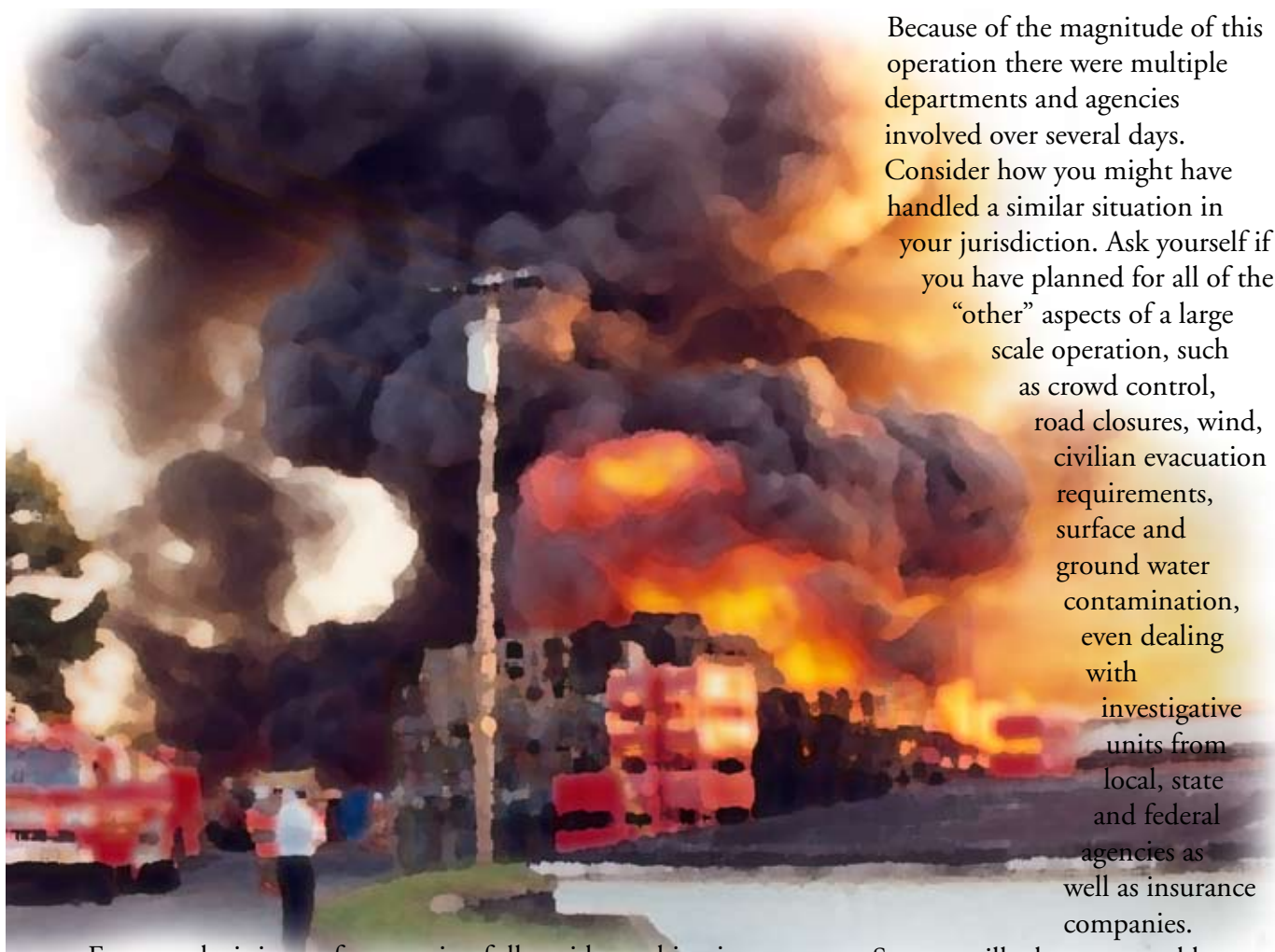


Looking Back:

