

BUILDING THE NATION'S CIVIL DEFENSE

25 February 1955

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INDUSTRIAL COLLEGE OF THE ARMED FORCES

Washington, D. C.

Honorable Val Peterson, Administrator, Federal Civil Defense, was born in Oakland, Nebraska, 18 July 1903. He was graduated from Wayne State Teachers College, Nebraska, in 1927 and in 1931 received his M. A. (Political Science) from the University of Nebraska. He later served as superintendent of schools in Elgin, Nebraska, and taught government at the University of Nebraska. In 1941-42 he was Secretary to the then Governor of Nebraska, and from 1936-46 published "The Elgin Review," a weekly newspaper. In World War II Governor Peterson served overseas in the Burma-India Theater of Operations with the Air Force. He was plans and operations officer in the Northern Air Service Command, with the rank of lieutenant colonel, and is presently a colonel in the Air Force Reserve. From 1947-53 he served as Governor of Nebraska, and in 1952 was chairman of the Governors' Conference and president of the Council of State Governments. Before his nomination as Federal Civil Defense Administrator, Governor Peterson had been serving as Administrative Assistant to the President. He is also a member of the Commission on Intergovernmental Relations. On 4 March 1953 Governor Peterson was sworn in, in his present position by President Eisenhower.

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ADMIRAL HAGUE: As you know, our speaker this morning is the Honorable Val Peterson, formerly Governor of Nebraska, and presently the Administrator of the Federal Civil Defense Administration. I know I can promise the Governor an understanding audience.

It is a certainty that we of the military have a lively appreciation of what we are up against in the matter of public reaction. On the one hand there are those who have panicked at the mere thought of enemy bombers flying through our skies and loudly proclaim that the Federal Civil Defense Administration is the responsible goat for not having made these United States of ours 100 percent safe under those conditions. And again on the other hand, there is the tremendous number who have a monumental indifference to the possibilities that we face today in modern warfare and modern weapons. I suspect it is this latter group that gives the Governor the most concern. Certain it is that whether or not we will be able to mobilize economically and militarily in case of an attack may very well depend to a great extent on the effectiveness of our Civil Defense measures.

We are very, very fortunate in again having the Administrator of the Federal Civil Defense Administration to discuss these problems with us. Governor Peterson, it is a great pleasure to again welcome you to this platform.

MR. PETERSON: Thank you, Admiral. Good morning, gentlemen. Civil Defense has only two tools to work with that I know anything about. Those two tools are space and shelter. We have been more interested in recent months in the utilization of space than in shelter. Now with the development of fall-out data, we are forced to go back and place a greater emphasis on light, protective cover. I think it has now become clear to the American people--or is rapidly becoming clear to them--that you simply cannot stay in an American city and survive a modern bombing.

Civil Defense in this country is based on the experience of the English and the Germans, and, as a matter of fact, all of our procedures are patterned upon that experience. That was a valid experience and those are valid procedures in the postattack period. We have

copied their civil defense methods and we hope we have also made some improvements; they have been kind enough to imply that we have. But all of these procedures that we follow in the postattack period are based on their experiences in World War II when they were dealing with block-busters. Now we are dealing with bombs described in megaton terms. Naturally there have to be many modifications in civil defense planning but many of the procedures are as sound today as they were then. Some of them however must be modified.

Once in a while you will read in the paper that there is no such thing as civil defense in the United States. I have continually said that civil defense is not adequate to problems of nuclear attack. I don't know anything else in the world that is fully adequate to meet a nuclear war. I would include the military without any criticism implied or offense suggested. We don't know all the ramifications of a nuclear war.

But in the United States, every state and every city on the mainland and in our territories does have a Civil Defense organization. It is based on the English pattern. The services are established; they have been established for a matter of years. The techniques and procedures are known. We have training and technical pamphlets. The communications systems are in, in large measure, and the various services are established in some degree of proficiency.

For instance, in Hawaii last March, I found that the medical services there are very well established, and there are two reasons for that: The medical services over there have been led by a number of outstandingly fine doctors who have the spark of leadership ability. They have recruited the whole medical profession in the islands into this movement. In addition, having gone through the bombing of Pearl Harbor, they have had to take care of people in a hurry; they know something about what the problem is in a bombing.

