

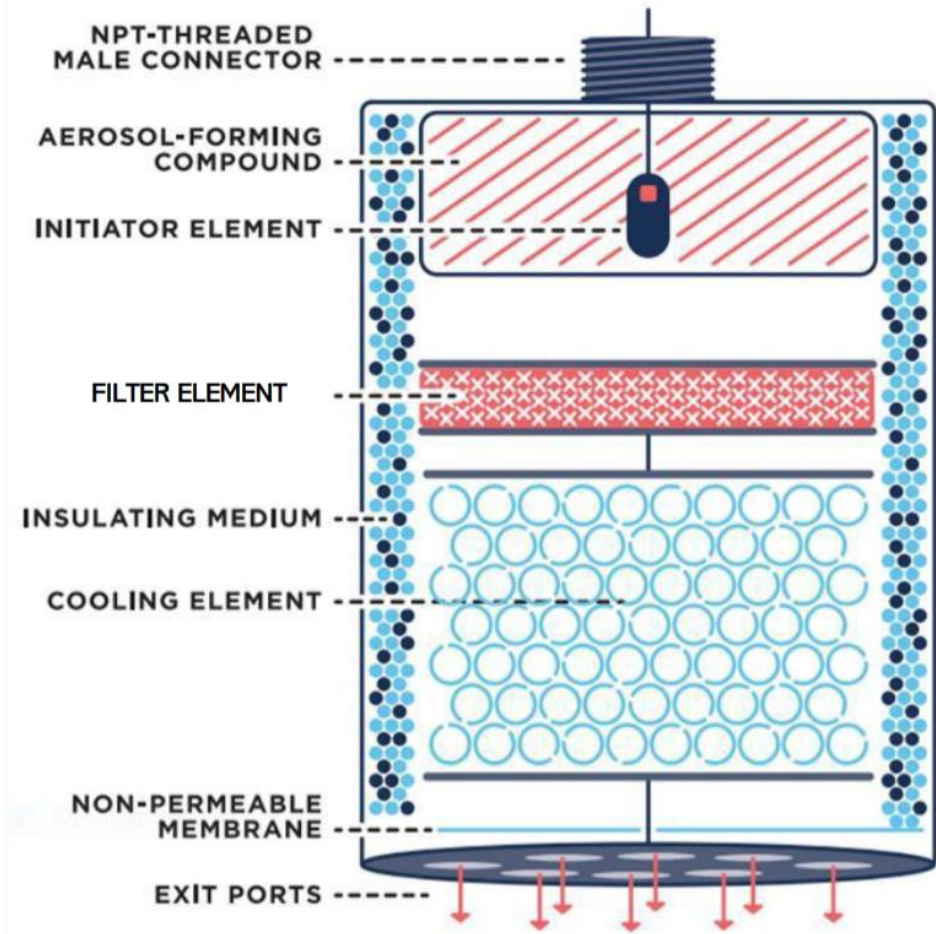
**UN/SCETDG/60/INF.45 (COSTHA)**

# UN Classification Fire Suppression Dispersion Devices (FSDD)

60th Session Palais des Nations



# How a Typical FSDD Operates



Upon activation, an aerosol of ultra-fine particles ( $\leq 2$  micron) is dispersed under low pressure ( $< 50$  psi/3.44 Bar)

# Typical FSDD During Operation and Fire Suppression



# Global Examples of FSDDs



Stat-X United States



FirePro Cyprus



Firecom  
Italy



GreenEx  
Netherlands



Dynameco  
Germany



Salgromatic Finland



Pyrogen  
Malaysia



DSPA  
Netherlands

Others: AFX Netherlands, ATK United States, XI'AN China,  
and many more being introduced Globally

