

NONMILITARY DEFENSE IN THE SHADOW
OF NUCLEAR ATTACK

15 May 1956

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GENERAL HOLLIS: You have read the biography of the speaker and you know that General Nelson is one of those individuals who made a distinguished reputation for himself as a soldier and at a very early age retired from the Army and has duplicated that success in business. The fact, however, that he has gone into business doesn't mean he has dropped his interest in governmental things. He has served notably and with distinction on many commissions and advisory boards, but perhaps one of the most worthwhile is his chairmanship of Project East River which was an assessment of means that could be taken to reduce urban vulnerability and other vulnerability of the country in the face of nuclear attack. That committee has since been reconvened to restudy the problem in the light of thermonuclear phase.

I am sure you will have an extremely interesting morning from a first-rate authority on the subject. It is a great honor to present to you Major General Otto L. Nelson.

GENERAL NELSON: Thank you, General Hollis. Gentlemen: I am glad to have the opportunity to discuss before this able and serious group what might be termed "Problems of Nonmilitary Defense." It might be useful to explain why. First of all, I am strongly of the opinion that the subject of nonmilitary defense is highly important now and will become increasingly important in the future. Secondly, despite the conscientious and able efforts of many dedicated people, both in and out of Government, I am dissatisfied and at times disheartened at the public apathy that exists and the slow and inadequate progress that is being made. Thirdly, as one who has participated more or less continuously in studies in this field, I am acutely conscious of the limitations and inadequacies of our work. Others ought to review our thinking and then go on to achieve some better answers and more effective policies and programs in a field that is admittedly highly complex and difficult. Difficult problems get solved only after you have interested and aroused enough able people who then do something about them.

Before proceeding further, I wish to alert all of you to a deliberate slant or focus which I want my remarks to reflect. I wish to emphasize and perhaps overstate what I conceive to be

changes required by present and future trends. I am conscious, of course, that all responsible and prudent administrators of any program try to steer a middle course between the dictates of past proven experience and the requirements for change to meet new and different conditions. Naturally, I am not advocating that, figuratively speaking, the book of past experience be thrown out the window, but I am going to concentrate on the changes which present and future developments appear to make mandatory. Thus, I am probably going to be overly critical despite my appreciation of the efforts which many able people have been and are now making.

Because the term "nonmilitary defense" is frequently used very loosely, I wish to define what I mean by it. To my way of thinking, it includes (1) civil defense measures, both prior to and after attack; (2) the entire program relating to the reduction of industrial and urban vulnerability; and (3) the measures needed in an emergency for continuity of government, industrial production, and essential services. Thus, it includes a substantial part of the industrial mobilization field, even though the word "nonmilitary" is used, because the activities do relate in the main to those measures involving primarily our civilian population and economy.

Please be reassured that I intend to attempt to discuss only a few of the many and complex problems to be found in the field of nonmilitary defense. In brief, my thesis will be that the truly revolutionary changes in weapons and weapons-delivery systems, which have come with the atomic age, require some equally drastic changes in the manner in which we have regarded nonmilitary defense, both in terms of importance and in the way it should be handled. Further, as I hardly need to tell this audience, there have been some drastic changes since the end of World War II in the world situation confronting the United States. It will then be my purpose to examine the implications of these so-called revolutionary changes in terms of what is being done and what should be done generally, first in the field of civil defense, and secondly in the area of reducing the vulnerability of our industrial and urban areas which, of course, includes measures for promoting the continuity of government, industrial production, and essential services in an atomic emergency.

Undoubtedly, all of you are familiar with all the significant changes affecting our military posture since the end of World War II, but I must ask your indulgence in permitting me to reiterate them briefly. I know, of course, that serious study has been given and

many changes have already been made since the advent of nuclear weapons. Even so, I doubt that few comprehend the magnitude of the changes that must eventually be made to adjust to this new factor. Now a very, very few planes can deliver a destructive force greater than that delivered by all the allied air bombings against Germany and Japan throughout all of World War II. Furthermore, the perfection of both long- and short-range missiles with nuclear war heads must be recognized as a development certain to come in the near future. In my humble opinion, these revolutionary changes in weapons and weapons-delivery systems are bound to have as shattering an impact on warfare and international relations as did the invention of gunpowder with its speedy elimination of the knight in armor and the rapid rise of the mass citizen army. A second profound change arises out of the situation in which the United States now finds itself with respect to the Soviet Union.

As background to a discussion of nonmilitary defense, I should like to outline what seems to me to be some of the implications of the following two especially significant and major developments.

At the top of the list is the certainty that in a major war the United States, throughout its length and breadth, will be exposed to attacks of devastating weapons for the first time in history. Centers of population and industry are certain to be highly important targets because they afford the opportunity of crippling our industrial might which is the essential basis for our military superiority. In addition, there is the further opportunity to immobilize or seriously limit the manpower that otherwise would be available for offensive military operations.

Secondly, I would stress the difficult dilemma that international tensions may last for a protracted period of many years during which there is the compelling necessity for the United States to be ready to meet a devastating all-out attack that an unscrupulous enemy might hope to be a one-time knockout blow. Our tradition has been all-out peace or all-out war, with time to marshal both our military and industrial resources; it has been our custom to go all out when we had to in war as well as all out in peace in terms of skeletonizing our military forces. In this atomic age there can be no substitute for operational forces in readiness, both in terms of military forces, nonmilitary defense, and industrial support.

As a corollary to this second major implication, I would like to call attention to the great interest and responsibility which the Armed Forces should have in (1) the long-term economic health of our country, (2) industrial progress to the end of continuing our industrial superiority over the Soviet Union and (3) effective use of United States manpower in which we are admittedly at a disadvantage. This is to say that our Nation requires a balanced national security program which not only seeks a well-balanced Armed Forces but also a proper overall balanced defense program which includes nonmilitary defense and the other items to which I have just alluded.

In the light of what I have said up to now, I should now like to discuss civil defense. Obviously time will not permit any thoroughgoing analysis; hence, I want to focus attention on a few highlights.

