

three houses was the ignition of gas that
d from a main damaged by a contractor's
hoe.

Contributing to the accident were the delay
by the gas company in shutting off the flow of
leaking gas, the failure to check for gas in
houses, and the failure to notify police and fire
officials. Also contributing were the failure of
the area residents to report the odor of gas in
their houses, and the failure of the county to
supply the contractor with the accurate gas main
location which had been provided by the gas
company.

VI. RECOMMENDATIONS

The National Transportation Safety Board
recommends that:

1. The Office of Pipeline Safety

(a) Amend 49 CFR 192 to require
onsite identification of all valves on
high-pressure distribution systems
which may be necessary for the safe
operation of the system. (Recom-
mendation No. P-72-40)

(b) Amend 49 CFR 192 to require that
each pipeline operator prepare pre-
planned shutdown procedures so
that any section of a high-pressure
distribution system can be shut
down in an emergency. (Recom-
mendation No. P-72-41)

(c) Amend 49 CFR 192 to require that
each operator maintain a log which
shows the receipt and handling of
each leak or emergency report
received. Information concerning the
time that the report was first
received, that a crew was first dis-
patched to the scene, that such a
crew arrived, and that the condition
was considered safe should be in-
cluded. In addition, each pipeline
operator should be required to
analyze his performance in respond-

ing to gas-leak emergencies and
reports. Both the logs and the analy-
sis should be made available to State
agencies and the Office of Pipeline
Safety. (Recommendation No. P-72-
42)

(d) Amend 49 CFR 192 to require that
each pipeline operator have on duty
a sufficient number of dispatching
personnel to effectively coordinate
emergency situations. A study may
be required to determine the
relationship between various condi-
tions and the number of dispatchers
necessary. (Recommendation No.
P-72-43)

(e) Amend 49 CFR 192.615 to include
an explicit requirement that each
pipeline operator notify and co-
ordinate his activities with local fire
and police officials when gas leaks
create hazardous conditions.⁷
(Recommendation No. P-72-44)

2. The American Public Works Association
develop guidelines for preconstruction meetings,
which should include methods of preventing
damage to underground utilities to be en-
countered during the proposed construction
work. Such preconstruction meetings should be
attended by all operators whose facilities are
involved. (Recommendation No. P-72-45)

3. The American Society of Mechanical
Engineers Gas Piping Standards Committee

(a) Recommend methods of numbering
or marking valves in the field so that
they can be readily and positively
identified. (Recommendation No. P-
72-46)

(b) Develop guidelines to be used by
pipeline operators in establishing pre-
planned sectionalizing programs to
shut down any section of main in an

⁷Same as Recommendation 1(b) in Board report, "Lone Star
Gas Company, North Richland Hills, Texas, October 4, 1971."

emergency. (Recommendation No. P-72-47)

- (c) Develop guidelines to assist pipeline operators in preparing their emergency plans. These plans should indicate the action to be taken by the first gas company employee arriving at the scene of an emergency. (Recommendation No. P-72-48)
- (d) Develop guidelines to assist pipeline operators in educating customers and the general public in the proper action to take if gas leaks are detected. (Recommendation No. P-72-49)
- (e) Develop guidelines in cooperation with the National Fire Protection Association to assist pipeline operators in determining the conditions under which local fire and police officials should be notified. (Recommendation No. P-72-50)
- (f) Develop guidelines for classifying and responding to leaks reported by the public. (Recommendation No. P-72-51)

4. The National Science Foundation, the Office of Emergency Preparedness, and the National Bureau of Standards initiate a research project, under their cooperative program, "Building Practices for Disaster Mitigation," to study the flow of natural gas through various basement wall materials and types of construction. This project should also include effective methods of sealing the space around underground utility lines where they enter a building. The effects of aging, settlement, and exposure to water should be considered. (Recommendation No. P-72-52)

5. The American Gas Association study the flow of gas through various construction fill media and recommend methods and types of fill to be used in the installation of underground utility lines. (Recommendation No. P-72-53)

6. The Washington Gas Light Company

- (a) Extend, in cooperation with other utility companies and governmental

agencies, the Miss Utility program to receive reports of proposed excavation work in the entire Washington metropolitan area. (Recommendation No. P-72-54)

- (b) Develop a sectionalizing program of its high-pressure distribution system so that preplanned procedures are available to isolate any section of its system in an emergency. (Recommendation No. P-72-55)
- (c) Train and equip all appropriate radio-equipped field personnel to locate and operate main line valves under the direction of knowledgeable office personnel. (Recommendation No. P-72-56)
- (d) Expand its customer education program so that its customers and the general public can be made aware of the proper action to take if gas leaks are detected. (Recommendation No. P-72-57)
- (e) Maintain a leak log which will give appropriate information relative to all aspects of receiving and responding to reported leaks. This information should be analyzed periodically to provide information which will readily point out problem areas in WGL's response. (Recommendation No. P-72-58)
- (f) Identify all valves in the field to permit positive identification. (Recommendation No. P-72-59).
- (g) Realign its dispatching facilities so that one dispatcher can contact all field personnel capable of responding to an emergency when such a situation is encountered. (Recommendation No. P-72-60)
- (h) Coordinate the activities of the transmission and distribution department dispatcher with the customer ap-

pliance dispatcher so that an appliance serviceman is dispatched to the scene of any reported leak in the distribution system. (Recommendation No. P-72-61)

(i) Provide all maintenance foremen with the equipment necessary to squeeze off 2-inch and smaller gas lines. (Recommendation No. P-72-62)

BY THE NATIONAL TRANSPORTATION SAFETY BOARD:

/s/ JOHN H. REED
Chairman

/s/ FRANCIS H. McADAMS
Member

/s/ ISABEL A. BURGESS
Member

/s/ WILLIAM R. HALEY
Member

Louis M. Thayer, Member, was not present and did not participate in the adoption of this report.

November 22, 1972.