# Global use of FSDD

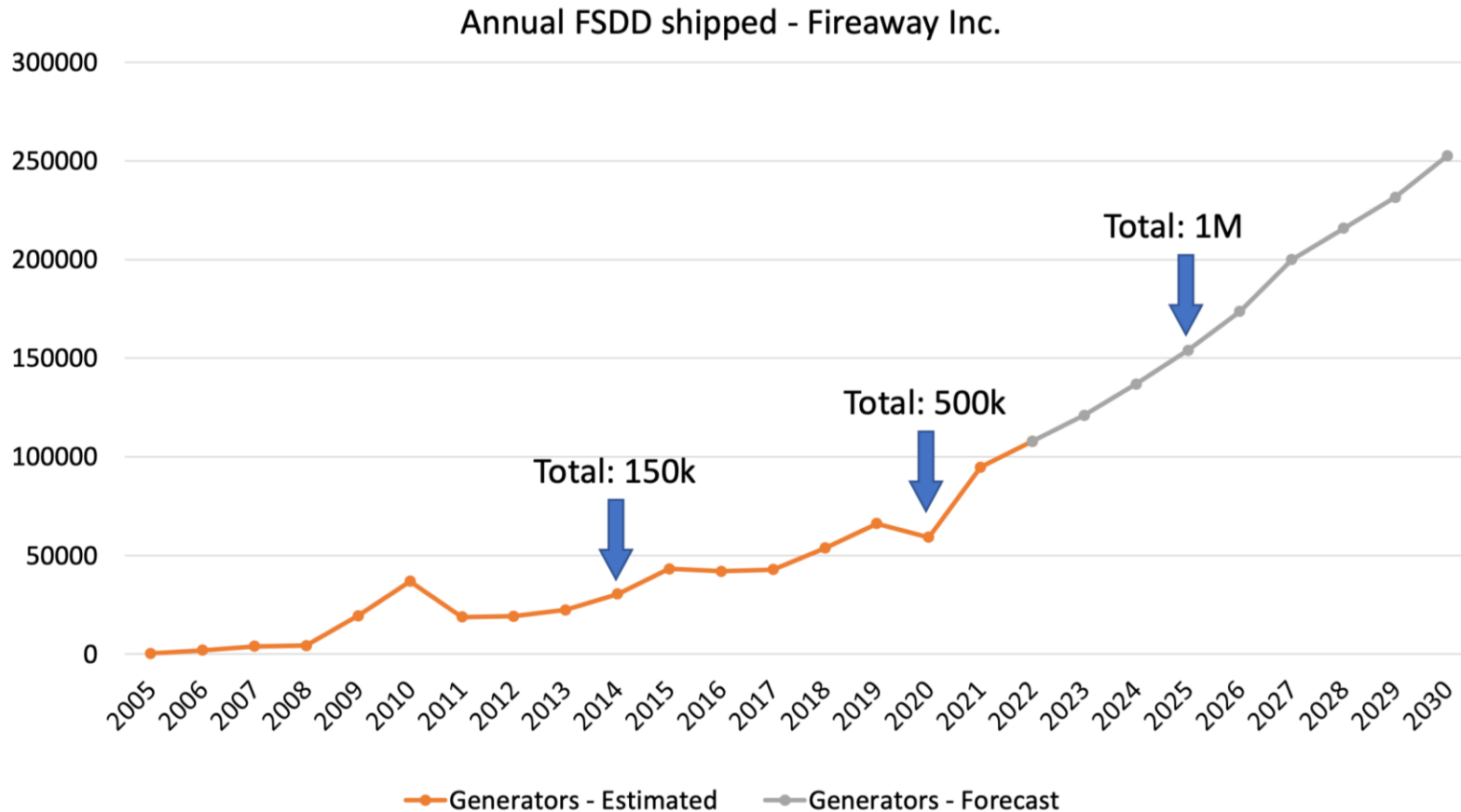


These devices are used globally protecting critical assets and are not use limited.

With restrictions being placed on the use of HFC agents, the use of FSDD solutions will continue to expand.