The Swepsonville Fire of 1989

On Oct. 4, 1989, what is believed to be the largest structure fire in North Carolina's history roared straight into the jurisdiction of Swepsonville Volunteer Fire Department, a small department located in Alamance County south of Burlington. Firefighters with Swepsonville and surrounding fire departments spent a long, sleepless night battling the blaze which caused an estimated \$5 million in damage and completely engulfed the old Virginia Mill building. But this fire burned more than the building at the heart of this mill town; seared into the memories of the approximately 200 firefighters working that night were the images of a fire purported to be visible from as far away as Virginia. After the ashes cooled, fire officials found themselves asking the tough questions all rescue workers must face after such an event: What could we have done differently? How could we improve upon our response for the next time? What lessons are to be learned from this fire?



Fortunately, it is rare for the fire service community to experience a major fire such as the one that occurred in Swepsonville that October. Unfortunately, a lack of experience with events of this magnitude can expose weaknesses — weaknesses that may be costly for those faced with those rare major fires. Fires such as the one in Swepsonville don't compare to the everyday incidents most firefighters face; for the most part, we do very well on the room and content fires that we deal with frequently. However, any one of us could one day find ourselves in Swepsonville's shoes. When the "Big One" does happen, just how prepared are we? What areas of training have we pushed aside in order to do other fun things? Whether or not your department

is a fully paid, combination or all-volunteer staff really makes very little difference when the alarm sounds for that big fire. We all have to perform to our very best for the sake of safety and efficiency.

By examining the facts of large scale fires such as the one in Swepsonville, and by reviewing the experiences and lessons learned by those who respond to such events, perhaps we can gain some insight into what we should be doing in our own jurisdictions to prepare for the Big One. Presented below are some of the facts and comments concerning the Virginia Mills fire of 1989. Swepsonville Chief Darrel Newton was in command of this operation, and he along with others made several critical decisions at this fire.

Because of the magnitude of this operation there were multiple departments and agencies involved over several days. Consider how you might have handled a similar situation in your jurisdiction. Ask yourself if you have planned for all of the "other" aspects of a large scale operation, such as crowd control, road closures, wind, civilian evacuation requirements, surface and ground water contamination, even dealing with investigative units from local, state and federal agencies as well as insurance companies.

Swepsonville demonstrated how quickly these other elements come into play with a fire of this magnitude.

Following is a report written by Chief Darrell Newton after the Virginia Mills fire. From this report we can see how the complexity of an incident can quickly grow to a magnitude that would overwhelm any unprepared fire department. As you read through Chief Newton's account of the events that transpired, take a moment to consider your department's capabilities and limitations. Then ask yourself what more should your department do to address your large scale fire protection problems. — *Greg Chatham, Office of State Fire Marshal fire and rescue training specialist*

**Swepsonville VFD
Virginia Mills Fire
Swepsonville, N.C.
October 4, 1989**

On Wednesday, October 4, 1989, the worst fears of the Swepsonville Volunteer Fire Department became a reality as a major fire struck the old Virginia Mills Textile Plant located in Swepsonville, North Carolina. Chief Newton stated, "This mill was built approximately 120 years ago and covers one million square feet under roof."

Swepsonville Fire Department is a volunteer fire department with three paid employees, with one firefighter working each 24-hour shift. Firefighter Matthew Bivins was on duty at the time of the call. Swepsonville has one substation, which is 54 East. There are a total of 56 firefighters in both Swepsonville and substation 54 East. The two stations have two engines, three tankers with large pumps and a quick dump. In addition, we also have two brush trucks and an EMT vehicle.

The Swepsonville fire district covers a 36 square mile district with a population of approximately 8,500. There is approximately \$215,000,000 worth of property within the fire district.

At 6:08 in the afternoon on October the 4th, a neighbor by the name of Bobby Ornsby reported to the Alamance County 911 Communications Center that a fire was in progress at the old Virginia Mills Plant. At 6:09 p.m. Alamance County Central Communications dispatched on the first alarm was Swepsonville Fire Department, 54 East, Mebane and Haw River.

