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CITY OF PORTLAND, OREGON  
COUNTY OF MULTNOMAH  
CIVILIAN DEFENSE COUNCIL

704 PUBLIC SERVICE BUILDING  
TELEPHONE BEACON 1868

December 1, 1941

MAYOR EARL RILEY  
DIRECTOR

EDW. L. BOATRIGHT  
COORDINATOR

Mr. Jerrold Owen  
Coordinator  
Oregon State Defense Council  
Salem, Oregon

My dear Jerry:

Attached find three copies of the report on the test blackout and the air raid maneuvers operated in conjunction with the United States Army Air Corps, October 28 to November 1st inclusive.

While this report is by no means complete in every detail, and many organizations which participated being omitted, it will give a fairly composite picture of the operations of the City of Portland and Multnomah County Defense Council's participation in the recent maneuvers.

Sincerely yours,

ELB:HS  
Enc.

Edw L Boatright  
Edw. L. Boatright  
Coordination

TO: Hon. Earl Riley  
Director of Civilian Defense  
City of Portland and Multnomah  
County Civilian Defense Council  
Portland, Oregon

REPORT ON THE BLACKOUT

Held October 31st, 1941, at 10.00 P.M.

and on

THE AIR RAID MANEUVERS OPERATED IN CON-  
JUNCTION THEREWITH FROM OCTOBER 28th to  
NOVEMBER 1st, 1941

\* \* \* \*

The first step in the preparations for the test blackout consisted of the organization of the military aircraft warning service. Largely through the splendid work and cooperation of the Central Volunteer Bureau, approximately 560 girls were enlisted, trained and participated in the exercises. These girls were stationed at the filter center and the information center.

The next step in the preparation for the blackout was the organization of the observation posts. Each of these posts was manned by from 10 to 25 observers, who worked under orders from the Army and reported their information on enemy planes directly and solely to the United States Air Corps. Briefly, the operation of an observation post spotter is to observe enemy planes or suspected enemy planes. When an Observation Post "spotter" observes enemy planes or suspected enemy planes, he telephones by direct wire to an Air Corps Office, called a Filter Center, giving his information as to number of planes, type, if observable, and direction of flight. The Filter Center receives information from many observation posts in the same locality and also from observation posts in other states.

As these reports from different Observation Posts stream into the FILTER CENTER and are placed on the Control Map by symbols, a picture of the enemy force, his numbers, speed, direction of flight and probable objective quickly becomes clear.

This report then is flashed to the Army INFORMATION CENTER where reports from other Filter Centers are likewise being received. At the Information Center a positive

diagnosis of the enemy's force and intention is quickly made. This goes at once to the Military Command for appropriate military action and simultaneously is flashed to the District Warning Centers and through them the civilian population in the threatened area is warned.

Largely through the splendid work of one of the members of the Mayor's committee, Mr. Paul Jewell, who was designated to organize the observation posts in Multnomah County and surrounding territory, this phase of the civilian defense efforts in our county functioned efficiently and smoothly. The thirteen posts in Multnomah County were completely organized with a personnel of 16 to 25 members each. Carlyle H. Wash, Brigadier-General, United States Army, commanding the Second Interceptor Command, paid high tribute to the work of this organization in the field during the army test maneuvers.

The next step in the preparation for the air raid and test blackout was the establishment of the local control center located at Northeast 21st Avenue and Pacific Street, operated under the direction of Chief Signal Officer, Charles Ralph. A system of air raid warning signals had already been surveyed and locations designated for these signal devices. However, as funds were not available for the necessary equipment for this blackout, and as the City of Portland had only one siren that could be utilized as an air raid warning signal device, this siren was utilized as the official air raid warning signal. The warning signal service for the blackout was augmented as follows:

- (a) All fire stations drove their fire apparatus outside of the station and sounded the sirens for at least one three-minute interval.
- (b) Traffic sirens in front of all fire stations were sounded.
- (c) All the city, county and state police within the corporate limits of the county sounded their sirens for a period of three minutes.
- (d) All ambulance companies operating in the city sounded their sirens for a period of three minutes.
- (e) All public, private and parochial schools having signal sirens sounded the alarm.
- (f) Certain large factories on the outskirts of the city and county blew their factory whistles at the given signal.