# One Example of the Accelerated Growth for a Specific FSDD

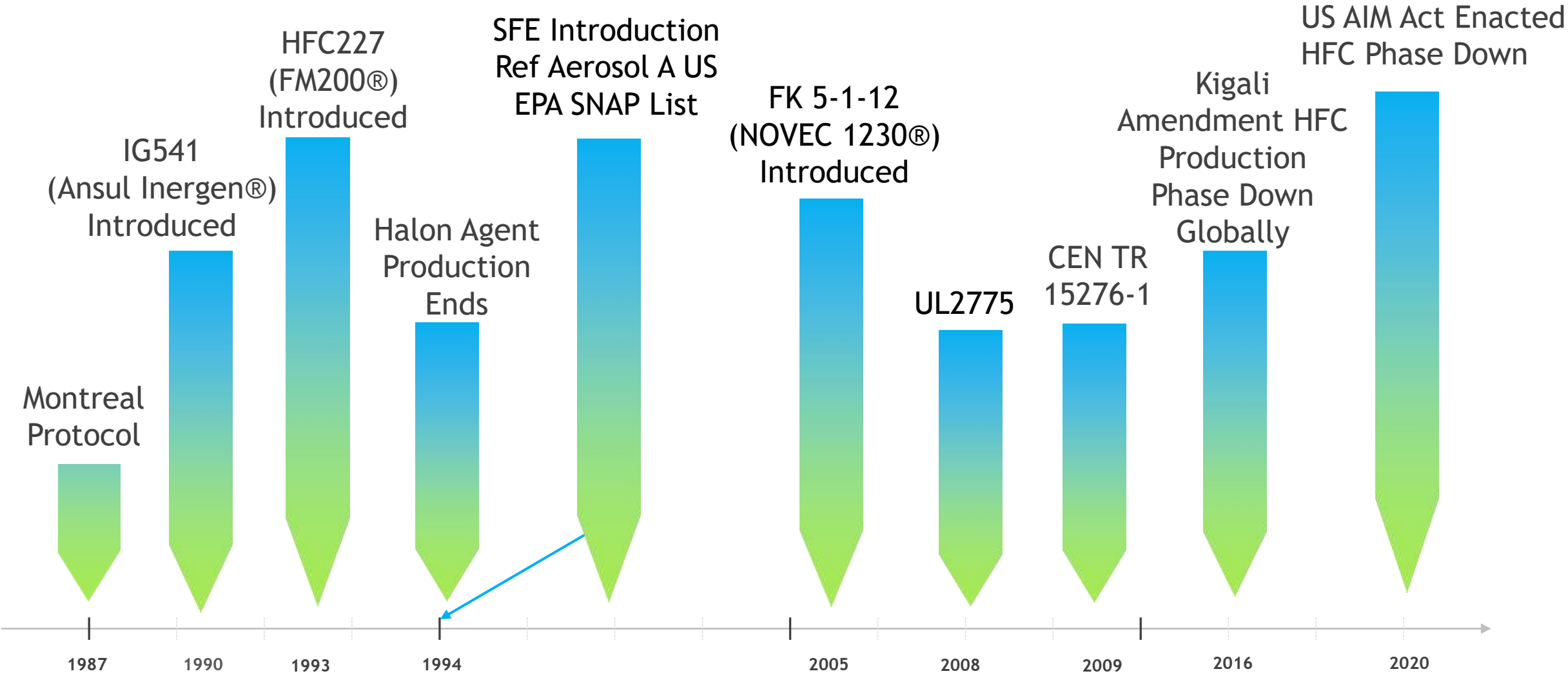


# Adoption of Global regulations require the need for Sustainable Fire Suppression Solutions

- Montreal Protocol September 1987
  - Paris Accord November 2016
  - United States AIM Act (American Innovation and Manufacturing Act) December 2020
  - Global Initiatives curbing use of PFAS (Foam Suppression Agents with potential reach into other agents)
- 
- US EPA SNAP List includes Acceptance and Inclusion of FSDDs for use in normally occupied and unoccupied spaces 2014
  - FSDDs are Green Fire Suppression Solutions and are needed to fill the gap with the regulated removal of Halon and HFC agents

Example – Several aerosol products have 0-ODP, 0-ATL and 0-GWP

# Path to Environmentally Friendly Fire Suppression Solutions



*Over the past few years there have been more regulations on Fire Suppression Agents. PFAS concerns are growing and will certainly play a role in future global restrictions.*



# Need for Sustainable Fire Suppression Solutions

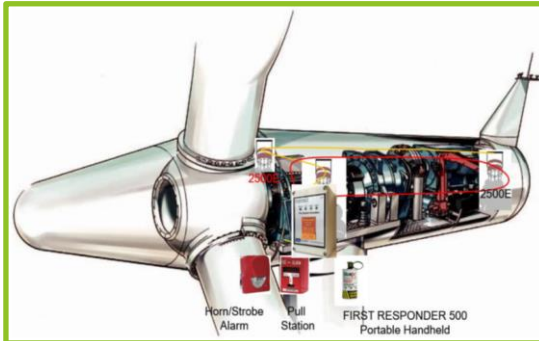
The expansion of Global Green Energy initiatives has led to the need for sustainable and innovative fire suppression solutions

