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TELEPHONE FIRE ALARM SYSTEMS
FOR INDUSTRIES AND LABORATORIES

C. R. Wintersteen

June 1, 1956

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**TELEPHONE FIRE ALARM SYSTEMS
FOR INDUSTRIES AND LABORATORIES**

C. R. Wintersteen, Safety Engineer

**Radiation Laboratory
University of California
Berkeley, California**

June 1, 1956

Although the controversy on telegraph vs. telephone fire-alarm systems continues, the Radiation Laboratories at Berkeley and Livermore, California have adopted telephone systems tailored to their needs.

The decision to make the change was based on the economics of replacement and (or) maintenance of outmoded systems. Also, it was felt that a better system of communications for reporting all types of emergencies was needed.

Now, instead of scattered alarm boxes which could only report a fire situation, hundreds of telephone instruments installed for routine business can be used for reporting any emergency that might occur. In addition there are a number of telephone boxes placed at strategic locations for use by inspecting police officers on the after-hour patrols.

At either Laboratory a person can report an emergency by dialing extension 333 on any business phone, which rings not only the telephone at the police communications center but also monitoring telephones, the first aid station, and the radiation safety office. Also, a signal light at the switchboard alerts the telephone operators, who can plug in and listen to the incoming report. The police officer does not pick up the handset until after two rings, so as to be sure that the other monitoring persons have heard the phone and can listen to the report. The agencies involved are thus simultaneously alerted for action.

Sprinkler system alarms and thermal detection signals are carried over leased telephone wires to the communications center of the police offices.

At the Berkeley Laboratory, where volunteer forces are used, the police officer on duty uses the project public address system to make coded announcements to advise emergency personnel of the location of the incident. At the Livermore Laboratory a coded zone system, utilizing large air horns, is used

to direct auxiliary assistance to the scene of the emergency. The Laboratory Fire Department is first alerted by a horn on the roof of the fire station, and receives the location of the incident from the police by use of a teletalk system.

Misdialing, which can cause a false alarm, presents no serious problem, since the police communications center serves as a screening point for emergency calls and for subsequent action to be taken.

The equipment at the communications centers includes such items as "conelrad" radio; sprinkler system annunciator panels; laboratory radio transmitter; transmitter for outside assistance; auxiliary microphone for the public address system; "Bell and Light" equipment for air alerts; and timing or code devices for air horns, fire sirens, and air raid sirens. Emergency power is provided for this equipment as well as for the telephone rectifiers that charge batteries and maintain a power supply for the ringing circuits.

Based upon the low rental rates for telephone circuits, the dependability of telephone circuits; and the excellent service rendered, the experience of the Radiation Laboratory has been that such a system has many advantages for self-contained industries, institutions, and laboratories.

This work was done under the auspices of the U. S. Atomic Energy Commission.