As a start, I should like to pose the question, "What kind of a civil defense should the United States have?" In search for a proper answer, let us not be content with an oversimplified and glib answer such as one student gave to the question of how a certain municipal program should be administered and financed. His easy answer that the program should be efficiently administered and liberally financed got him little credit in the exam. A similar answer would not be of much help to the civil defense program. When this question was being considered by the Project East River group in 1951 and 1952, there were two basically different answers that were advanced and argued.

A number of the individuals participating in the project argued that civil defense should be turned over to the military. They maintained that civil defense, as it was then and is now constituted, would fail in an atomic attack and the problem would then have to be turned over to the military anyway, so why not do it in the beginning. To use the vernacular, they asserted that it was clear that civil defense would fall flat on its face in any emergency, so why wait for that. If the military was going to inherit the problem by default and nonperformance, why not give the responsibility to the military initially so that they would have the opportunity to prepare adequately for handling it and the time to train and get ready for it? It was further argued that civil defense was a part of national defense and hence it could be better coordinated and administered if it were put in the Department of Defense. In addition it was urged that the civil defense task could be tied in closely with the National Guard and reserve force programs of the Armed Forces. Or it might be a logical extension in the air defense and antiaircraft and ground-to-air guided missile defense program.

Despite the great appeal of this solution and only after very considerable and prolonged argument, Project East River finally decided that it would not recommend turning civil defense over to the military. It may be useful to state briefly some of the principal reasons for this decision.

Certainly our decision was influenced greatly by the strong feeling that the Armed Forces should not be diverted from their offensive, interceptive, and defensive missions in order to undertake what must remain essentially a civilian responsibility. If civil defense were to be made the primary responsibility of the Armed Forces, the effects would be reflected now in larger troop requirements and, in the event of war, in heavy pressures for the diversion of additional manpower into civil defense at the very time such manpower would be most needed to increase the Nation's offensive striking power. The functions of leadership, planning, and operation of civil defense programs are so closely intermixed with the normal day-to-day functions of civil government that in our opinion the extension of military direction and control in this area should be avoided.

An even more serious objection to turning over nonmilitary defense to the military is that from a practical point of view the problem probably could not be solved in this manner. One of the great handicaps to any practical and effective program of nonmilitary defense is the all too general belief on the part of many citizens that in an emergency the military would have to take over, so why worry. There is an all too widespread belief on the part of too many mayors, governors and other citizens that nonmilitary defense is completely a Federal responsibility and that they should and can disavow any responsibility for the program. The plain facts are that there are not enough people nor enough money for the military to do the job on any separate, professional basis. The only possible way that the job can be done is to use existing agencies of town, city, county, and state governments as well as most of the major departments in the Federal Government. People doing comparable work in their main job must be utilized and must expect to take, in an emergency, assignments in nonmilitary defense. Likewise, volunteers who are already holding down a useful normal job in the community must expect to assume an emergency role. There is no other source of manpower available or competent to do the job. The illusion that mayors and governors can stand aside while the Federal Government moves in to do the job and the attitude of some citizens that they can stand on

the sidelines while the military comes in and takes care of them in an atomic attack are some of the most dangerous hoaxes that could be perpetrated on the citizens of our country. Somehow the record needs to be made abundantly clear that in time of atomic danger, the people must look for their immediate salvation to their own resources and those of the local, county, and state governments that are closest to them. The Federal Government must, of course, provide leadership and far more financial assistance than at present. The job cannot and should not be done by diverting the military from their proper and all-important role of taking active military measures to inflict military defeat on the enemy.

Even though the nonmilitary defense program remained an essentially civilian program involving civilian agencies of local, state, and Federal governments, it was considered to be highly undesirable to place such an operation in the Department of Defense or assign it as a responsibility of the Secretary of Defense. This is not to say that there might not be substantial advantages in so doing. One principal objection to such a solution is that it would endanger the Secretary of Defense's ability and effectiveness in coordinating the Armed Services.

At the time the offices of the Secretary of Defense and the Defense Department were established, there were many who believed that this placed too much authority and responsibility in a single individual or office. The establishment of the Defense Department has improved, in the opinion of many but by no means all so-called experts, the overall coordination and efficiency of our Armed Forces, but it has also placed upon the Secretary of Defense more responsibilities and burdens than are desirable. In fact, one able Secretary of Defense told me that the responsibilities and duties inherent in the job were so far beyond what any one man could handle effectively that the rule should be to take away from the Secretary of Defense and the Department of Defense any responsibilities and duties that could reasonably be assigned elsewhere. This is a good workable rule that ought to be followed to protect and preserve the ability of the Secretary of Defense to coordinate and direct the operations of the Armed Forces. Under this rule, one certainly would not endanger the effectiveness of the Secretary of Defense in directing the Armed Forces or add to his already too great responsibilities by having him take on a highly complex and difficult nonmilitary defense task, particularly under circumstances where citizens as well as local and state

officials are trying to "bow out of the picture" and let the Federal Government do it all.

Project East River, in its answer to the question of what kind of a civil defense system the United States should have, stressed the following:

(1) To the maximum degree possible, a civilian civil defense should be developed.

(2) Civil defense should be organized and operated on the principle that existing local, county, and state personnel, facilities, and agencies should be used to the greatest extent possible with civilian volunteers used to increase their effectiveness.

(3) Civil defense should conform to traditional and accepted methods, means, and organizational patterns because only in that way can such a program be made acceptable to the people of the country. In particular, it was believed that the Federal versus state tradition, and the home rule local autonomy principle versus the state government had to be accepted.

In 1955, some of the members of Project East River were asked to review our 1952 Report to determine if we still believed what we then recommended. As one who participated in those deliberations, I believe that the members of the Review Committee would agree with me on the following:

First of all, all of us were unhappy about the operational readiness of the civilian civil defense program. This is not to say that a great deal of progress has not been made by the many individuals who have been working so hard in the face of many frustrations and great public apathy.