In our local control center were five operators from the Fire Bureau, one from the Police Bureau, one each from the Portland General Electric Company, Northwestern Electric Company, Pacific Telephone and Telegraph Company, the A.D.F. Company, the Water Bureau and radio organizations.

The messages were sent from the U. S. Army information center by direct wire to the report and control center under the direction of the Fire Alarm Superintendent, Charles Ralph, who also has been appointed superintendent of communications for this area.

Upon receipt of the signals they were designated on the operations board by a series of colored cards - yellow, blue, red and white, which corresponded with the army telephones which contained a corresponding series of colored lights - the yellow lights designating the preliminary caution; blue, second degree caution; red, that an air raid is imminent or in progress, and white, the all-clear signal. Immediately upon receipt of these signals our control center flashed the corresponding color signal to all of the agencies, defense industries and required organizations in the city. Approximately one minute was required to warn all agencies concerned as these agencies had direct lines, and staff members in the Control Center charted and diagnosed the reports on large maps and in this manner controlled actual field operations.

#### AIR RAID WARDENS

In the City of Portland and Multnomah County, through the efforts of the Central Volunteer Bureau, over 8000 women were enlisted to serve as air raid precautions officers. The entire area was divided into blocks and each woman assigned the duty of patrolling one block before the blackout, notifying occupants and giving them instructions how to operate during the blackout, and serving as air raid precautionary officers. These women were assigned the residential areas only.

### POLICE PROTECTION

Chief Harry Niles of the Portland Police Bureau, and Sheriff Martin T. Pratt of Multnomah County, who was assigned the territory outside of the city, provided most excellent means of notification to occupants of the entire area. All of the special police activities under the direction of the air raid warden service of the Portland Police Department, which includes the Portland Police Reserves, the Motorcycle Reserves, the Mounted Reserves and the Veterans Guard and Patrol units, plus all the regular police force, who were called back on duty for the night of the blackout, constituted approximately 3000 men. The Veterans Guard and Patrol units were assigned the duty, prior to the blackout operations, of enlisting 5 additional ex-service men each, to work with them and under their direction during the night of the blackout as air raid wardens.

In Multnomah County, outside the city, through the cooperation of the Sheriff's office in Gresham and adjacent territory, the boy scouts and students of the high schools acted as air raid wardens, together with the auxiliary police.

In Bonneville, United States Army engineers, in conjunction with employees of the Bonneville Power Administration, acted as air raid precautions officers.

The Board of County Commissioners divided the county outside the City of Portland into 8 districts - each of these districts in charge of an ARP officer who was responsible for the organization of his territorial unit. These men worked in close cooperation with the regularly constituted governmental county authorities and were supervised by Burton Walrad.

Many County employees were called back to duty during the night of the blackout, and all deputy sheriffs, state and county police in that territory assisted in the patrolling and the direction of traffic. The restriction of lighting was enforced by the entire personnel.

All roads and highways were closely guarded. Business institutions were posted, placarded and instructed prior to date of blackout.

In addition to the above, 1000 members of the Mantle Club reported for air



raid warden duty in the downtown sector and operated under the direction of Captain of Detectives, John J. Keegan.

The restriction of lighting on all bridges was under the supervision of the Board of County Commissioners.

#### FIRE SERVICE

The FIRE DEPARTMENT, under direction of Chief Edw. Grenfell, called upon the entire off-duty shift to volunteer their services for the day and night of the Blackout, assisting in notifying business establishments and distributing circulars. During the night of the blackout members of the various companies off duty acted as fire officers and assumed charge of approximately 1100 volunteer auxiliary firefighters, who assumed their regular positions and duties in the various auxiliary fire station locations as designated. They also assisted the Air Raid Wardens in their respective areas.

