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## Kansas State Firefighters Association

- Dedicated to the Safety and Education of the Kansas Firefighters -

### Spontaneous combustion ignites mulch

By Adam Hutton  
Olathe Daily News - July 2, 2002  
Submitted by Kansas Press Clipping Service

Olathe Fire Department officers struggled Sunday night and Monday to decide how to deal with a fire that ignited spontaneously in an enormous mulch pile at the old city landfill.

The mulch pile at 127th Street and Edge Lane is more than 2 million square feet in volume. It came from debris collected in the city after January's ice storm left literally tons of tree branches in its wake.

The fire broke out Sunday afternoon, Battalion Chief Paul Willy said, and the department was still weighing its options Monday night.

Even though the first visible smoke didn't surface from the mulch until Sunday, Fire Marshal Kent Harris said the heat caused by decomposition that precipitated the fire likely started months ago when city crews started piling shredded tree limbs and brush in a relatively small area.

"It probably started off with the first few dump trucks that were dumped there," Harris speculated. "There were a lot of green limbs and a lot of moisture in the debris, which contributes to the heating process."

The fire marshal said immense built-up pressure and the natural heat emanating from decomposing mulch often touches off internal combustion.

He said that any kind of compressed organic material, including grass clippings and animal manure, is subject to internal spontaneous combustion.

Harris said the fire likely started after mulch in the center of the pile reached about 450 degrees, which is the temperature at which paper or cardboard combusts.

Smoke billowed from the heap Monday afternoon as city crews began to isolate the source of the heat and fire in the 80-foot tall pile. Mulch untouched by the blaze was being shifted away from the burning section of the pile to keep the fire from spreading.

Now, Harris and Willy said, the fire department and the city are doing all they can to contain the blaze by digging trenches in the pile and trying to reach the seat of the fire. Once the source is separated from the rest of the pile, the department has several options, Harris said.

"Right now what they are trying to do is break the pile up and recover what is still good," Harris said.

"Once we find the source of the heat, we'll be looking at a couple of options. We may try and accelerate the fire, so that we can burn it off quicker using an air curtain destructor, which is basically a large fan turned on the fire once the mulch has been pushed into a pit, which will bring up the pace of the burn.

"Also when we get to the seat of the fire we may decide to simply douse it with water."

Willy said the department also could locate the seat of the fire and spread it out before burying it with dirt in an attempt to smother the smoldering embers.

The battalion chief said there were distinct advantages and disadvantages to each method. In addition, even though it would cost the city some money to hire a contractor with experience in controlled burning, Willy said that might be the most effective way to handle the situation.