



# HILLTOWN TOWNSHIP

13 West Creamery Road

P.O. Box 260

Hilltown, PA 18927

(215) 453-6000

June 1, 2005

To the residents of Longleaf II,

This letter is in response to the concerns voiced at the May 23, 2005 meeting of the Hilltown Township Board of Supervisors. A number of residents in the second phase of the Longleaf development have raised concerns over two distinct issues with the fire sprinkler systems in their homes. The first issue is that of leaks and weeps, coming primarily from the sprinkler heads themselves. The second issue is that of cracked pipes which have resulted in significant water damage to their homes.

Both of these issues are being investigated to determine the cause and possible remedies. At this time, the original homebuilder (Heritage Construction Co., Inc.) and the Township are conducting independent investigations. Representatives from Heritage have agreed to keep the Township updated on a weekly basis as to their progress. It is our intention to pass not only this information along to you, the residents, but also to keep you informed of the progress being made by the Township.

The Township is currently in the process of gathering the baseline facts of the situation. Attached you will find the details of our progress so far. It is the intention of the Board of Supervisors that each of you be given the opportunity to have your fire sprinkler system inspected by a Township Code Enforcement Officer, to assure you that the system is installed to Code and complete the data collection. Although will be an optional inspection on your part, we strongly recommend that you agree, as it will allow for more complete and accurate data to evaluate. When we are prepared to conduct these inspections, we will be contacting each and every one of you to set up a time.

We have also included a list of frequently asked questions to clarify some of the issues. Should you have any further questions, please do not hesitate to contact the Township so that we may include it in a future update. Again, we encourage you to send an email to [djenkins@hilltown.org](mailto:djenkins@hilltown.org) to receive these updates by email. Please be sure to identify your street address, so that we may reduce the duplicate mailings.

Respectfully,

Daniel A. Jenkins, MCP  
Fire Marshal

David W. Taylor, CBO  
Building Code Official

## Longleaf Phase II Fire Sprinkler Update #1

### Heritage Activities:

According to Larry Wargo, of Heritage Construction Co., their investigator visited a total of four houses. Their first visit to the site included a stop at a home that had a system designed and installed by HAS Protection, the second home had a system done by Qualified Fire Protection, Inc. On Friday, May 27, their investigator came out again to investigate two homes that had cracked pipes, but minimal damage. During this stop, they were able to collect two samples from all three floors of each house. Heritage assures the Township that everything is being done to expedite the process, including the use of Federal Express for all correspondence.

### Township Activities:

- All eighty property files were reviewed.
- All inspections have been compiled and documented.
- Dave Taylor, the Township's Building Inspector, inspected nearly every system at the rough and final stages.
- Several inspections were failed due to a lack of a pressure test on the system. They were later inspected again and found to be in compliance.
- The plans that were approved for construction are being pulled from the archives.
- Chief John Gillespie, of the Silverdale Fire Company, was advised of the magnitude of the situation. (See attached)
- The following municipalities are being queried as to their requirements relating to pressure-reducing/regulating valves: Buckingham Township, New Britain Township, Newtown Borough, Warrington Township, Warwick Township, as well as other municipalities in southeastern Pennsylvania.
- A master list of all homes is being developed to show inspections, installers, model, etc.

### FAQ:

- 1) To what standard were the fire sprinkler systems designed to meet?
  - a. National Fire Protection Association (NFPA) 13D – Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes, 1996 Edition.
- 2) What is the difference between this standard (NFPA 13D) and the NFPA 13 Standard for the Installation of Sprinkler Systems?
  - a. The 13D standard was written as a “standard that would produce a reliable but inexpensive sprinkler system” for single family dwellings. The standard was written with life safety as a primary goal, and property protection secondary. The trade-offs to reduce the costs, as compared to an NFPA 13 system for commercial buildings included: “a system that was slightly less reliable and had fewer operational features... but that could be effective and installed at a substantially lower cost;” and also that “system design should be such that a fire could be controlled for sufficient time to enable people to escape”. (Reference: NFPA 13D Commentary, 1996)
- 3) What is the timeline of sprinkler regulations in Hilltown Township?
  - a. The Hilltown Township Board of Supervisors, with the recommendation of the seven serving fire companies, adopted an ordinance requiring residential fire