The Fire Marshal's Office used all the inspectors for approximately one week prior to the blackout and contacted all theatres, barber and beauty shops, sawmills, woodworking plants, warehouses, factories and defense industries.

Fire Marshal Fred W. Roberts, assigned inspectors to all theatres and places of public assembly during the period of the blackout.

The ARSON and SABOTAGE Squad under direction of Lieutenant Wm. D. Browne, contacted all the occupants along the waterfront sections in the city up to Fourth Avenue, and also the foreign element sections giving them instructions on Blackout operations.

#### Health Department and Building Division

Each of these departments rendered a most valuable service in contacting building contractors, public and private institutions, hospitals, etc., also restaurants, clubs, beer parlors and such places as their Inspectors were required by the nature of their positions to visit and deliver instructions.

#### RIVERS AND HARBORS COMMITTEE:

The Rivers and Harbor Committee, under the chairmanship of H. L. Corbett, performed valuable service in the coordination of all waterfront units and activities. The U. S. Coast Guard, U. S. Custom Service, U. S. Immigration Service, and the U. S. Engineers Division participated and gave their whole-hearted cooperation with the result that this part of the program was outstanding.

The Port of Portland and the marine units of the city government, namely, the Harbor Patrol and the Dock Commission, worked in close harmony with the aforementioned agencies and in this manner contributed a great deal to the success of the test blackout.

#### TRANSPORTATION:

The Transportation Committee, under the direction of E. L. King, functioned very efficiently, coordinating the efforts of all transportation units and facilities in this defense area. The Transportation Committee is divided into railroads, city and suburban transportation, inter-city transportation, taxicab, truck and fleet operators, air lines and the various facilities attached thereto.

#### FIRE:

Every member of the Portland Fire Department has received training in first aid and has been given rigid instruction in teacher training and public speaking, and they are now in the process of training over 1000 auxiliary fire fighters. These men are trained not only to act as auxiliary firemen and assigned to their auxiliary fire stations located in their respective residential districts, but also to serve as fire brigades in the building units and factories where they are employed. These men all reported for duty on the night of the blackout to their assigned fire stations and assisted in enforcing the provisions of the blackout in their respective areas.

#### BOY SCOUTS:

Nearly all the Boy Scouts in the City of Portland and Multnomah County participated in the blackout, serving as messengers and guarding fire alarm boxes



due to the fact that the blackout was held on Halloween night. Throughout the balance of the county the boy scouts also patrolled the areas and acted as air raid precautions officers.

The PORTLAND CHAMBER OF COMMERCE and the COLUMBIA EMPIRE INDUSTRIES rendered valuable services, notifying all of their members by letter, including instruction sheets.

THE LABOR RESOURCES COMMITTEE contacted the various locals affiliated with the A.F. of L. and C.I.O.

THE BONNEVILLE ADMINISTRATION and all FEDERAL agencies cooperated to the fullest extent by posting bulletins, notifying employees and making arrangements for a successful completion.

THE AMERICAN LEGION, the VETERANS OF FOREIGN WARS, SPANISH AMERICAN WAR VETERANS and other members of the veterans' groups participated whole-heartedly by volunteering their services and working in conjunction with the Guard and Patrol Units now being organized by the Defense Council.

The BUILDING OWNERS, OPERATORS AND MANAGERS, the APARTMENT HOUSE ASSOCIATION and the HOTEL ASSOCIATION all cooperated to the greatest extent.

PORTLAND JUNIOR CHAMBER OF COMMERCE assisted in the campaign by contacting all jewelry stores and assisted in the placing of blackout circulars in all windows three days prior to actual time of blackout.

The shipyards and all other defense industries were contacted and cooperated to the fullest extent.

Speakers appeared before nearly every organized group in the city. Numerous other organizations were contacted by mail and telephone.

Approximately 130,000 circulars were printed containing instructions as to procedure for the blackout, and these were distributed to the public, private and parochial schools and the various trade organizations.



