

APPENDIX F

WATER LINE LEAKS / BREAK REPAIR POLICY

Reporting Requirements:

Water Mains breaks or leaks on pipe sizes of 12" and larger shall be reported to either the TWA Environmental Specialist, Assistant Director of Field Operations, another Assistant Director, or the Director. The leak shall also be reported to FDEP within 24 hours by either phone or by fax through the attached form. Reporting after normal work hours and on weekends shall be by the fax form. Reportable leaks should be reported as soon as possible recognizing that TWA and FDEP may be receiving inquiries from customers and the media.

Water leaks or breaks on pipe sizes of 6" or smaller are not reportable to FDEP unless there shall be a substantial number of customers affected by a water outage. If there is a question as to the need to report a leak of this size or smaller, the appropriate supervisor chain of command shall be followed in seeking clarification.

Water leaks or breaks on pipe sizes of 8 and 10" shall require reporting when a substantial number of customers shall be affected by a water service outage. For leaks or breaks where pressure is not lost or the number of customers affected is small, reporting shall not be required. A guideline for reporting is as follows:

Residential Areas - more than 200 homes affected

Commercial Areas - more than 1500 feet of pipe isolated

Leaks that are maintained under pressure throughout the repair process are not reportable under any circumstances. Only leaks that result in total loss of pressure to the customers are required to be reported.

Repair Procedures:

1. When responding to a water leak or break the Field Operations Crew, Construction Inspector, if on-site, or the stand-by personnel, shall attempt to locate the valves to isolate the leak/break area and minimize the area or customers to potentially be affected if total isolation is necessary for repair. Valves shall be operated to verify their ability to isolate the repair area and minimize the affected customers and to reduce the outflow from the leak/break to a level capable of being pumped for excavation purposes. Positive pressure (positive flow from the leak or break) should be maintained unless the potential loss of property, damage to surrounding infrastructure, or health/safety issues require the complete shutdown of the leak/break.

If the water leak or break cannot be repaired with positive pressure, total isolation and shutdown is required, the Field Operations crew foremen should be notified to initiate the reporting and bacteriological testing portions of this policy. If the crew foreman is unavailable, the immediate supervisor available following the chain of command shall be notified. After hours, the immediate notification should be the Field Superintendent followed by one of the Assistant Directors and the Director. Notification shall be made to the Field Operations office during normal working hours of the customers affected by a leak/repair and an estimate of time to restore service. During off hours, notification shall be made to Station 3 and Central Communications.

2. Emergency locates of other utilities in the area shall be requested immediately.
3. The water main shall be excavated to 12-18" below the bottom of the pipe using safe excavation practices and while the main is maintained under enough pressure to maintain continual outflow from the leak/break. The excavation shall be dewatered with the continual outflow and the water level maintained 12" below the pipe during the repair. Once the water level is below the pipe by 12", the water may be totally valved off if necessary to proceed with the repair after letting the pipe discharge for 2 minutes after the water level is below the pipe.
4. The excavation and the external area of the excavated pipe shall be disinfected by liberally spraying liquid sodium hypochlorite over both.

5. During repair the repair parts and the inside of the pipe shall be sprayed with a 1% sodium hypochlorite solution. The inside of the pipe shall be sprayed liberally as far into the pipe as the spray device shall reach but no less than three feet each direction from the leak/break.
6. After completing the repair, the pipe should be thoroughly flushed. If possible, water should be flushed towards the repair area from both directions. Flushing should continue to remove discolored water, air pockets, and to produce clear water with a chlorine residual representative of the distribution system.

Bacteriological Testing:

1. If water pressure was maintained throughout the repair of a water leak, no bacteriological samples and testing shall be required.
2. If water pressure was maintained until the pipe was excavated and the excavation dewatered 12" below the pipe before the water outflow was shut off, a single bacteriological sample and test shall be performed in the vicinity of the repair to verify bacteriological quality.
3. If the leak/break required totally shutting off service before the excavation and dewatering could be completed, two successive bacteriological samples taken at least 18 hours apart in the vicinity of the repair shall be required. The customers that lost service shall be under a Boil Water Notice until two successive samples are negative.
4. If bacteriological samples shall be required, the laboratory shall be notified during normal working hours. During off hours and weekends, South Bermuda shall be notified so that the appropriate lab personnel may be notified.

Sampling Procedures:

The laboratory shall be notified as soon as the determination has been made that bacteriological testing is required. After hours, the South Bermuda WRF shall be contacted to make contact with laboratory personnel. The notification to the laboratory shall include the number of samples, number of days to sample, approximate time samples are expected at the laboratory, the person collecting the samples and the person in charge in the field. When the actual time of sampling is known the laboratory or South Bermuda shall be contacted again.

Samples shall be taken by either: the water plant operator, the environmental technician, or construction inspector. After hours the water plant operator on call shall be contacted to collect the samples. The operator shall initially be notified of the need for samples when the determination is made to sample and shall be contacted later when the actual time of sampling is known.

Once a determination has been made that sampling is required, the laboratory shall be responsible for scheduling, tracking results, and providing notification of results. If two days of sampling are required, the laboratory shall schedule the second day and any subsequent days for sampling. Sample results shall be communicated to the Environmental Specialist, the Field Operations Superintendent, and Director.

The laboratory shall maintain current phone and a pager contact number for personnel for after hours contact.

BOIL WATER NOTICES:

If the water leak/break shall not permit maintaining pressure during excavation and service shall be terminated to customers prior to complete excavation and dewatering, a Boil Water Notification shall be made to all affected customers as well as FDEP. Under a Boil Water Notice declaration each customer shall be notified of the repair and to boil any drinking water until further notice. As soon as a crew or inspector is aware that a Boil Water Notice shall be required notification of customers, FDEP and Water Resources Administration shall be initiated immediately. In areas where practical a standard Boil Water Notice included with this policy shall be distributed to the customers individually. For cases where the number of customers affected makes the hand distribution of notices impractical, notification shall be made through the radio and television media. A listing of

the phone contacts for the media shall be maintained by Field Operations, the Environmental Specialist and the Administrative Assistant. After two successive negative bacteriological tests are obtained, the customers shall be notified of the lifting of the Boil Water Notice in the same manner as the original notice.

If restaurants and motels are affected by a Boil Water Notice, contact the Department of Business and Professional Regulation of Hotels and Restaurants at 1-800-375-6975.