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## Examples:

- FSDDs play an important role in multi-tier Mitigation Plans for Energy Storage System applications
- FSDDs are protecting Wind Turbine Generators
- Protecting critical operating equipment at nuclear power facilities
- Gas Turbine Generators- FSDDs are used in place of CO2 systems as safe and sustainable green solutions

# Applications currently being protected using FSDD (Power Generation)



Gas Turbine Generator Frame 5

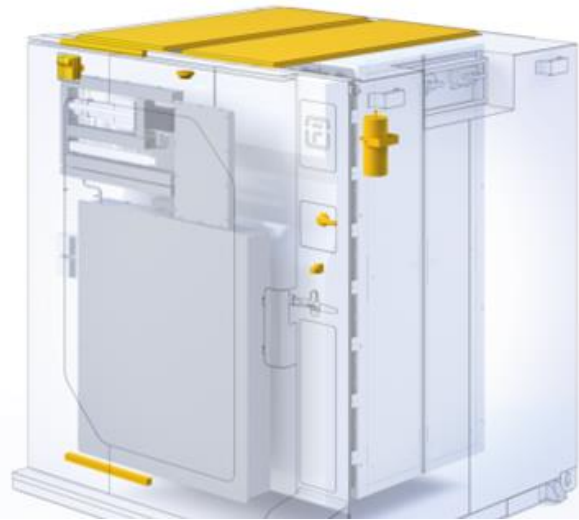
Wind Turbine Applications

Power Generation Transformer Room

# Applications currently being protected using FSDD (Energy Storage Systems)



Aerosol Solutions are being used as part of the Mitigation Plans for ESS and BESS applications globally.



Example

## Safety Features

Fast stop, fire detection and suppression system (solid aerosol), gas detection (carbon monoxide), deflagration panels, lockable disconnect switch, open door sensor, gas spring damper, sliding door lock