Secondly, in the event of an atomic attack, it is still highly likely that the present civil defense organization would fall flat on its face and that the problem would be turned over to the military.

Thirdly, despite the still unsatisfactory performance of civil defense, we still believe that civil defense should not be turned over to the military. Rather it should function as originally outlined in

the 1952 Project East River Report and as a civilian civil defense based on strengthening local, county, and state civilian governmental agencies by local volunteers who are proficient because of their daily work in comparable skills.

In our 1955 Review, we did attempt to stress the overriding requirements of operational readiness, and the ever-increasing power of nuclear weapons. Toward this end it was recommended that the metropolitan target zone be utilized as the basic unit for nonmilitary defense planning and operations. In my opinion, civil defense needs to be organized and operated on a metropolitan area or regional basis or, to use the term in our 1955 Review, on a metropolitan target zone basis.

I should now like to return to the problem of civil defense and the Armed Forces. Up to now it has been my impression that the Armed Forces have taken a polite but aloof position that civil defense is not their responsibility. Of course, this is literally correct and true. But I should like to assert that in this situation the Armed Forces are most certainly their brother's keeper, and in this instance their brother is civil defense.

Make no mistake about it--the contingent liability accruing to the Armed Forces in the civil defense field is both enormous and important. An impotent and ineffective civilian civil defense might persuade the Soviets that here is the Achilles heel of our overall defense, that deficiencies here neutralize operational readiness in our Armed Forces as an effective means of deterring war. In its effect on manpower utilization, I do not believe that the Armed Forces can afford to let the concept of a civilian civil defense, in the main, fail. If popular opinion determines that only soldiers or other members of the Armed Forces can handle the civil defense task, then the shortages in manpower will become very much more acute in a wartime situation. This is an area in which, at best, the situation is none too good. Added to this, of course, is the equally distressing possibility of immobilizing for civil defense military manpower that should not be diverted from striking forces or their operational readiness to take offensive action.

What, then, should the Armed Forces do about civil defense? I only wish I knew the answer or even thought I had some good suggestions. However, here are some thoughts.

First of all, the Armed Forces need to help civil defense attain operational readiness without their becoming responsible or inextricably involved. But this goal may not be possible; I am not very sure that it is. Perhaps some compromise is required. At least there are alternate solutions that need to be explored.

As a first step, I would like to see the Armed Forces engage in what might be termed a "big brother" project to help get the acceptance and the improvement which is needed to bring civil defense to a satisfactory standard of operational readiness.

A second step might involve the use of the National Guard and the so-called ready reserve as military aid to the civil power. These units might be given an operational readiness mission in connection with civil defense and still be employed as military units in later phases of the war. Some cynics have claimed that there is no such thing as a ready reserve or a National Guard unit that is fit for combat without strenuous retraining when called up for active duty. If war in the atomic age is to be characterized by an all-out first blow followed by a slow process of getting back on your feet and of slowly bringing into action all the components of the Armed Forces except the retaliatory striking force, then the dual-purpose use of certain second- and third-line military units has much to commend it so long as thereby the Armed Forces do not become inextricably involved.

A third step might be to incorporate civil defense as well as other phases of the nonmilitary defense program into a continental defense program. Certainly, air defense and the antiaircraft and guided missile defense program for a metropolitan target zone need to be coordinated with all the elements of nonmilitary defense. Whether coordination requirements justify overall responsibility and complete organizational control is, of course, highly debatable.

Another alternate that perhaps should be explored is even more drastic. Perhaps the conclusion might be that it just is not possible to provide an effective civil defense organization that can maintain a high degree of operational readiness over what may be a protracted period of many years. If this be the verdict, even then there are alternates. Conceivably, the civil defense task might be limited to what can be done where there is strategic warning of several days or weeks. Or there could be concentration entirely on the long-term reduction of urban and industrial vulnerability. This, of course, could only be justified on the basis that the seventy-odd million

dollars now being spent annually for civil defense could accomplish demonstrably more if spent on the Armed Forces for greater air defense or other similar items.

Let me turn now to a consideration of that part of nonmilitary defense that relates to the reduction of urban and industrial vulnerability. Again, this is an area in which the Armed Forces have a tremendous stake. I need not remind this audience that a proper national defense program seeks not only to make sure that wars will be won but also that potential enemies will be deterred from war. Likewise, long-term superiority of the United States over the Soviet Union in terms of military might can only be maintained if there is continuing superiority in our industrial might.

At the risk of belaboring what may be obvious, let me develop this theme in some detail. At the present time, each of the great powers is placing major emphasis on the development and use of atomic weapons. The entire structure of their weapons systems and their military organization has been adjusted for the use of atomic weapons. Failure to use them in a major war would involve a risk which no responsible head of a state could or should take. This does not mean, of course, that indirect tests of power politics through satellite countries will not continue. Here atomic weapons probably will not be used, and for this reason our country will continue to need a well-balanced armed force of land, sea, and air elements. Nevertheless, let me assert as my very strong personal opinion that in any future major war between any of the great powers, atomic weapons must and will be used.

Grim as is this prospect that atomic weapons of a destructive capacity rated at many, many millions of tons of T.N.T. will assuredly be used in any major war, there is, it seems to me, a less dismal side to the picture. It is this. In this atomic age, preparations can be made and steps taken which will act as strong deterrents and persuaders against the starting of any major war which perforce must be an atomic war. The most potent deterrent, of course, is the continuing maintenance of the military might needed to strike a crushing retaliatory atomic blow against any potential enemy. Secondly, there is the need for an effective early warning system with an air and guided missile defense with the potential that under favorable circumstances a substantial part of an enemy striking force would be destroyed before it could reach the targets. Thirdly, and scarcely less important than the other two, effective steps need to be taken to make our centers of population and industry less lucrative targets. In fact, in a situation

where nearly equal or substantial progress is made in the development of atomic weapons and weapons systems for their use, the critical and possibly determining factor in deterring a potential enemy from risking an atomic war might well be the progress and the accomplishments that a nation has been able to make in the reduction of its urban and industrial vulnerability. And yet this is an area in which, despite the efforts of conscientious and capable public servants and industrial leaders, the accomplishments and progress to date are not anywhere near what they ought to be. Even worse, there is still very inadequate understanding and acceptance by the people of our country of the great advantages of such a program in terms of its value in deterring war and in improving peacetime living.