When you are dealing with volunteers, people do these things as a patriotic service and without pay. In the main, the proficiency of this activity is going to vary with the quality of leadership you have in the community and in the service that you are considering. I don't know of any state or city that has a Civil Defense organization that has reached a high level of proficiency clear across the board. I just don't know of one but I do know that many of them have reached a high level in some service or another, or several services. I am still speaking about this postattack period now. Those services are such things as maintaining an auxiliary police force to maintain law and order,

auxiliary fire service, auxiliary transportation, communications, mass feeding and sheltering activities, welfare activities, rescue services.

So when one says we have no civil defense in this country, it is an untrue statement; it is a gross exaggeration. If he says civil defense is not yet up to where it should be if the Russians strike this country, he is on solid ground. That is correct.

We have been more interested recently in preattack defense than in postattack defense. What can we do to save lives? This business of how many casualties we will have after an attack is a very depressing phase of Civil Defense. We are more interested now in how many people we can save, not how many we can medicate or bury after an attack takes place. I assume there will always be too many who fall into the casualty class. If we have a hydrogen war, we will never be able to save everybody, no matter what we do.

In the preattack defense, we first have to have warning time. I talked about that here last year. We still need warning time. We have found the warning time we need is much more vital than a year ago. Warning time depends on a detection system to pick up intelligence immediately when bombers come into the North American area.

But at any rate we are making progress. I was pleased to note in the papers the other day that the Air Force has announced that 35 aircraft carrying radar equipment are now being assigned to the eastern coast. We need a lot more than that on both coasts. The Navy needs to get picket ships operating at sea. We need water elements, air elements, and land elements all the way from Hawaii to Canada with an arm sticking down into the Azores. That still happens to be true.

I noticed this week the Defense Department announced that a contract had been let, naming the principal contractor to do that job of constructing detection facilities. To the best of my knowledge, the American Government is doing everything it can to get that detection system in as rapidly as possible. It means working in the worst terrain in the world. Money alone isn't going to put that there, I have talked to men working in the Arctic, enlisted men who live up there, and I know the conditions under which those men live and work. They live under very difficult conditions.

When we get warning four to six hours in advance at one of the control centers that this is it, an immediate attack is underway, it

is our job in Civil Defense to alert the people of the United States and to suggest to the people in the states and the big cities in those states that they evacuate, that they get out of these towns. To remain in one of these big cities would mean death. I think the idea is pretty well accepted in the United States--you must get out.

Now when we first started talking about getting out, people said it was an impossibility. "We can't get to work in the morning; we have trouble getting home at night." Since then, a series of experiments have been run in America. We have had evidence that evacuation of these big cities will work. I think I should recount the experiments for you very quickly.

Spokane, Washington, with a population of 174,000, on 14 June 1954 moved all the people out of the downtown industrial-commercial area on foot a distance of five or six blocks to the perimeter where they were put in automobiles. They moved 16,000 people that distance on foot in the rain in 8-1/2 minutes. There was also a test run at Bremerton, Washington, involving the Naval installation there. The tests run in Washington were by the local civil defense director. Admiral Barbey, retired, is the Civil Defense Director there.

In Mobile, Alabama, a somewhat smaller town than Spokane, they conducted a more ambitious program. They moved all the people out of a downtown area of 400 blocks, by automobile to the edge of the city, a distance of a few miles, depending upon the direction in which the various cars went. They moved 30,000 people, completely abandoning that 400-block area, in 22 minutes.

In Houston, Texas, they removed all the automobiles from a 400-block area--just moved them out of the area; that is all they tried to do--in six minutes. Houston is a city of a million people. I think that is a meaningful experiment.

Albany, New York, tried a little different type of experiment. They sent all the people home from the downtown area and checked to see how many minutes it would take to move those people from the industrial-commercial part of town to their homes, on the premise that it puts the people in the business area in their homes and the family can go out as a unit.

Since I strongly feel that the Civil Defense Administration has some responsibility for making a study in this area, we got hold of

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Wilbur Smith Associates in Connecticut--one of the world's best traffic engineering firms--and the Traffic Institute of Northwestern University to study evacuation of the city of Milwaukee.