The BOARD OF COUNTY COMMISSIONERS and the CITY COMMISSIONERS gave their wholehearted support and cooperation, in many cases detailing members of their staff organizations in covering every labor organization, trade organization, patriotic society, fraternal organization, educational organization, professional organization, youth group, church group and all women's organizations and the various veterans' societies.

The WATER BUREAU patrolled their entire pipeline system, as well as the reservoirs and other subsidiary plants, maintaining communication by radio; blacking out the entire Bull Run watershed, and acting as Wardens in this area.

The CITY ELECTRICAL DIVISION is to be especially commended, as well as MR. C. H. LUNDELL, City Electrical Engineers, who so ably supervised the participation of this Division. Mayor Earl Riley assigned City Engineer BEN S. MORROW to handle the municipal participation, and MR. R. G. BARNETT was assigned the major job of supervising the utilities and outside groups. Largely through the efforts of Mr. Barnett, the various sign companies were organized and completed an outstanding job not only by contacting their own contract members, but going into the field and contacting all independent sign operators.

The OREGON BREWERS INSTITUTE contacted all members of their organization by letter, as did the Wine Council of Oregon, and their efforts were noticeably effective during the blackout.

The VITAL INDUSTRIES COMMITTEE contacted the oil industries, railroads, docks, trucks and all other vital and defense industries concerned.

The PUBLICITY COMMITTEE performed an outstanding job relative to publicizing the blackout and deserve special praise for their participation. All of the newspapers, daily local, weekly and monthly community papers and all radio stations gave freely of their time and effort in order to assure the success of the blackout.

In conclusion, Governor Charles Sprague complimented the Defense Council on the excellent work performed, as did Joseph K. Carson, Jr., Inspector General of the Office of Civilian Defense.

Brigadier-General Carlyle H. Wash, reported it was the most outstanding job that he had ever witnessed.

Respectfully submitted,

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Edw. L. Boatright  
Coordinator



## COMMUNICATIONS - PORTLAND, OREGON

Re: Civilian Defense Blackout, October 31, 1941

Portland area comprises City of Portland and 32 cities and towns.

Communication Control Center located at Fire Alarm Headquarters,  
N. E. 21st and Pacific Streets, Portland, Oregon.

### FACILITIES

1. Four circuits, main line; air raid warning signal and telephone direct to Portland Headquarters, Second Interceptor Command, U. S. Army.
2. Direct telephone lines to 39 fire stations, Police Bureau, Water Dept., Portland General Electric Company, Northwestern Electric Co., Portland Gas & Coke Company and Pacific Telephone and Telegraph Company.

Dual position telephone switchboard with 5 main-line incoming trunk lines and five 2-way trunk lines.

3. 500 watt ultra high frequency radio transmitter.
4. Audio frequency transmitter operating on fire alarm circuits to all fire stations and fire alarm boxes.
5. Telephone jacks in all fire alarm boxes and fire stations for communication by telephone over fire alarm circuits.
6. Ten 2-way portable audio transmitters with self-contained batteries for use at any point on fire alarm circuits.
7. 1 - remote controlled greater alarm fire whistle.
8. A coordinated radio amateur network of 30 licensed radio operators located in this area.
9. An auxiliary communication group of 76 members of the Bonneville Power Administration.

COMMUNICATION PROCEDURE USED IN AIR RAID WARNING  
FOR BLACKOUT - OCTOBER 31st, 1941

Yellow Warning - 9:50 P.M.

1. Checked with Interceptor Command
2. Notified Oregon Shipbuilding yards by telephone

Blue Warning - 10:01 P.M.