It might be useful to examine briefly the reasons for this lack of accomplishment. Perhaps the main obstacle has been the sense of futility stemming from the realization that the task is too big and too complex to tackle. In my opinion, however, one of the major reasons for the very slow progress to date has been the inability to bridge the gap between the Federal leadership that must come from Washington and the voluntary grass-roots participation and execution of the program that must be carried out locally by industrial and civic leaders at the city, county, or metropolitan area level. Finally, I must say that in my humble opinion the actions and policies of the Government have only been halfway measures to date and leave much more to be desired.

I have no quarrel with much of the planning and other work in what might be termed the industrial mobilization field except that it does not go far enough. Item-by-item analysis is a useful start, but this needs to be supplemented by area studies to determine the self-sufficiency of the various areas or regions and their ability to put together and keep moving the flow of military and other items needed to prosecute a war. What good are stockpiled items or key industrial facilities still able to produce if the surrounding area is paralyzed and nonoperational? To me, in this atomic age, operational readiness in the industrial field is quite as essential as operational readiness in the Armed Forces. Further, to maintain this operational readiness under nuclear attack, you need most of all a well-balanced cross section of industrial production, services, and facilities distributed among as many urban centers as possible. However, there are many steps that can and should be taken to make our great centers of population and industry able to continue to function even under and after nuclear attacks.

Undoubtedly, your reaction is that this is fine, but how do you do it. How can you bring about operational readiness in industry and make it able, even under nuclear attack, to operate and support military operations. May I discuss what I consider to be two important parts of such a program.

One major goal that does not appear to be too difficult of accomplishment would be to seek to obtain a balanced 30 percent of our gross national production outside of the metropolitan target zones which the Federal Government would designate and which will be discussed later. The 30 percent level is suggested as a first objective because it has been estimated that the present productive capacity of the Soviet Union is about 30 percent of our present level. At best, this 30 percent goal is merely a starting figure that can and should be adjusted as time and experience dictate. Informed opinion indicates that the United States is not too far away from this 30 percent goal although it is not quite so well off in terms of a balanced 30 percent. Likewise, the Soviet Union is rapidly increasing its industrial output. At present, it is believed that the Soviet Union has but 30 percent of our capacity in heavy industry. In consumer goods, the United States' present capacity is at least twenty times that of the Soviet Union but, of course, our standard of living and thus even a minimum wartime standard is much higher. At any rate, this goal of achieving a balanced 30 percent of our gross national production outside of our metropolitan target zones is not too difficult to achieve and is highly practical.

If such a goal could be accomplished within the next five or ten years, and I believe it can, what would be the practical advantages of such a course?

To me, the great advantage is that such an accomplishment would add greatly to our chances of maintaining peace and to our chances of victory if an enemy should strike. The Soviets would then be confronted with the sobering realization that even if they were successful beyond all reasonable expectations in overcoming our active military and air defenses and in driving home an atomic attack against all our great centers of production and population, there would still remain an industrial capacity and a productive might equal to that existing in the Soviet Union before the awesome power of our Strategic Air Command and our naval striking forces was unleashed in terrible retaliation. Certainly, the existence of a balanced 30 percent of our gross national production distributed

throughout our country and outside of our great metropolitan areas is a tremendous force for the maintenance of peace that becomes of increasing importance as the power of atomic weapons increases and as the capabilities of weapons delivery systems are increased and improved.

Beyond the strictly national defense aspect, there is another important advantage. To my way of thinking, such a program is worth doing strictly on the basis that it will increase the economic and industrial health of our country and is justified solely as a peacetime measure. This could be an orderly way of promoting superior industrial facilities located in a setting that would make for increased industrial efficiency. Delays due to congestion and the tiring frictions involved in difficult home-to-work and work-to-home journeys could be reduced with resulting increases in worker efficiency and production procedures.

In addition, it should be said that this kind of industrial decentralization is very much the present trend. All that is needed is some Federal leadership, incentives, and informational guidance that will make it easier for willing individuals and industries to cooperate in a manner that will produce the results to be desired in the interests of national defense.

How can such a program be carried out practically and effectively? Perhaps I should first state how I believe it should not be carried out. In my opinion, it should not be done by persuading established industries to move from city to country or from one section of the country to another. This is not necessary. The goal can be accomplished with the program restricted to the location of new or expanded facilities. One of our leading economists has forecast that while in the past nine years production has increased about 3.5 percent a year, the next ten years will witness a growth of production to four percent a year or about 40 percent. With a population increase of some three million persons a year and with the gross national production confidently expected to increase from 400 to 450 billion dollars a year in the not too distant future, the task of locating some 30 percent of our gross national production facilities outside of our metropolitan target zones should not be difficult in this expanding country of ours.

The second important point to emphasize on how not to do it is that the program must not involve any governmental coercion or regimentation or restriction of free enterprise. The Government can and should try to make the opportunity to participate in the program attractive by the use of incentives and other inducements, but whether individuals and industries desire to undertake and embrace the opportunity should be left to them.

The United States has at its disposal many techniques and tools to help in doing the job. Much of the information which is needed, on which to base the details of the program, is already in the files of certain of our major governmental departments, such as Commerce, Interior, Agriculture, Defense, Office of Defense Mobilization, and the Federal Civil Defense Administration. The recently announced new farm program which the President has recommended to Congress includes a proposal to foster the growth of local industries in marginal farming land areas. Likewise, in a greatly expanded public roads program, which Congress is expected to pass within the next few months, there could be included provisions which would stimulate the decentralization process. The need for a national program to conserve our diminishing water resources is becoming more and more urgent. Here, orderly and distributed growth is needed which certainly would assist the program which I am suggesting. In fact, there are many Federal agencies and departments which could materially help.