# Applications currently being protected using FSDD (Transportation)



Global Rail Systems

Public Transportation

# Applications currently being protected using FSDD (Military)



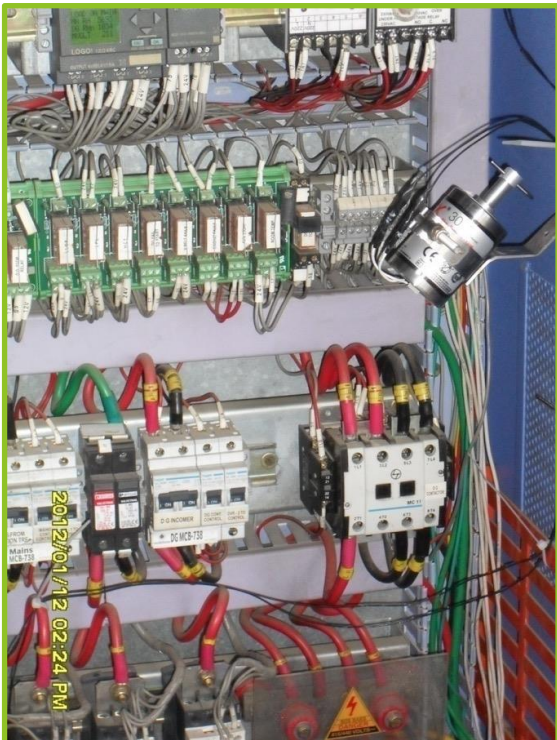
Military Armored Vehicles

# Applications currently being protected using FSDD (Marine)

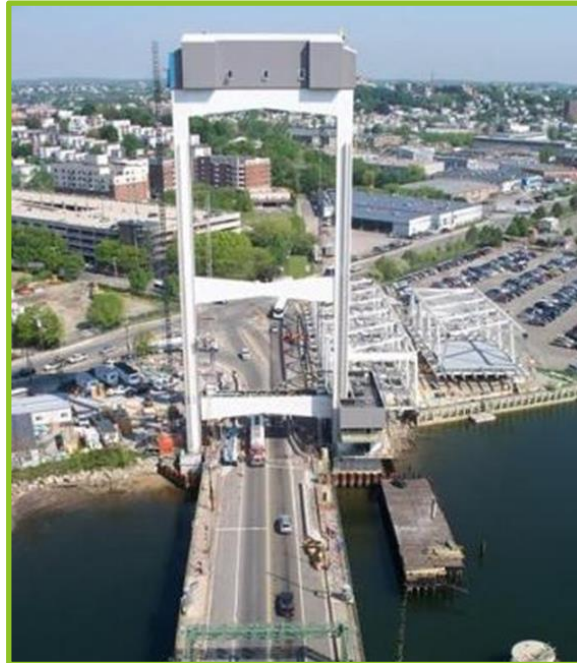




# Applications currently being protected using FSDD (Infrastructure)



Tele Com Cell Shelters



Lift Bridge Controls



Tunnel Boring Machines

# Global Standards

- Regulation of FSDDs when in use
- Typically for design, use, installation and maintenance of these solutions

## **Examples of standards and organizations requiring compliance:**

- NFPA (National Fire Protection Association) – NFPA2010
- IBC (International Building Code)
- IFC (International Fire Code)
- EN Standards- EN15276-01
- ActivFire Cisro (Australia)
- Marine (MCA, ABS, IMO, RINA, BV and many more)
- US EPA SNAP list – specifying use in occupied and/or unoccupied areas

# Property and Life Saving Successes When Using FSDDs

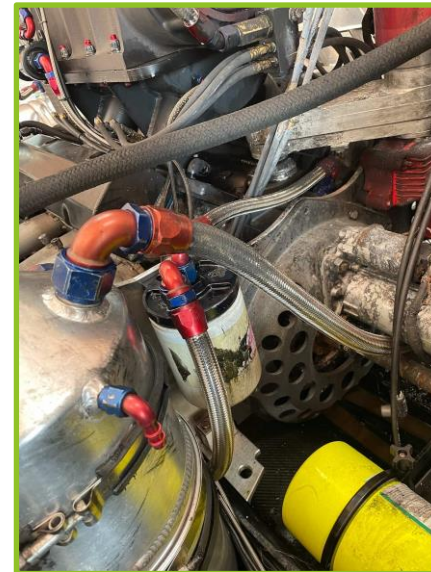
These are published articles that involve the use of Stat-X products. I can discuss these in detail as they are the products my Company Fireaway Inc. manufactures.



## Stat-X® Fire Suppression is a good influence on BAD INFLUENCE!

*"Just a short story regarding the onboard Stat-X® condensed aerosol fire suppression system you installed on May 25, 2021.*

As you are aware, we have been involved in powerboat racing since 2002. Our current boat, BAD Influence, is now running a blown alcohol engine fueled by methanol. After some recent incidents with other boats in this field on which they had major damage from onboard fires and were not running any fire extinguishing systems and seeing the damage this fire caused, we took the steps to ensure that in the event of a fire we had the best chance of survival and minimize damage to the boat.



# Stat-X First Responder® Deployed – “It could have been a million times worse!” Two Forest Lake Girls Escaped Serious Fire

Fire Chief Alan Newman learned of the Stat-X First Responder® at a demonstration he participated in Lake Elmo, Minnesota. This demo covered the proper use, deployment, and what to expect of the Stat-X First Responder tool, which is manufactured by Fireaway Inc. located in Minnetonka, Minnesota.

When Chief Newman became chief of the Forest Lake Fire Department located just north of the Twin Cities in Minnesota he acted. He decided to purchase 3 carry cases complete with two Stat-X First Responders each. These equipped the chiefs’ vehicles. Now, they have also equipped the first “two out” engines. These two engines can deploy the units if the early-stage fire event is vent limited while the rest of the team deploys all of the equipment that is necessary for the fire attack.

The Forest Lake Fire Department has been using the Stat-X First Responder since 2018! Chief Alan Newman has the department well trained on the products’ use and deployment.

In their most recent success story, the Chief explained that based on scene response times, it was 6-8 minutes from the time of Stat-X First Responder deployment to the time of the fire being extinguished with minimal water using the Stat-X First Responder device. This tool generally reduces the amount of water needed to extinguish the fire, which directly relates to less damage.

Two girls in Forest Lake escaped serious injury on Friday night after a fire broke out in the kitchen of their townhouse.  
(Courtesy of Tameka Neal)

# Stat-X First Responder Saves the Two Occupants

*Jan 15, 2018*

The Fire Department of the Township of Tay, Ontario (Canada) had a fire in which the Stat-X First Responder product was used.