Milwaukee has a population of 750,000 people within the city limits and a metropolitan population that amounts to 1 million 10 thousand people. We studied Milwaukee to determine the sufficiency of the road network to evacuate the town, to plan the evacuation, to plan the controls that would be necessary to handle traffic. The concluding sentence in that report is: "Any evacuation is better than no evacuation." The report, I think, might be interesting to the military not only from the Civil Defense standpoint but because of some military repercussions in this type of movement.

They found that to move all those people, the 1 million 10 thousand, to safety, would require seven hours. We don't expect to get seven hours.

You could get into some debates on this matter of how much warning time you will get. There are some in the military who believe we would get several hours today.

This business of attacking the United States is not as simple as it is made to appear in newspaper reports and speeches. It can be done but it is a tough problem in timing. Some people think we will get several hours of warning. Then there are some who think the Russians will have to move so much materiel and people that you will see a stepped-up tempo in Russia and we will get what is called a strategic warning.

I hope we get all these warnings. I hope we will get a strategic warning and have time to act on it. There are all kinds of political problems involved should we act too rapidly.

But at any rate, going back to Milwaukee, they said that under the most favorable conditions, daytime evacuation, in good weather, you could move 600,000 people to places of safety in two hours; 800,000 in three hours; and that, if you widened a few bridges and roads at the edges of the town, you could step up this whole process very materially.

We asked them to study the evacuation of Milwaukee by air, water, rail, and motor car. They eliminated water and air. They planned the evacuation of 70,000 people by rail and the rest by motor car. We picked

Milwaukee because it was tough to handle--fairly big, a million people; cut off by water on one side and by Chicago on the south. We picked it, too, because the mayor and the city council understand these things and they are very cooperative. Everything indicates that this evacuation will work.

I think some cities can be evacuated quite rapidly. Take a city like Houston, Texas, located on level terrain, with a checkerboard system of roads--you can get out very fast when you get down to the serious work of planning and practicing. Chicago, I think we can get out of. New York is still the 64-dollar question. We have deliberately stayed away from tackling New York at the Federal level until we learn how to work out some of these things that are more easily handled, although some people in New York are working on the evacuation problem right now.

I say to you more flatly today than I did a year ago that evacuation will work. These figures will testify to it: In the Chicago loop, a small area, the population during the day is 900,000 people; at night, 85,000 people. There is some kind of evacuation there every day. I don't know the exact number of minutes that evacuation takes, but there is that movement. The advantage there is that the transportation facilities are geared to that movement. The fact is, it works and it works under conditions of cross traffic. Obviously, we would have to eliminate cross traffic if there were an attack.

One of the problems is: How can you get families to leave town without breaking them up? Can you get mothers to leave without their children who are in school? Without husbands?

Admiral Barbey said to me, "I don't think you can get these families to break up." He cited his experience in Crimea, when he was evacuating White Russians, with the Reds moving in by land, and with everybody threatened with typhus which had broken out. He saw mothers jump off the boat rather than leave a child under those circumstances.

I think the only answer to that is: If you work out careful plans, publicize them, explain to the mothers of America and to the fathers why it is necessary to get out, that they will be saving lives by going by different routes, I think everyone will agree with the logic of that situation and we will be able to put it across.

Another suggestion was that the elementary school district is a good unit for evacuation because then you would have the advantage that the home is usually pretty close to the elementary schoolhouse. That would mean you could work out a test where the mothers would take the younger children out of the school. That seems to me to make pretty good sense. Boys and girls of high-school age are more self-reliant.

So we are learning things as we move on. This is pioneering. Evacuating 100 cities or more is a staggering thing. It is probably a bigger maneuver than all the military maneuvers in history put together up to this point.

Then there is the problem of how to feed them. I have received a letter from a farmer in which he said that the farmers and their wives in Weld County, Colorado, the big town of which is Greeley, have already made plans and are ready to accept 200,000 people from the metropolitan area of Denver in the event of a bombing and would feed them for 10 days. They have worked out and run one test. Several hundred took part in the small test. Nevertheless, they came to the county and registered. They had communications and transportation established to shuttle these people back and forth. They did everything they would do in the real thing, except with a limited number of people.