While a program to locate a balanced 30 percent of our gross national production outside of metropolitan target zones is important and practical, it is secondary and subsidiary to a program designed to reduce the vulnerability of our great centers of population and industry. Despite the fact that in the past too little has been done here in this area, I believe that much can be accomplished. I should like to suggest what I believe would be a workable program.

As a preliminary, it should be stated that our cities and great urban areas are essential to the maintenance and growth of our industrial efficiency and our economic system. I am not suggesting any program which contemplates the gradual abandonment of our great urban areas. This would be neither practicable nor desirable. Likewise, it should be pointed out that no simple dispersion policy of ten miles, or fifteen miles or even thirty-five miles, would be workable. Instead, the problem should be approached from the other direction. Here we have in the United States a number of great industrial and

heavily populated areas which have grown up over many years. The task is to develop a method whereby as these areas grow or rebuild, maximum advantage is taken of the opportunity to not only reduce our vulnerability in the event of an atomic war but also to increase our industrial efficiency and our living comforts in time of peace. In my opinion, these twin objectives are the same.

In the past, there has been difficulty in bridging the gap between Federal planning and direction as a matter of national defense and local acceptance and execution. I believe that this gap can be bridged if the responsible Federal, state, and local officials can sit down together and formulate jointly what could be called a metropolitan target zone nonmilitary defense plan especially tailored to meet the needs and possibilities of each of our large metropolitan areas. Here is how such a program might be started. Initially, the Federal Government should be expected to supply the funds necessary to carry out needed studies and to prepare the initial program. After agreement has been reached on the boundaries of a given metropolitan target zone, a modest program could be formulated under a limitation that every part of the program had to receive the unanimous approval of the responsible local, state, and Federal officials. It would be desirable to revise the program each year, and there should be sharing of the costs involved among the affected state and local governments, with the Federal Government paying for a substantial share.

Initially, a metropolitan target zone plan for a given year aimed at reducing industrial and urban vulnerability could focus attention on certain projects that should meet with complete public approval and acceptance. No one would object to steps being taken to insure throughout the entire metropolitan target zone the continuity of such essential services as water supply, electricity, gas, and other related items. Likewise, transportation facilities and arterial highway development represent areas in which there are both great interest and desire for much needed improvement. Circumferential highways are also badly needed in all our metropolitan areas, and their construction would encourage the spreading of healthy growth and rebuilding of industries which would not only enhance the economic efficiency of the area, but with better spacing would also reduce our urban and industrial vulnerability. As the work week becomes progressively shorter in terms of hours to be worked, and certainly this is a trend that will continue, the need for wide open country for recreational purposes around our metropolitan target zones will become more and more pronounced-- especially so, if you consider our population increase of over three

million persons a year. What a natural and appealing step--to link recreational needs with national defense by providing permanently reserved open spaces between industrial and population centers.

After progress has been made in some of the more obvious and universally acceptable steps, the time would soon arrive when a metropolitan target zone would wish to prepare comprehensive industrial use maps along with other important similar data for the entire metropolitan area. The preparation of such information would be of great use to business and industry generally for purely peacetime business use. With such information available, one would then know how much spacing out or scattering is practical and possible. Likewise, such maps and other accompanying data would reveal the extent to which there is the unhealthy concentration of similar plants of one key industry in the area. When such information is known and analyzed for each of our important target zones, then the question of appropriate incentives from the Federal Government to stimulate better rearrangement within the existing area can be answered.

I could go on at length to elaborate on measures that might be most useful and practical in each metropolitan target zone to reduce its industrial vulnerability and to improve its peacetime industrial efficiency and economic potential. I am sure that most of you can think of many additional steps which can be taken. The point I should like to emphasize is that most of the steps which need to be taken in the interest of national defense ought to be taken anyway. The advantages to be gained in increasing industrial efficiency and in improving general living and working conditions are well worth the costs involved. As our population expands and our productive capacities increase, we must determine and stimulate healthy growth and avoid costly mistakes due to unthinking and haphazard expansion. The wide open spaces are not there any more; in many places we are now confronted with the problem of crowding.

Up to the present, progress in the peacetime solution of these problems, for reasons other than those of national defense, has been handicapped by the fact that the problems cut across so many local and state governmental boundaries and jurisdictions. Because several states are often involved and because of its importance to national defense, there are both the opportunity and the need for the Federal Government to act in a coordinating capacity. For the Federal Government to attempt this in any capacity other than on the

basis of national defense interest would be difficult and would immediately bring up the charge that the traditional Federal-state relationship was being upset.

I believe that the activities which I have outlined are needed for national defense. In the main, they can be carried out by local and state governments without violating our traditional concepts of government. At the same time the Federal Government can and should provide a useful coordinating service by bringing them together and in providing proper direction, incentives, information and leadership.

There is, of course, another very important reason for the rebuilding and the improvement of our great centers of population and industry or, as I have called them, metropolitan target zones. In the long run, our national security rests not only on the relative strength of the Armed Forces of the United States versus the Soviet Union but also on the industrial base upon which our Nation must depend to maintain superiority of weapons, weapons carrier systems, equipment, facilities, and other support items used by the military. We are now many years ahead of the Soviet industrially; we have great advantages, particularly in transportation. The Soviet Union can expand its industrial facilities in relatively frontier areas, while in the United States our main industrial progress can only come in very large part by the rebuilding of our industrial centers. Certainly, much great technical improvement will come within the factory but this can be left safely to private initiative. But great opportunities exist to improve the efficiency of our industrial process by rebuilding our great metropolitan centers. And this can only come through governmental leadership at all levels. It is of such importance to national defense that it most certainly needs and deserves assistance and leadership from the Armed Forces.

