters for their employees. What we have done in planning for the protection of our employees is to look at the situation that we have in each plant and in the area immediately around the plant that we could reach in the evacuation time that we think we will have and attempt to select the evacuation area that would provide the most protection which is immediately available for our people.

STUDENT: Even for new plant construction?

MR. REDMOND: Even for new plant construction, because a shelter isn't going to earn you any profit, and it does cost money. It is astounding what you are talking about in the way of investment when you start talking about a shelter program.

5750

QUESTION: Sir, I noticed in the back of the Iron and Steel Manual that there is an analysis of the steps that the committee states should be taken by the various members of the industry in order to be prepared for an attack. It analyzed the companies, went down through all of them, and showed what they had accomplished in their part of the plan. It looked pretty crummy, except for one company. Do you know whether that has improved any since the report was made?

MR. REDMOND: Yes, it has improved appreciably since the report was written. As you can well visualize, in the very writing of that report you had people on the task force who had done quite a bit in this area of planning, also people on the task force who had done little or nothing in the way of industrial defense planning. The writing of that report has crystallized in the minds of all those people the nature of the problem and the steps that could be taken, and should be taken, to do something about the problem. The action of going through the step of preparing and writing that report and issuing it was a tremendous stimulus to planning in the iron and steel industry. The same thing was true of the chemical and allied industries group. The very writing of the report resulted in a tremendous impetus to planning in the chemical and allied industries. The same thing is happening as each of these industry groups or any company gets interested in the problem and begins to take a look at it.

QUESTION: Mr. Redmond, your comments with regard to the insurance industry included the rather obvious effects on that industry of a mass attack. Can you give us some of the solutions or findings of the planning of the industry, and can you identify the general nature of legislation which might be sought as an aid to their wartime problem?

MR. REDMOND: As to the legislation that they might seek, I really don't believe that I am in a position to comment on that. That is a tremendously specialized area, and it would take an insurance industry expert to answer that particular question for you. One of the big problems that is going to face the insurance industry, that may require some type of legislation, is the problem that a nuclear attack and the casualties and the deaths resulting from a nuclear attack completely throw out the window the actuarial tables upon which their premiums have been based; and the reserves that they have been building up on all the policies that they have in force do not begin to take care of the payment of the claims that would be moved up in time, should a nuclear attack occur. It is quite probable that that particular area and the consideration of some underwriting of that unusual risk faced by the insurance industry is the area where legislation or Government underwriting might be sought.

As to the other question, what they are doing--they are doing a considerable amount of work in planning for continuity of management of their companies and in the protection of records and essential data, so that, should their central office locations be destroyed, the information that is available there will be available in other places.

I imagine that some of you are familiar with the fact that there are being developed in the United States at the present time by private companies, organized for the specific purpose, underground storage areas where space can be rented and where there are most adequate and most modern facilities for duplication and reproduction of records. Many companies, not only in the insurance industry, but also many banks and many large corporations, are providing space of that type. Some are providing facilities of their own, such as, U. S. Steel has an excellent setup for the protection of its records--they use it as their permanent archives--in one of their worked-out limestone mines, and Jones and Laughlin Corporation has set up one of its worked-out coal mines on the same basis. Then we have these commercial enterprises which have taken over worked-out mines of one type or another, have developed them and are renting out space. That space is being used by the life insurance industry and the other industries as a means of protecting essential records and data.

Does that answer your question?

STUDENT: Yes; very well, thanks.

COLONEL SEEDS: Mr. Redmond, have there been any peacetime economic returns to the companies which engage in defense planning, any return for the expenditure of manpower and money, to date?

MR. REDMOND: I can certainly answer a hearty yes, out of our own experience. One of the obvious places where you would expect return is in reduction of accidents and in reduction in fire losses. That has certainly taken place in our company. As we started into the study of our existing operations and processes, particularly from the viewpoint of which ones will become hazardous in the event of attack, we found places where, for a very nominal expenditure, we could give ourselves much better protection against accidents and against fire or explosion than we previously had. We found other places where, by changing the process or making a relay-out of the process, we could drastically reduce the hazard and the risk that we had.

37-6

It has paid off for us in a reduction of our accident frequency and severity record and in a reduction of our fire losses. This past year, 1956, we had no fire loss in Koppers Company where we had to seek insurance recovery. As a result of that improvement in our safety and our fire and explosion record, we have also secured very substantial reduction in our insurance premiums, and that has put money into our pockets.

When we got into the area of looking at our operations from the viewpoint of how we would restore production in case we had a partially damaged operation, with some equipment surviving, we began to review our maintenance practices from the viewpoint of extending preventive maintenance practice much further and increasing our supply of spare parts and our maintenance and operating supplies to the point where we will have materials available quickly to do a repair job if one is needed. We also purchased some additional spare items of specialized equipment-- pumps and motors and relays and controls, and things of that type. As the result of the work that was done in that area, we have decreased down time, increased through-put rates, and secured a reduction in unit cost, which has resulted in a significant contribution to our company's profit.

So I would say that, out of our experience, there is a very resounding yes to the question that you have asked. Our program is paying off for us today in a very handsome return on the time and effort and money that we have put into these defense planning activities.

QUESTION: Sir, I wish you would comment a little further on your comments relative to getting production restored, where you are stockpiling certain pumps and relays and so forth. I read in an article that, in addition, industry is considering stockpiling productive items in larger amounts than they formerly have, so that they can continue production.

MR. REDMOND: We get into some problem areas in industry on this matter of stockpiling. It sort of boils down this way: As far as the production man is concerned, he never has enough stockpile. He would always like to see it bigger. As far as the financial man is concerned, you always have too much stockpile, and he would always like to see it smaller. So you have that constant discussion going back and forth within any company as to just what your inventory level shall be.

I don't know whether I should tell any of my trade secrets out of school or not, but, what any operating man will do is, when the profits are good and nobody is looking very critically at his costs or his

inventories, he sort of lets them drift upward; then he lives on that when profits are not good. I don't know, human nature being what it is, that that situation is going to change very much.

COLONEL CRYSTAL: Mr. Redmond, in the past hour and one-half you have certainly given us a concentrated and fascinating dose of how American industry today is attempting to face some of the problems that we, as military people, also face. Furthermore, you have raised a couple of questions that I think are definitely within our sphere of responsibility and interest, and I am going to be very surprised if we don't have some eager and active minds tackling some of the questions you pointed to.

On behalf of the entire College I would like to say thank you for a job very, very well done.

MR. REDMOND: It has been a real pleasure for me to be here.

(8 July 1957--3, 950)O