1. Checked with Interceptor Command by telephone
2. The words - "Blue Warning, Blackout" were spoken into the microphone which controls the Fire Department radio transmitter and loud speaker system in all Fire Stations at the same time.
3. This radio message was picked up by the Police dispatcher, commercial broadcast stations and amateur network control stations and rebroadcast over their respective frequencies.
4. Police broadcast notified all City, County and State cars in this area who immediately sounded their sirens in the Air Raid Warning code.
5. The amateur control stations called all members in the outlying cities and towns, and these members notified their local fire department by telephone.
6. All Portland Fire Department sirens were operated on receipt of warning over loud speakers in their stations.
7. The Fire Department Greater Alarm Fire Whistle relayed the warning to 11 mills and factories - the latter also sounding their steam whistles.
8. Commercial broadcast stations gave the warning on the broadcast frequency. This was picked up by over 100 schools that sounded their assembly horns; 12 ambulance companies sounded their sirens.
9. All 32 cities and towns outside of Portland were contacted by long distance telephone.  

A fireman in each Portland station was detailed to call one city by long distance telephone over the private telephone in his station as soon as he received the warning over the loud speaker.
10. All cities and towns with telegraph facilities were notified by telegraph.

OBSERVATION POST COMMUNICATION

Four observation posts were maintained to check on the Blackout - one on the 14th story of the Terminal Sales Building; one on the 14th story of the Meier & Frank Building; one on the 15th floor of the Public Service Building and one on the 12th floor of the Weatherly Building. These posts were in 2-way communication with each other and control center by use of the portable audio communication sets over the Fire Alarm Circuit.



Nine cases of failure to blackout were reported from these posts and police cars were dispatched to turn off lights.

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Representatives of the Northwestern Electric, Portland General Electric, Pacific Telephone and Telegraph Company, Water and Police Departments were at the Control Center to act as liaison officers with their respective utilities.

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White - All - Clear Signal - 10:15 P.M.

The All-Clear Signal was sent out and the same procedure followed as on the Blue or Blackout Signal.

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#### SPEED OF NOTIFICATIONS

All Police cars were notified within 30 seconds by Police radio.

All cities and towns outside of Portland were notified first by amateur radio, next by commercial broadcast; next by telegraph and then by long distance telephone.

The average time for completion of the amateur network to remote Fire Department calls was 60 seconds.

Western Union Telegraph Company was notified within 30 seconds.

Average time for completion of telegraph calls - 3 minutes

Average time of completion of long distance telephone calls - 3 minutes

### RECOMMENDATIONS

Audible sound warning by all methods employed did not make complete coverage of the City and these methods would not be an efficient warning for air raids.

For complete coverage of this City it will be necessary to install special air raid warning horns strategically located and operated simultaneously from the Control Center.

According to available information, the commercial, Police and amateur radio bands will be silenced during actual air raid conditions and we will be forced to rely on telegraph, telephone, fire alarm and person to person for communication.

As radio is outstanding in the Communication field, every effort should be made to have the Army permit the use of one of an ultra high frequency band for civilian defense work.

Small portable units of about  $\frac{1}{2}$  watt output on  $2\frac{1}{2}$  meters, could be used to cover the average area.

Tests should be made with the Army to determine if any interference would be caused by use of this equipment.

While the telephone is the quickest and best way to transmit information under normal conditions, its availability prevents its efficiency in abnormal emergencies. Experience has taught that under air raid conditions so many users try to call one number at the same time that facilities are jammed and not more than 1% of the calls can go through in time to be of any use in fire fighting.

Localized communication, using audio amplification over fire alarm circuits from volunteer fire stations to the present fire station in that locality will put a means of emergency communication within a few blocks of any person in the city.

In London, communication in emergencies is carried on by person to person



by means of different methods of visual signaling and messengers.

At present in Portland we have Communication group of 76 employees of the Bonneville Administration who are meeting once a week and drilling on all forms of communication.

The amateur network group is willing to build the 2 $\frac{1}{2}$  meter radios if assurance can be had they will be able to use them, and clarification on this point will be necessary before further progress can be made on this line.

Yours very truly,

G.C. Ralph  
Chief, Communications  
Portland Area  
Civilian Defense

CCR:CF

11/10/41