In conclusion, let me summarize what I have tried to say. My slant or bias has been an effort to emphasize the drastic changes which, it seems to me, are required by the following two significant developments:

(1) The rapid progress in nuclear weapons of great power and destructiveness;

(2) The strained relationship between the United States and the Soviet Union.

These developments mean that

(1) In any major war the United States, throughout its length and breadth, will be exposed to attacks of devastating weapons for the first time in history.

(2) International tension may last for many years during which the United States must maintain an operational readiness to meet an all-out initial attack where the enemy might hope to achieve a one-time knockout blow.

(3) To maintain Armed Forces superior to those of the Soviet Union, there is needed the long-term economic health and industrial progress required to continue our industrial superiority.

In view of these trends and their implications, civil defense must have a high degree of operational readiness; otherwise it is of little practical use. It would be preferable to have a civilian civil defense system based on using existing local agencies of government with appropriate coordination, leadership, and financial support coming from the Federal Government. To date this goal has not been accomplished, and the question again arises, "Should the military be given this responsibility, or should our major effort be made in the form of a long-term program to reduce our urban and industrial vulnerability?" Two programs are suggested:

(1) To obtain a balanced 30 percent of our gross national production outside of the metropolitan target zones;

(2) To provide incentives so that the normal rebuilding and expansion of our great centers of production and population will bring about not only a substantial reduction in vulnerability but also an improvement in our metropolitan target zones as places in which to work more efficiently and live more comfortably.

But progress in nonmilitary defense is not being achieved as rapidly as it is needed. Here the biblical quotation is appropriate-- "For if the trumpet give an uncertain sound, who shall prepare himself to the battle?" To date, the trumpet sound has been both uncertain and faint. I hope that you gentlemen may help give it more clarity and force.

QUESTION: It sounded to me like you were talking, near the end of your lecture, about perhaps an industrial plan. I was wondering really three things: First, how you go about getting the machinery in motion and who would coordinate it, recognizing the jealousies and the difficulties in getting political subdivisions to work with each other? Secondly, over approximately what period of time are we thinking of? And then, lastly, about what organization in magnitude of cost are we visualizing here?

GENERAL NELSON: Well, that's a very good question. I am not sure I can answer it all, but I will try to answer it along these lines:

First, it would seem to me that this would not be very difficult to get started. I think probably somebody in the White House level would have to ask--let us take the New York area--the governors of New York, New Jersey, and Connecticut, and probably the mayors of New York and Newark, and probably somebody designated by the mayors of the other communities, and I think that, if a representative of the Federal Government went down there with a budget of about 100,000 dollars, he could get these people together and say, "Look, this is the problem. What do you suggest we can do about it?"

Now I believe you should start with a modest program. I have been distressed at the complexity and the completeness of some of the planning because, if you go too far in planning before you act, you tend to give people so much at one time that they choke. So I would deliberately refrain from going into overly complicated planning studies. I would try to do this almost like you do an ad hoc committee, in the hopes that out of it there would arise a recognition of the Federal Government's leadership.

I believe the governors of each of these states could appoint and would appoint a full-time personal representative to serve on this so that thereby you would have a working committee, and that periodically this working committee, consisting of, say, the representatives of the governors of New York, Connecticut, and New Jersey, the mayor of New York, the mayor of Newark, and one representative of the other mayors, if you could get his working committee and say, "Look, this is the problem. Here are its peacetime benefits. What do you think we can do to make some progress in this field?"

I am surprised actually that the politicians haven't gotten hold of this because for many, many years in our country the River and Harbor business was a pork barrel that was particularly alluring and I would think the same technique could be used on this and it would be very good for our country.

I would think that after this working committee came up with some suggestions, that then these could be presented to the steering committee, consisting of the governors and mayors, they could then come down and get their representatives in Congress, their Senators and Congressmen, to put this program over. I think you have got to grease it a little bit with some Federal handouts, but I think it could be done on a quid pro quo basis, with the communities putting up some money and the Federal Government putting up some money.

One thing I am certain of, there is the most terrific need in our country to bring about some kind of industrial growth and greater comfort of living in this great metropolitan area in which most of our people now live.

Maybe I got a little bit like I was making a political speech on this. I didn't mean to. Is that a fair answer to your question?

QUESTION: Yes, sir.

QUESTION: General, as an alternative, but albeit a costly solution, and one which would be longer term, we have learned that it would be feasible to construct underground shelters which might be on the basis of dual purpose use with garages for parking cars. Do you have any comments to make on that solution?

GENERAL NELSON: I don't mind talking off the top of my hat and this is exactly what I am doing in this because I don't consider myself technically qualified. I would think this could be a very good program, but I would like to go a little bit further. It seems to me that one of the great needs is to have a metropolitan nonmilitary and a metropolitan military defense plan. Certainly with the progress that is being made in guided missiles that are being installed around our big areas, that needs to be tied in.

It may be that we are establishing a degree of coverage by the NIKE and the other land-to-air missiles and an air defense system, so that you might say that we are not concerned about, say, the tip

of Manhattan, we think this can be protected by military measures and this we are going to do. You might supplement that by certain dual purpose use. I am a great believer in dual purpose use because if you don't use things normally, they won't certainly be able to be used in an emergency. I should think the opportunity in our big cities for public parking garages that would have a shelter use would be simply terrific, and that most of these could be made self-liquidating. But they are costly and when you consider that we are spending 35 billion dollars a year in national defense, I would think that the marginal utility of spending three or four billion in this kind of work in a way that could be repaid would be worthwhile.

This operation is something that is badly needed because the thing I can't help but feel is that up to now there is a great blind spot in our country about the importance of our centers of industry and population in supporting the kind of a military establishment we are going to have to support for many years.

QUESTION: I am just reminded of the advertisements we see in the papers and magazines every day: "Toledo has everything." "Come to Newark." "Move your industry to Louisville." and so on. It seems to me that, rather than welcoming this type of dispersal you suggest, the chambers of commerce and city fathers would fight it tooth and nail. The great tendency of the chambers of commerce has been to seek the continued concentration. Would you comment on that, sir?