I thought we were making progress when we got evacuation plans rolling. Many cities have worked out their own plans. But about that time along comes the Atomic Energy Commission and the Armed Forces Special Weapons Group and they brief us on fall-out. We had observers, as we have had at all these tests, at the Pacific proving grounds. We knew a little something about the problem. We certainly didn't know the impact of it--as no one else did. As a matter of fact, we are still learning; everyone is still learning about this fall-out business.

It is too bad they didn't fire off eight or nine of these to get more data. It seems to me the data have been rather thin for some of the conclusions. I don't mean by that to say the findings are not valid, but we haven't had quite as much experience as would be desirable.

Obviously, Civil Defense and everybody else involved in this business has known for a long time about the radiological effects of an atomic attack. We have had pamphlets out in this field since 1951. We underestimated the effect of radiological contamination of these bombs because we believed they would be detonated at some 2,000 feet in the

air in order to get the maximum blast effect. Blast seemed to be the best effect you could get from one of these things. But now there are bombs in the megaton range. The first thermonuclear blast at Eniwetok blew a hole 175 feet deep and created a crater a mile across. Weapons bigger than that were tested in March.

It now appears that an enemy could just as well drop these bombs close to the ground because he gets the blast effect he needs, the fire effect he needs, and in addition creates a situation where hundreds of millions of tons of dirt and debris are sucked high up into the air. The prevailing winds at this altitude start moving this material across the countryside and it starts drifting down on the people. That creates a tremendous problem, a problem which was made known to the American people just a few days ago.

In Civil Defense we have been talking about fall-out since last September, but we always had to be careful not to say anything about the pattern of the fall-out, the number of miles involved in width and length, or about the dosage because that was highly classified, and for good reason. In the first instance, had America been given that fall-out pattern right off the bat, enemy scientists could have figured backwards and gained certain information about what transpired.

To Civil Defense, that creates problems in three important areas: First, we now have to work out and organize radiological monitoring. We also have to determine and develop procedures and techniques involving the utilization of aircraft in this monitoring business and we have to develop the instruments that are necessary to handle this problem.

For two years we have been working with manufacturers, everyone in the Government, and scientists to try to come up with the right type of instrument in this field. That is very difficult in itself. No one as yet has been able to make an instrument that has a broad enough range to handle the three intensities. That created three separate problem areas for us. In other words we need an instrument that will measure what we call high intensities, medium intensities, and low intensities. Nobody has been able to make one that would do the job for the three.

We are working with the contractor to develop the kind of instrument we want. The instruments cost us nearly \$70 apiece. A plain dosimeter--one of the pen-sized instruments that you look through and it gives the dosage--costs \$14.75. The problem is: How many million of these things do we need? Who is going to finance them? How are we going

to get them out in the country? I am not going to be a party to buying <sup>1821</sup> millions of these until we know they are the most efficient and effective instruments possible.

The second problem is the job of forecasting weather. Civil Defense people, working with the weatherman, should be able, we think, to forecast the fall-out pattern to keep the people out of affected areas insofar as possible.

In the eastern part of the United States, from Washington to Boston, there is a much more difficult problem because the fall-out pattern from one town overlaps that from another. High-altitude winds aren't fixed and we need to know a lot more about them.

The third thing is that we now have to get this business of space and shelter back into balance. We have to start with a shelter concept. I am not talking about bomb shelters in the center of town. They will be gone when a bomb goes off. Being in a bomb shelter is no final protection from blast. It is a good place to be if you can't get out of town.

If we get these people out of town, we have to cover them. I have said that an old-fashioned Kansas or Nebraska cyclone cellar is the best thing you can get into. Three feet of dirt overhead is ideal. How are you going to do that? If you get 800,000 people out of Washington, how are you going to cover them up? There are not enough basements to put them all in.

Here are some of the things we are thinking about: Take these ordinary concrete culverts and put three feet of dirt over them. Go along the road from Baltimore to Washington and build culverts and pour three feet of dirt over them. You will be safe there. It may not be too comfortable. That doesn't worry me. I want to live.

Some people say, "This is going to be so bad we might as well give up." I don't believe it. I think we will survive. It is going to be a mess but there are lots of things we can do.

Thank you very much.

CAPTAIN REEVES: Mr. Peterson is now ready for your questions.