A total of four engines and five quick dump tankers were dispatched on the first alarm. Deputy Chief Phillip Farrell was the first Fire Officer on the scene and immediately called for three additional stations to be dispatched. At this time, Assistant Chief C.L. Stout and Deputy Chief Phillip Farrell decided to make an interior attack with a 2.5 inch line and try to determine exactly how far the fire had spread inside the building. Other firefighters at this time were setting a deck set and hooking up to yard hydrants inside the mill. Also, the tanker operation was placed into service at this time by using the drop tank operation just outside the fire wall.

By this time, Chief Newton had arrived on the scene and set up a command post and took over command. Fire attack was in progress from inside and outside using large deck sets and 2.5 inch hand lines. The mill's water system was inadequate to handle the needed water flow.

Fire Chief Tim Bradley from the Mebane Fire Department was arriving on the scene at this time and he was assigned to Staging, which was set up in a parking lot across the road, approximately 300 yards from the fire. All incoming tankers from other stations were ordered inside the gate to continue the fire attack with the drop tank situation since the hydrant system was rendered inadequate at this time.

The water system that feeds the mill was coming in off a private system on a six inch line and the mill system had a twelve inch loop system around it. The sprinkler heads had activated in the fire area and were using all of the available water in the mill system, mainly because of the 6 inch line feeding the 12 inch loop system.

"Due to the fact that this building had been pre-fire planned many times, it was obvious that if the fire got ahead of you in a structure like this, the only possible place to stop it was at the one fire wall that was located 900 feet downwind from the fire," stated Chief Newton. "Our pre-plan for this facility was to attack the fire with everything we had and if not contained, then to set up a strong defensive attack at the fire wall. This building consisted of several structures, but was all tied together under one roof. The

length of the building that was involved in fire was approximately 900 feet, some of it three stories high, and measured approximately 300 feet across in width."

At this time, County Fire Marshal Drew Sharpe arrived on the scene, and Chief Newton and Drew Sharpe made a decision that the fire was too involved at this point to try and stop.

At this time the decision was made to move to the fire wall and all concentrated efforts would be put on the fire wall with as many large streams as possible. Chief David Ray from Haw River Fire Department was in charge of ground operations at the fire wall. Chief Eddie King from the Elon College Fire Department was in charge of roof operations at the fire wall. Chief Bradley in Staging was ordered to set all engines that he could possibly get together on the pond which was located approximately 500 feet downwind from the fire and lay lines up the street to the fire and relay pump. None of the fire stations on the scene at this particular fire had any large diameter hose. The largest hose that we had was three inch hose to use feeder lines to the engines. In all, five deluge guns and five 2.5 inch hand lines were put into operation at the fire wall.

Station One engine and tankers were ordered out of the main gate where the fire was in progress and redeployed to the fire wall to set up ready for the feeder lines and water coming from the pond. Other arriving engines were also staged in this area.

We had a total of four engines; one engine from Swepsonville, one engine from Haw River, one engine from Elon College, and one engine from Mebane staged just inside or right outside the gate to do relay pumping to try to stop the fire at the fire wall.

It was also decided at this time, due to exposure, that a drop tank operation from another direction was going to be needed to protect an exposure which was located just on top of the hill. The closest house to the fire, an old, two-story house, was approximately 200 yards away. A drop tank operation was set up utilizing engines and tankers coming from

another direction to take care of this problem at this house. Also, property on W. Main [S]treet, which was directly behind the mill, could possibly be involved in serious fire. There was also a fire exposure problem with another warehouse that was separated from the main fire building by a 20 foot alley.