GENERAL NELSON: I am on the National Defense Committee of the United States Chamber of Commerce, and in their policy book, I did some of the drafting along the lines which I have been saying. I don't think this needs to follow. It all depends on how it is handled. I would think the idea of this 30 percent of our gross national production outside of our great metropolitan target zones might be opposed if such a program were not accompanied by a similar program that would be attractive to our metropolitan areas. And here the thing that industry is looking for all the time, there is a tremendous amount of rebuilding and expansion going on in our industry, the great thing that limits where you put these things--and I can speak with some feeling on this because construction is my business--no manufacturer likes to put a plant where it is not served by a public water supply system, a public sewage system, adequate utilities, and paved highways. All you need to do to spread out the New York metropolitan area from hell to breakfast is to just build a good utility system

and a good highway system. Then all you need to do is let the real estate salesman go to work. And I would like to have the exclusive commission to do it.

QUESTION: The District Commissioners are presently considering the Zeckendorf plan for the slum clearance of Southwest Washington. The latest reports indicate that they will accept the plan. Was any effort made by people like yourself to get a hearing before the District Commissioners to deter them from this decision which would rebuild homes right in the prime target area?

GENERAL NELSON: Well, we, of course, urged in Project East River that the FHA and the Urban Renewal Division of the Federal Housing and Home Finance Agency that these people could have terrific leverage in accomplishing whatever was announced to be a national policy. The trouble has been that you can't expect these people to be able to help when they don't know how they are supposed to help.

I think we have got to rebuild our cities. I don't have any personal objection to the Zeckendorf plan. As a matter of fact, the New York Life Insurance Company and the Housing Department, which I head, are building a very large project in Chicago. We have 100 acres, ten minutes from downtown, on the lake front, which we are rebuilding. There were some 13,000 families that lived there and we now have a building coverage of some nine percent of the area. We are providing apartments for 2,000 families and a shopping center. I think in that process we have materially reduced the vulnerability of that part of Chicago. It was covered by very bad slums before that would come pretty close to fitting the conditions needed for a fire storm. We now have a reinforced concrete building. But no private builder can do some of the things that would greatly reduce our vulnerability. It has been estimated that it would increase our building costs by about eight or nine percent. If you could have in each building a center concrete corridor, that would be an effective shelter. If the Federal Government won't do this in their own buildings you can't expect private enterprise to do it, because if you do they think you've got a screw loose, and it's just as simple as that.

I won't even do it in the projects that we are building, even though I have been working on this kind of stuff for some time, because of my position in respect to finance committees and with boards of directors that are composed of conservative people. If you should say, "I want to do this, and thereby up our building costs ten percent," they

would say, "Well, why doesn't the Federal Government do this if this is so important? Why must you do it?" And, of course, in that kind of situation, you don't do it. But it could be done.

There are a great many ways in which our buildings could be strengthened so that they would be materially improved. There is a great deal that we don't know about the canyoning effects of large cities on what happens in a thermonuclear test, and in this field you can't expect the construction industry, the architects, or the engineers to act until they get some positive leadership and some example by the Federal Government, which, thus far, we have not had.

QUESTION: I was very happy to hear your comments about dispersal and decentralization and community betterment because it sounds like you have read my term paper. I want to get that on the record so I won't be accused later of stealing from you.

In a more serious vein, I went a step further in longer range planning and I gave some consideration to dispersal of production capacity, not only to spread throughout the United States but also throughout the Western Hemisphere. Have any studies considered this as a better longer range means of making this part of the world stronger?

GENERAL NELSON: What we did in one part of Project East River, we were always confronted by the problem that if we went too far and we were too ambitious, we wouldn't get anything accepted. So we did exercise a certain amount of restraint in the hope that by presenting a thing that we thought was fairly modest, we could get some acceptance. It is this old story that, if you dish out too much at one time, people choke on it and don't do anything.

I think that the expansion of industry throughout the United States and the Western Hemisphere is coming. In this respect we have a tremendous advantage that it would seem to me we should exploit. The Soviet Union could not possibly spread out industry and living accommodations the way we do, and they will not be in a position to do it for 20 or 25 years, for the simple reason that practically no one in the Soviet Union who is a worker uses an automobile. Our passenger automobile transportation, our truck transportation, our highway system enable the United States to spread industry and people from hell to breakfast. The Soviet Union can't do this. They are

tied to mass transportation; they are tied to railroad transportation, and this is an area where we could really make pikers out of them. I just don't understand why we don't do it.

QUESTION: In order for the Federal Government to provide the firm and positive leadership that you recommend, do you feel there are any changes needed in the organization within the Government or in legislation which sets up that organization which would eliminate some of the things that appear to us to be conflicts of responsibility and authority?

GENERAL NELSON: Let me explain my philosophy first. I think in this field you have to be somewhat of an opportunist, and this might be what is part of the difficulty. I don't believe you can expect Congress to pass a law that would immediately authorize all the things that I have been arguing for. I think you have to go down to each of the metropolitan target zones. I think you have a real job of selling to do, a real job of explaining. You have got to do a little bit, and then after you do a little bit and have built the fire at the grass roots where you will get some action, then you can do a certain amount.

I would think it would be a pretty easy job politically to do a little log rolling of the Old River and Harbor type, to get, say, 100 million dollars for matching funds for improvements in the metropolitan areas, of, say, maybe 20 or 25 areas. That would set the stage for real progress. I don't think you can go too fast by setting up and increasing the power of the Federal Government in this area because I don't think you can sell it now. I don't like to see in this atomic age reliance on planning that is done here centrally in Washington because the problems are so complex that whatever you come out with as a standard rule doesn't fit a community. It is resisted locally, and I would say that the great problem of the Office of Defense Mobilization is that every time they come up with some kind of single, overall policy, they have met so much local resistance, and the Congressmen and Senators have gotten after them so much that they have had to duck for shelter.