QUESTION: We had one very senior officer this week who told us he was highly in favor of chemical warfare and that he thought it offered great potential and should be used whenever we could gain an advantage by doing so. We had another fairly senior officer who indicated he was not familiar with chemical warfare policies but he was not worried about the possibility of biological warfare. We have spent quite a lot of money on the development of chemical and biological weapons. Do you think there is any possibility of the enemy using biological warfare against the United States?

MR. PETERSON: I am very much worried about it myself. I think we should be worried about it. I think it is shameful that in these United States we have not yet come up with defensive measures--speaking from a civilian standpoint--for possible attack with gas.

I am sorry that I just don't know enough about how they could carry gas in aircraft to know how they would manage to gas a place like New York, but it seems to me it does have possibilities. But I don't know enough about it to know whether the enemy would elect to use that instead of a bomb. The bomb would have a devastating effect. I think the ideal way would be to use gas, kill all the people, and take the wealth.

But I am really worried about chemical warfare problems.

QUESTION: Sir, I am thinking about this four to six or three to four hours' advance notice--How often can you evacuate a city? If you pull the evacuation of a city once and the airplane went somewhere else, why wouldn't such a plan play right into the hands of the enemy? Why couldn't they feint or drop a dummy bomb and come back with a delayed action?

MR. PETERSON: I think I sense about two questions there. Sometimes people say to me, "You are just setting up an ideal situation for the Russians. They will feint. They will knock on that detection system and then pull away. You are going to get yourself into a sucker situation." I don't believe that is true. I don't believe anybody is going to do any feinting on a serious basis around a detection system. We know what has happened to our planes that have done some feinting. If they do some feinting, I am sure General Le May will be all the way over there.

They say to me, "Suppose you evacuate Chicago and then that enemy plane doesn't get to Chicago. What a mess that would be to move those people out and then not have Chicago bombed." If we get them out and the bomb doesn't get there, that won't disturb me at all. I am hopeful that when they come some of our cities will escape. I hope we knock a lot of their planes down. I am not going to worry if the people have to march out of Pittsburgh, even on a cold night, and Pittsburgh doesn't get bombed.

I don't mean to minimize your question. I realize it has a sound element in it.

QUESTION: In a recent article which appeared in a scientific bulletin, it was suggested that this is a good time for reevaluating the work in the Civil Defense establishment. Also, that an inventory should be made to see what measures are in the hopeless or useless category. Since so much of the Civil Defense measures have focused upon disaster relief, these should be carefully assessed.

MR. PETERSON: I agree that any organization should be constantly reevaluating what it is doing and that is true of anything or anybody in life. And certainly I am in favor of that, and we are doing it and have been doing it for months.

QUESTION: Returning to a previous question, there is something sound about this general line of argument. It seems to be true that people do feel that from successive evacuations of people from towns would come about these false alarms. This is a serious business. If one got up to the point where he would evacuate a city, we would start a counterattack on Russia. Isn't this perfectly sound reasoning and there would be only one such evacuation along the line indicated?

MR. PETERSON: I assume that the Russians, if they hope to win a war, will have to make an all-out attack on the United States in the first instance. By all-out attack I assume they will probably have--it is a military problem, not mine at all--400 or 500 of their airplanes against us with that number of bombs. They will have to attack 30, 40, 50 American cities and a number of naval installations simultaneously if they hope to win. Then I would hope that we will have our bombers off the ground. I hope they won't be caught on the ground. We will have to retaliate. I would hope we would do enough damage that, while there would be further attacks, they would not be of that scale again.

All those things are subject to further thinking and refinement. No one is wise enough to deal these things off the cuff or the top of the head. I am hopeful that after the first attack we will not have such serious attacks again on the country. Maybe no further attack on the country.

I am not saying that just in answer to your question. I have thought about this a good deal. I would like to say something that may challenge some of you a little bit.

If the Russians attack successfully as small a number as the 20 leading metropolitan complexes in America--Minneapolis and St. Paul, Newark and New York, being complexes--with megaton bombs, they will destroy all major ports in America and all shipping in ports that day, completely pulverize that area. They will destroy the great commercial food warehouses of America, the great petroleum concentration points in America. They will wreck our banking system. They will destroy our great railroad terminals, and I personally believe they will create such havoc in the United States that we will not mobilize troops the next morning or maybe not for weeks, and we will not mount any expeditionary forces immediately. We won't be shipping troops over to fight somewhere right away. In fact, I am inclined to think they would immobilize the military to a considerable degree, other than the Air Force and the Navy, which I hope would be able to continue to operate in pretty large measure.

