

Chemistry Lab Fire at University of Texas - 1996

As a relative newcomer to the Austin area, I have followed this story with interest. Here are some excerpts from the University of Texas at Austin newspaper regarding the Saturday, October 19 9:30 AM fire in a chemistry lab on campus:

The fire began in an organic-synthetic chemistry lab used by Stephen Martin, a professor of chemistry, three graduate students and two post-doctoral fellows who work with him. Martin said the fire began after Matthew Marx, a postdoctoral fellow, tried to dispose of sodium metal, a hazardous material that can spark fires when exposed to water. Martin said Marx followed safety procedures by exposing the metal to alcohol to dispose of it. He added that Marx was unaware of the presence of a tiny amount of residual metal when he began to pour the material down the sink. "He was disposing of what he thought was a completely safe material when some residual metal came into contact with water," Martin said. "This contact is what produced what I am sure was a small, contained flame." The flame grew after Marx tried to remove a second container of acetone, a waste solvent, that was in the sink. Martin said the acetone container tapped against the side of the sink and broke, causing the original flame to grow. Martin described Marx as a competent and careful researcher. He said the accident arose from circumstances almost all professors have experienced and that Marx followed safety procedures before and after the fire.

Ed Sharpe, vice president for administration and public affairs, said University administrators may meet with Austin Fire Department officials to discuss whether additional safety procedures should be adopted in the building. "The University and the Fire Department have been working on Welch Hall safety training for some time, but if additional things need to be done, we are definitely open to them," Sharpe said. "There has always been a considerable focus on laboratory safety, and if safety measures need to be enhanced, they will be." While Professor Martin praised University efforts to address safety concerns, he said safety cannot be fully addressed without additional funds for laboratory renovation. He said it was unfortunate that media reports tended to blame students when they should be looking at the shortage of funds to address safety. "I know a lot of people on the outside don't want to hear this but the University is strapped for money," Martin said. "And it will take money being tossed into this to take care of these problems."

Besides the costs of reconstructing the lab and cleaning the smoke and water damage, Martin said the fire has resulted in a loss that cannot be assigned a monetary value. He said many research records kept in the lab were ruined as well as notes kept on current research. He said he was still assessing what types and how many records were destroyed during the fire. "I would probably characterize the lab as a total loss," Martin said. "There was a lot of archival material some stuff that goes back 15 to 20 years -- that was lost." But he added he was relieved that no one was injured in the fire, and he hoped people did not try to assign blame for something that was completely an accident. (end quote)

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* Completely an accident? More details on the fire and circumstances:

- The fire broke out on the fifth floor of Welch Hall, the >>>>chemistry building with 150 chemistry labs.

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- The researchers left the lab, shut the door, and called 911. Another student, getting off of an elevator, saw fire coming through the lab door and pulled the fire alarm.

- Students were still in the building unaware of what was occurring after the alarm was sounded, even some in other nearby laboratories.

- UT Austin's chemistry building has sustained 5 fires in the last 2 1/2 years, this last one being the largest.

- Three of the 5 fires at Welch Hall have resulted from "experiment mishaps," another from improperly disposed chemicals in the garbage.

- This was a six-alarm fire: half of Austin's on-duty firefighting force, 90 firefighters and 25 fire engines, spent 6 hours extinguishing the fire.

- The fire caused no injuries, but 40,000 square feet of the building were damaged, at an estimated cost of \$300,000.

- Although chemical inventories for the labs are kept electronically, the responding firefighters had no information on what chemicals were involved in the fire. Unlabeled containers and improperly stored flammable chemicals were encountered during the fire.

- In addition to other safety shortcomings, the Austin fire department primarily blamed poor housekeeping of chemicals for Saturday's fire.

- UT Austin is a state institution and is exempt from City of Austin fire codes and inspections. UT Austin is subject to state fire inspections, but those inspections may not be frequent or thorough enough since there are only 10 fire inspectors for the whole state.

- Welch Hall has two additions, the three sections having separate fire alarm systems. When the fire alarm was pulled on Saturday, it was only heard in one section of the building.

- All incoming students receive safety training at the beginning of each semester. Chemistry department graduate students are required to attend a one day orientation emphasizing safety, and receive additional departmental safety training, including how to extinguish chemical fires.

- As a result of a Wednesday meeting between university and city fire officials, the fire department has made the following suggestions:
 - *Install sprinkler systems.
 - *Provide fire extinguishers for every type of hazard.
 - *Install chemical storage cabinets and rooms on each floor appropriate for each type of chemical stored.
 - *Post chemical inventory on wall outside each lab.
 - *Maintain full-time, on-site emergency response team members who can contain spills during experiments.
 - *Segregate incompatible chemicals.
 - *Modify alarm systems to be heard throughout building.

- **Quotables** (the most interesting quotes seem to be from students, >maybe because they tend to be more candid and are a bit less cautious than the rest of us):

(Student on first floor during fire) "We heard a beeping noise, but it wasn't very alerting. Someone came in and told us there was a fire. Everyone was very calm because we didn't know it was that serious."

(A chemistry graduate student, who has taught chemistry labs)
"There is no gross negligence going on, just minimal stuff. You have to understand that there are risks associated with chemistry."

(A molecular biology senior) "The chemicals are pretty secure. You've got to expect that fires will happen when chemical reactions are going on all the time."

(Yet another student) "Five fires in 2 1/2 years is kind of low, taking into consideration there are chemical reactions going on all day, all the time. I'm surprised the building hasn't burned down by now."

(Austin Fire Chief Robin Paulsgrove) "The Fire Department cannot accept the suggestion that this grievous track record must be tolerated to support high-quality academic research." and "I made it clear that I do not want this process to degenerate into a series of committee meetings."