The great trick in this is to try to get it down to the grass roots level, to get Chambers of Commerce interested in doing this. There is a great movement in this area. All you have to do is look to St. Louis where a citizens' organization has tried to see if they could come up with some kind of metropolitan area scheme. The same thing is going on in Miami in a Dade County study.

Toronto has established a Toronto Metropolitan Area Government where, in addition to the city government of Toronto and the city governments of some 13 other towns that are part and parcel of greater Toronto, over and above that, they have a Toronto metropolitan government which runs the schools, the roads, the water system, the sewage system, the airports, and I think a couple other things.

Now, it is easier to do in Canada because the Ontario legislature is free to make this kind of arrangement without having a home rule referendum. It is a little more difficult in this country, but certainly this thing has got to come in our country.

Maybe I speak feelingly because I live on a farm 15 miles from New York. I commute every day to New York. So do a great many other people. The employees of our company are scattered from Buck County, Pennsylvania, to away up in Connecticut. One of the most effective dispersal things that our company has is to just tell us to go home.

QUESTION: The biggest business we have in this country is the Federal Government and it is probably the most vulnerable. You asked the question a few minutes ago and I am very much interested in what the answer to that is: Why doesn't the Government do it?

GENERAL NELSON: I wish I knew too. I think there is a good answer for that and perhaps I am a little too impatient. I realize it has taken us a great many years to achieve the kind of an armed forces organization that we have. I can understand quite clearly how the President and how some of his principal advisers would hesitate to take action in the field until they are pretty certain that what they want to recommend to the country is correct. I would not blame the President for not having made a nationwide appeal on this or announced a strong policy because again the trumpet has sounded a very uncertain note, and if I were in such a position, I am not sure I would say anything because the information that comes up is not sufficiently clear; yet it doesn't seem to get answered.

As a matter of fact, I almost busted a button the other day reading the most recent Kiplinger Letter. I would like to just read this. This was in the Kiplinger Letter of about a week ago, which has a pretty good circulation. This is an excerpt from the Kiplinger Washington Letter of Saturday, 28 April, and here is what it says:

"Atomic and hydrogen bombs will never be used by the United States or Reds and no such war is expected by either side. This is standard opinion within our Government. The opinion is held by most high officials, both civilian and military. They say so privately but not publicly, not for publication, because they might appear indifferent to security or trustful of the Reds. They are not. They are Cabinet members, Generals, Admirals, Diplomats. Here, for example, is the substance of a typical talk by an official.

"We in the United States are bound not to initiate a war by atomic and hydrogen devices. We have our secret reasons for thinking the Russians won't do so either out of fear of retaliation. So we believe there will never be such a war. We can't come right out and say this formally and officially. We think both sides know there is a stalemate and neither can break it; neither dares start anything; also neither dares to acknowledge it. Acknowledgment must await some agreement to limit armaments. Until then, we have got to forge ahead on atomic and hydrogen devices. To get behind would give the other side the edge in a war or in any negotiations. We think limitation of arms is making a little progress but it may take five or ten years to make enough progress to be seen by all.' The point of such talk: no A or H bomb warfare meanwhile. Also meanwhile a conspiracy of silence on know-how."

Now to me this is contrary to whatever history we know about warfare. Success in war has always been achieved by bringing overwhelming force to the point where it will do the most good. And I would like to say that the record of history is full of nations that have gone down to defeat because they couldn't adjust to changing times.

The fact that we may place a major reliance on atomic weapons, I can't conceive of any responsible head of a state who, if war were declared, wouldn't use all the force he could muster. We have gotten into enough trouble from getting ourselves into situations where they think our military ought to fight with one arm behind their backs. Something like this really, in my opinion, needs to be given the works.

I think this probably explains the willingness at the present time not to stir the pot. I mean I think Governor Peterson and probably Mr. Flemming and some of the others are in this difficult position--they can't stir up things too much because they say, "Look, you're a member of the team. Don't rock the boat." This is all right up to a point,

but if you take this for too long, in some places when the boat ought to be rocked and something happens, you certainly are holding the sack.

QUESTION: It seems to me that letters like that Kiplinger Letter which you just read reaches a very influential part of our public and that can only foster instead of overcoming the emergency with which we are faced.

GENERAL NELSON: That's right.

QUESTION: What do you propose to marshal public opinion behind the measures that must be taken to meet the national security problems today?

GENERAL NELSON: Well, that is again a very good question which I don't think I have a very good answer for. I would like to see some real speculative thinking on this area because I am not sure that we are going down the right path. For instance, I think that the analogy between military exercises and, say, civil defense drills is not an appropriate analogy. You take troops out and go through maneuvers because in the process of doing so you get the team spirit, you get the feeling that we have got an outfit that can do things. So they have a great use for training for morale purposes and evaluation. On the other hand, if you try to get the populace of a city to walk out of the city, the spectacle is one where every ordinary guy says, "Look, if I've got to go through this, I would just as soon sit there and take it." It's like asking people as a part of a fire drill, that in order to go through a fire drill, you must regularly jump out of a window into a basket, and most guys would say, "To hell with it. I would rather sit here and burn if this is what you are going to do."

There has been so much of this in this particular field that to me it tends to make people apathetic. I mean none of us wants to admit that we are Casper Milquetoasts. Most of us want to appear to be sophisticated. It's a sort of embarrassing position to go out and do things that appear to be silly to you.

Now this is quite the opposite from what you try to accomplish by military exercises. So I thought that perhaps the great emphasis in this whole field that has been neglected is that before you try to get mass participation, you need to build up a team. I would never use the public in these evacuation things. I would begin to recruit the kind of an organization that can practice doing this, not use the public as

guinea pigs where, if you get them out in the kind of a traffic jam you will have, they will say, "Well, I'll be damned if I am ever going to do that again."

I'm sorry. This isn't a very good note to end on.

COLONEL ECKLES: General Nelson, on behalf of the College, I want to thank you for an excellent lecture, sir, and a very interesting question period. Thank you very much.

(3 July 1956--450)K/mmg