sprinkler systems on October 16, 1999. On April 9, 2004 the Pennsylvania Uniform Construction Code (UCC) began. The UCC preempted all municipal ordinances throughout the Commonwealth adopted after July 1, 1999. Thus, the Township's ordinance requiring fire sprinkler systems was rescinded by the Commonwealth. There is an extensive process to reinstate the ordinance. This process is being evaluated by the Board of Supervisors.

- 4) How many installers were used during this development?
  - a. Thus far, our research indicates that there were only two. HAS Protection and Qualified Fire Protection, Inc.
- 5) Why are some of the pipes in the attics not insulated?
  - a. Antifreeze systems have to be used when sprinkler pipes are installed in areas that are subject to freezing. The antifreeze solution must be prepared with "a freezing point below the minimum temperature for the locality". The freezing point for most solutions is -15°F to -50°F. The use of an approved antifreeze system does not require that the pipes be insulated. (Reference: NFPA 13D, 1996)
- 6) What is used as an antifreeze agent?
  - a. According to HAS Protection the antifreeze solution that they used is a food grade glycerine product, which is mixed with domestic water at a 1:1 ratio. Qualified Fire Protection reports that they used a product called Firefighter GL, which is a pre-mixed glycerine solution. Both of these products are non-toxic and conform to national, state and local health codes.
- 7) What about pressure tests, why were they only tested to 75-90 psi? Why were they not on a witnessed test for two hours?
  - a. The requirement for a hydrostatic test (usually conducted at 200 psi for two hours) is a requirement for commercial buildings only. NFPA 13D states that "all systems shall be tested for leakage at normal operating water pressure." (Reference: NFPA 13D, 1996)
- 8) Is the orange plastic pipe used tested and/or approved to be used in all sprinkler systems?
  - a. It is tested and approved by Underwriters Laboratories (UL) for light hazard and residential occupancies. It is also received approvals from Factory Mutual and NSF International. The pipe is UL listed for a working pressure of 175 psi at 150°F. Additional information can be found at <http://www.blazemaster.com/>
- 9) What preventative maintenance is needed on an antifreeze fire sprinkler system?
  - a. According to NFPA 13D, "*Before freezing weather each year, the solution in the entire system shall be emptied into convenient containers and brought to the proper specific gravity by adding concentrated liquid as needed. The resulting solution shall be permitted to be used to refill the system.*" On all sprinkler systems a monthly visual check of the system is recommended. When doing this, one should look for bent or broken sprinkler heads, sprinkler heads that have been painted (after the factory paint), obstructions to the sprinkler heads, and items hanging from sprinkler heads. Any of these could delay the operation of, or cause the sprinkler head to fail to operate.



May 24, 2005

Chief John Gillespie  
Silverdale Fire Company  
P.O. Box 83  
Silverdale, PA 18962

Dear Chief,

In the past we have briefly discussed the issue of fire sprinkler systems being shut off in the single-family dwellings at the Longleaf development. It was made very clear last night, at the regular session of the Board of Supervisors meeting, that there are considerably more fire sprinkler systems that have been disabled by the residents. The residents are shutting down the systems due to extensive damages received, or the fear thereof. The cause of these damages is being investigated, in hopes that a solution can be found and the systems restored.

I am certain that you will continue to provide the exemplary service that has come to be expected from your group of volunteers, regardless of whether you are fighting a fire in a sprinklered or unsprinklered home. Further, I am certain that any necessary changes to strategy, tactics, and/or response will be made to ensure that the level of service to these residents is maintained.

Be safe,

Daniel A. Jenkins, MCP  
Fire Marshal

C: Board of Supervisors  
File