There were three L.P. tanks that could possibly explode and rocket toward these houses. The decision was made at this time to get the Alamance County Sheriff's Department to evacuate W. Main [S]treet, which consists of approximately 22 homes. Sheriff Richard Frye, Alamance County Sheriff, was on the scene. He came to the command post and we conferred with Fire Marshal Drew Sharpe in charge of the evacuation procedures. Sheriff Frye and Fire Marshal Sharpe decided that the people would be evacuated to the Swepsonville Methodist Church. In a situation like this, you certainly have to do something to take care of the people's property. Plain clothes Sheriff Department personnel were placed in this area to make sure that no looting or anything like that took place.

Also the Sheriff's Department and Highway Patrol were set up to take care of traffic control. By this time, traffic was becoming an enormous problem in getting incoming fire vehicles to the scene. The Swepsonville Road was completely blocked to all traffic except emergency vehicles.

Fire Marshal Drew Sharpe was in charge of notifying all the various agencies such as the telephone company, power company, gas company and law enforcement. All these agencies

were contacted and did have a representative on the scene. We did have a gas line rupture inside the mill. We also had problems with the power company getting the power cut off. It seemed the only way to cut the power was to cut the power to the entire village. The representative from the power company at that particular time was reluctant to do that without orders from a higher authority.

We were advised that the traffic problem was becoming worse and incoming additional mutual aid from Graham, Mebane, and Burlington were having difficulty getting to the scene. Radio stations were contacted in the local area and were requested to air a request for people to please stay away and not come to the fire scene. It was estimated at this time that there were probably 2,500 spectators on the scene watching the blaze. By this time, the fire could be seen approximately 30 miles away in Durham, North Carolina and Danville, Virginia.

During the course of the fire several 55 gallon drums exploded high in the air. There were also two tow motor propane tanks rocketed into the air. By this time, all lines had been laid to the pond area and the struggle to stop the fire at the fire wall began.

It seemed as if it took an enormously long time to get the drafting situation at the pond going and water up to the fire. However, once the operation started, everything worked beautifully. Fire Chief Tom Santa from Eli Whitney Fire Department was assigned water supply operations officer.

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The Swepsonville Fire of 1989 ...continued from page 9

Approximately an hour and a half into the fire situation, tankers and engines started to become low on diesel fuel and gasoline. Fire Marshal Drew Sharpe, being the resource allocator, again took care of this problem. He contacted Payne Oil Company which sent a tanker and a driver down to the scene to keep the fire trucks on scene fueled. It should be emphasized that Payne Oil Company donated some thousand dollars worth of fuel that night, in addition to their truck and driver expenses.

Approximately two and a half hours into the fire, personnel were becoming exhausted from handling hose lines. We did have four injuries, all of the minor type. Two were transported to the hospital by the Alamance County Ambulance Service and the Alamance County Rescue Service, which stayed on the scene throughout the night. One fireman was released from the hospital after being examined. One fireman was kept in the hospital overnight for observation and released the next morning. The other two had minor cuts from a fall.

The fire was contained some five hours later at the fire wall. It had burned all existing material within, about 450,000 square feet area, again emphasizing that the area was approximately 300 feet across and 900 feet long with some parts of the building having two and three stories underneath.

During the rest of the night, the fire had to be watched and water continued to flow. We pumped approximately two million gallons of water from a pond. The pond level dropped approximately five feet during the course of the fire.

The awesome job of getting up the hose lines began at approximately 2 o'clock in the morning. At this time there was approximately 8,000 feet of three inch hose on the ground. Some of the lines were rolled by firefighters and a decision was made by command that additional fire departments would be requested to send five fresh personnel to the scene to help take care of this problem. All fire departments in Alamance County did respond to this situation and sent manpower to help us get up the hose. Engine companies at the pond continued

pumping water throughout the night and were finally released around 7:00 a.m. the next morning.