I am speaking personally now, just trying to stimulate some interest in this subject. I don't believe we will ship any ground forces out of this country in any volume for a long time. I believe we will have to win the war with the productive capacity that we have that day; with the industrial capacity we have that day; with the stockpile we have that day. I believe that the old World War I and World War II concept that this country then goes into production and wins the war with productive capacity is gone with the coming of the nuclear age. In other words we are going to be knocked flat on the floor. We are going to have our great big industries flat on the ground, and it is going to be some time before any of them gets back up.

If we were really serious about the threat to our survival as a nation, right at this minute we would be putting things underground in America. I am speaking now of industries. We would be dispersing our industries and the sensitive parts of important factories would be going underground.

We have lots of territory in America, but the minute you start talking this way you run into economic problems involving real estate values and tax bases. The best we can do is to build new ones in other places. We should be using the vastness of America and the mountains of America to get some of these military installations out of the target areas. Some of these installations are sitting ducks for any bomb that comes over.

I am not overdrawing the picture in my judgment. Play this one out for yourself. Take the Atomic Weapons Effects Handbook. You know the means for carrying these weapons into this country by boat. They could have submarines lying off shore, pumping missiles with atomic warheads in here. There are all of these different things that can be done. Figure the thing out for yourself. But think what it does to America's productive capacity, America's ability to sustain a war.

If I could offer one piece of advice from where I sit as Civil Defense Administrator and also with military experience as a civilian soldier, it is this--just wipe out of your head any concept you may have carried over about world war III being a war to be fought along the lines of World Wars I and II.

I don't know whether I have taken enough time and used the proper words to make myself clear, but to me this is highly significant.

QUESTION: You have answered part of my question, but my question now is: With your move to Michigan, How do you tie in with the military--Army, Navy, Air Force? Are you close enough to get the picture and keep up with what is going on?

MR. PETERSON: Yes. I am in Washington about a third of the time. I work with my Battle Creek office by telephone when I am not actually out there. There are some advantages of being in Michigan and some disadvantages. Our closest contact with the military on a day-by-day basis is the Continental Defense Command. We have people in all of the Air Defense Centers.

My personal relationships with the military are primarily through the Security Council. I am not a member of the Security Council, but I am invited to attend all meetings in which matters of continental defense are discussed and all meetings where matters that affect Civil Defense are discussed. That is quite a number.

I am in association with the Secretary of Defense and the Deputy Secretary, with the Secretaries of the services on many occasions, plus many other people in the military. I am briefed frequently by AEC and also by AFSWP.

I was asked by "Meet the Press" last Sunday night whether the military was cooperating to see that Civil Defense was informed. I answered promptly that we had received fullest cooperation from the military and the finest consideration.

QUESTION: A few days ago, Winston Churchill made the statement that the British Air Defense is capable of coping with any atomic attack. I think that is what he said. My question is: How closely do you work with the British and our allies overseas? Do you coordinate with them?

MR. PETERSON: I have visited Civil Defense in Britain; also in NATO to discuss these purposes in common. Sir Winston Churchill is one of the world's greatest men. Anything he says I am going to look at very carefully and think about my defects before seeing any in him. If there is anybody whose air defenses are capable of coping with an atomic attack, I don't know about it.

The fact of the matter is, there isn't anybody who can completely stop one of these attacks and be reasonably successful at the present time; everybody I know in the whole Government understands that. From the Civil Defense standpoint, I want the strongest possible military in this country and I want it just as long as anybody has any idea of fighting. It has a deterrent effect--but really when you stop to think of the number of billions we spend for military defense, which is not complete defense in the final analysis, and the pitiful amount we spend for civil defense, you have an anomaly that requires no further comment on my part.

CAPTAIN REEVES: Governor Peterson, I see our time has run out. On behalf of the Commandant, the students, and faculty, I thank you for a very fine lecture and a most interesting question period.

(1 Apr 1955--750)S/mss