

LEPC CHRONICLE

Could New Tool Change the Response to Oil Fires?

By: David Luessen, McClatchy News on April 24, 2014

<http://www.emergencymgmt.com/safety/New-Tool-Change-Response-Oil-Fires.html>

An inventor working out of Medina, N.D., has applied for a patent and successfully test fired firefighting equipment he built in response to two catastrophic oil train derailments last year.

Darrell Graf, a former Medina police chief who has more than 40 years of experience as a firefighter and a firefighting instructor, said the July 6 derailment in Quebec that killed 47 people and the Dec. 30 derailment near Casselton, N.D., that sent a massive fireball into the sky and led to the evacuation of the city, were the catalyst behind the latest in his growing list of firefighting equipment he's developed.

Graf said he recognized that many fire departments are "grossly underequipped" when dealing with catastrophic oil and ethanol spills and fires. He developed the Foam Cannon 2000 and the Foam Cannon 4000 to combat that lack of resources.

"My first thoughts were after the one in Quebec, and I didn't do anything about it because that

was such a rare situation where about 70 cars crashed, and that's out of this world," Graf said. "But when the Casselton one hit, I woke up two nights later thinking, 'I have this information, this and this in my head, I used to build fire trucks by trade, why don't I put this together and make something out of it.'"

Continued on Page 4...

MARK YOUR CALENDAR

- Riverwatch is up and running
- Mass Rescue Exercise in Nome May 13-15
- Kodiak Crabfest May 22-27
- End of LEPC FY14 June 30
- LEPC grant applications for FY15 due May 30

Dear LEPCs,

The work you do for our great state is invaluable. I want to personally thank you for your dedication and hard work. The preparedness and involvement of so many communities during Alaska Shield highlighted how successful you have been in preparing your communities. Keep up the great work and let my staff at DHS&EM know how we can further support you.

- Mike O'Hare, Deputy Director, DHS&EM

LEPC SUPERSTARS

★ Valdez LEPC presented Dorothy Taylor with a Certificate of Appreciation for her hard work in preparing the community!

★ Congratulations and good luck to Jack Maker, the new LEPCA Treasurer!

★ Recognize your outstanding LEPC members here!



Is there someone you want to recognize? Send your message to Mariel Fonteyn at mariel.fonteyn@alaska.gov or 907-428-7024

LEPC AROUND THE STATE

- Copper River is working with UAF to develop preparedness material for school children and developing safety flyers for tourists this summer.
- Southern Southeast has formed an emergency communications working group to improve communication in areas of the island without TV and radio.
- Fairbanks has out-of-state vendors attending their annual preparedness expo this year.
- North Slope is working to rebuild membership under new leadership.
- Kenai has been working on outreach and reviewing the results of their recent Security and Vulnerability Assessment; they are working with community partners to solve the groundwater problems largely responsible for flooding last year.
- Mat-Su partnered with the Girl Scouts who built 100 emergency kits from donated items and gave the kits to local charities to distribute.
- Ketchikan is developing flood zone outreach to go with new warning sirens being installed in May.
- Kodiak recorded interviews to be aired locally on KTUU and printed in the newspaper; they were able to exercise their new EOP draft during Alaska Shield and identify areas for improvement.
- Nome assisted with preparedness and emergency planning for the Golovin-Nome Snowmachine Race.
- Anchorage is working with Access Alaska and the Governor's Council for Disabilities to develop preparedness videos for the functional needs community.
- Valdez successfully set up an Alternate Care Site to triage injured students from the school bus-semi truck collision in January.
- Sitka is partnering with local behavioral health groups to assist them in preparedness and help the city prepare to shelter those individuals.
- Skagway is looking into creating an Emergency and Disaster Preparedness Department.
- Northwest Arctic is visiting flood-prone communities in preparation of breakup.

*Schedule an informal potluck for
LEPC members and families to
improve morale.*

Leussen, David, Continued from Page 1:

Fire departments use a chemical foam called AR-AFFF 3x3 (Alcohol Resistant-Aqueous Film Forming Foam) that is diluted with water to respond to flammable chemical spills or fires. Also referred to as "light water," the foam floats to the surface of the fuel and cuts off the vapors. It was originally developed by the Navy to respond to jet crashes on aircraft carriers in the 1960s.

Graf said his Foam Cannon 2000 carries 2,000 gallons of foam and can shoot up to 300 feet at 2,000 gallons per minute, whereas a typical unit carries 20 to 50 gallons of foam and has a range of about 100 feet. The 2000 can dispense foam at 3 percent (97 percent water) for 30 minutes before running out.

The Foam Cannon 4000 shoots the same distance and has twice the capacity and would be more suitable to fight fires at refineries or larger railroad yards in the country, Graf said.

The 2000 model will weigh 28,000 pounds when fully loaded and the 4000 will tip the scales at 45,000 pounds. Both would have to be mounted on heavy duty industrial trucks.

Graf said it took him around 10 weeks and cost about \$150,000 to build the Foam Cannon prototype, which was built out of a 1991 Ford F-9000.

"I'm very, very content with the way it works," Graf said. "We tested it (April 13) and as cold and miserable as it was it worked like a champ; it worked so good. There are a couple of little design changes that I'm going to make for production models. ... Just some general little things that you think about and it's like, 'I could do this a little better or that a little better,'" adding some of those changes included reducing the amount of plumbing on the rig, and possibly making a cover and installing heaters all to prevent freezing.

Graf said he wanted to see one Foam Cannon 2000 in every North Dakota county, and the state should make funding available from the money that has been made from oil production for the \$210,000 devices when they become available.

"With all the ethanol it would be nice to have one in every county, and if there is a fire the next available unit in the nearest county should respond with their foam truck, so we just doubled the amount that they can use," Graf said.

Jamestown Rural Fire Department Chief Rick Woehl said the Foam Cannon would definitely be something that could be put to good use in the oil-producing counties in the state, but the only use he could predict for it in Stutsman County would be for a random train derailment or a fire at the Dakota Spirit AgEnergy ethanol plant being built near Spiritwood. However, he said the ethanol plant will have enough safety and fire infrastructure that the cannon might be overkill.

"I'd like to watch the thing perform to actually see the capabilities, but with what's going on out in the western part of the state (it) would be definitely useful out there," Woehl said. "It's possible that we would have a need for that, but it's new. New technology (should be) tried and proven before we'd want to jump into something like that."

Other equipment Graf has developed include the PEMNA firefighting monitor which clamps to a solid object and holds a fire hose and nozzle so a firefighter doesn't have to, a dump tank that rolls on top of a truck instead of hooking on the side, and the dumpster devil, a special hose nozzle specifically for fighting dumpster fires.

"There's been some off-the-wall stuff I've just kind of whipped up," he said.

... Continued at: <http://www.emergencymgmt.com/safety/New-Tool-Change-Response-Oil-Fires.html>

©2014 The Jamestown Sun (Jamestown, N.D.)