At approximately 3:00 a.m. the decision was made by Chief Newton that some of the fire departments could be released. There were numerous other calls to these fire departments during the course of the night. Swepsonville Fire Department had two other calls during this time. From Staging and Chief Bradley, this was handled in addition to other situations being taken care of as far as a quarter of a mile down the road. Hot spots and debris that had fallen on roof tops seemed to extinguish themselves, but had to

which is also extremely lethal. We did make the evacuation, or notification at least, of four houses in the direction the smoke was traveling. Also, we sent out a team to track the cloud of smoke to make sure it was dissipating and not settling further on over on the road. Water in the river, which was adjacent to this on the back side, was also checked by the water quality people to make sure that no contaminants were flowing into the river from the water that we were putting on the fire.

Also called to the scene that night, was State Bureau of Investigation Agent, Jerry Webster. Representing this department, he arrived at approximately 12:30

in conducting interviews with witnesses and physical evidence that was obtained at the fire scene.

Chief Newton stated, "If any lessons were to be learned from this fire, I think one would have to say that pre-fire planning is definitely an important factor regardless of the size of your fire department, whether it be volunteer or all paid, or whatever. I think that there would have been more firemen injured and possibly some killed if a plan had not been placed and implemented at the time it was implemented.

"Also I think that it is extremely important that the various agencies work together in their training exercises so that

the people can become familiar with people that making decisions from the Sheriff's Department, Highway Patrol, and power company. For example, the power company may send a technician out and he may not be able to make a decision to cut power to certain areas of a village.

Who do you need to talk to? All of this needs to be in a pre-fire plan.

"Also, one lesson we learned that did not necessarily involve the fire but we had to keep the road blocked. Firemen were put on scene for eight days cooling down and extinguishing hot spots. The main road was blocked for approximately five days and this had a sort of mushrooming effecting traffic problems. Most of all, I think it dealt with the school kids and the school buses being late as they had to be rerouted."

Chief Newton received many calls two days later wanting to know about the road situation, when they would be open. "I think the point here is that we need to coordinate with the schools and various agencies. What happened was buses all came late and the parents thought the kids had missed the buses and they were trying to get them to school and this type of thing."

Concludes Chief Newton: "You can never overstate the importance of pre-fire planning. The hard work in planning and training by all departments in Alamance County proved this point at the mill fire."

I think it is extremely important that various agencies work together in training exercises so that they can become familiar with the people making the decisions.

be checked out by firefighters. Fire departments from staging were sent to take care of this problem.

The next day, Thursday, October 5th, the fire was pretty much out. There were a lot of hot spots at the very back of the mill in the basement. Wool and various materials were stored in this area of the building. This area had not burned to the point where some of the rest of it had on top because it was in an area that used kind of like a bomb shelter. Fire did break through there on Friday, however, and we did have a problem with hydrogen cyanide gas. Parts per million were somewhere around 30 and the lethal dosage is 50 PPM.

The health department and state environmental people were called in to check this air flow at approximately 12 o'clock. Friday, October 6th smoke was extremely thick and actually thicker than it was during the fire that night from just smoldering wool and hydrogen cyanide gas. The call went out around 12 o'clock. Finally at 5:30 we got somebody after having to get some politicians involved up here to check the quality of the air. It was extremely high with hydrogen cyanide gas

in the morning. A decision was also made by Agent Webster, Fire Marshal Sharpe and Sheriff Frye that due to the size and loss of this fire, the Bureau of Alcohol, Tobacco, and Firearms (ATF) National Response Team would be called in to assist in the investigation.

Also, 48 Hours Phil Jones was going to arrive on Sunday to tape a program for the 48 Hours show which would be aired sometime later in October.

The ATF Arson Investigation Team arrived approximately 24 hours later. Special Doug Wenner was In charge of this team. A thorough investigation was made by this agency using various techniques. As of this date, the cause of this fire has not been determined.

Chief Newton would like to thank the State Bureau of Investigation and Agent Jerry Webster along with the ATF for their efforts in trying to determine the cause of this fire, but due to the fact that the heat was so intense and most of the physical evidence was burned, it seemed to be a very difficult and uphill task. These agents all used a very high degree of professionalism