The deployment involved a house fire and the Deputy Chief was first on scene. The fire was in a two story house and two people were trapped upstairs. He quickly deployed two Stat-X First Responder units and that knocked down the fire enough to extricate the people from the burning building and get them out. The fire department arrived within minutes and was able to extinguish the fire.

The Chief is very pleased he bought the Stat-X First Responder product and will continue to purchase them as he needs them. He credits the Stat-X First Responder with saving the lives of the two occupants.





## Stat-X First Responder® Suppresses the Fire and Limits the Damage

Jun 07, 2018

The Stat-X First Responder® makes a significant difference in the outcome of this home fire by suppressing the fire and limiting the damage. "This picture is from the home fire..."

*Jun 07, 2018*

*The Stat-X First Responder® makes a significant difference in the outcome of this home fire by suppressing the fire and limiting the damage. "This picture is from the home fire yesterday. We used two units of a new product, called Stat-X First Responders, that we are carrying in our command vehicles. Both of them were deployed through the window. The first one was dropped behind the appliance and the second was thrown farther inside the room. It helped control the fire until the fire truck arrived. These portable fire suppression devices did a great job yesterday and so did our crew. As you can see from the picture, the papers above the dryer are barely charred. The homeowner's son helped minimize the damage in the rest of the home by shutting the door from the kitchen into the mud/laundry room. This helped contain most of the smoke to that room and the garage. The family was able to stay in the home*

James Van Eyll

Fire Chief

Long Lake Fire Department

# There is a definite need to consider a New Entry for these suppression devices

- ▶ The current entry “Class 9 Safety Device” does not adequately describe these devices.
- ▶ We suggest a new description that better describes the device would benefit all parties.
- ▶ Example “Class 9 Fire Suppression Dispersing Device”
- ▶ The following pages are examples of either Self Declared classifications or classifications issued by Authorities Having Jurisdiction

Product Name	COO	Shipping Class	Transportation Mode	Reg Body	Source	
Stat-X	USA	Class 9	Rail	US DOT CFR49 and BAM	SDS	US DOT SP 20600
		Class 9	Cargo Vessel	US DOT CFR49 and BAM	SDS	4th Edition
		Class 9	Highway	US DOT CFR49 and BAM	SDS	
		Class 9	Cargo Air	US DOT CFR49 and BAM	SDS	
		Class 1.4s	Passenger Air	US DOT CFR49 and BAM	SDS	
		Class 9	Rail, Cargo Vessel,	BAM	SDS	D/BAM1857/19
			Highway, Cargo Air,	ADR / RID / IMDG – Code		Special Provision 280
			Passenger Air	IATA-DGR		Special Provision A115
				ICAO-TI		
FirePro	Cyprus	Class 1.4s	Rail	US DOT CFR49	SDS	Bulletin of Change
		Class 1.4s	Cargo Vessel	US DOT CFR49	SDS	From Class 9 to 1.4s
		Class 1.4s	Highway	US DOT CFR49	SDS	by the US DOT
		Class 1.4s	Cargo Air	US DOT CFR49	SDS	CFR49 Dec 2020
		Class 1.4s	Passenger Air	US DOT CFR49	SDS	
		Class 9	All Modes of Transport	IATA and IMDG	SDS	

Product Name	COO	Shipping Class	Transportation Mode	Reg Body	Source	
FireCom	Italy	Unclassed	All Modes of Transport	Claim- Can be shipped without restrictions	DIOM	
GreenEx	Netherlands	Class 5.1	All Modes of Transport	Self Declaration	SDS	
Dynameco	Germany	Class 9	Highway	ADR/RID	SDS	Special Provision 280
		Class 9	Inland Water	AND/ADNR	SDS	
		Class 9	Sea Transport	IMDG-Code/GGVSee	SDS	
		Class 9	Air Transport	ICAO-TI and IATA-DGR	SDS	Special Provision A115
Pyrogen	Malaysia	Class 4.1	All Modes of Transport		SDS	
Salgromatic	Finland	Unclassed	All Modes of Transport	Claim to not be a DG Self Declaration	SDS	

Product Name	COO	Shipping Class	Transportation Mode	Reg Body	Source	
DSPA	Netherlands	Unclassed	All Modes of Transport	Claim to not be a DG by Authorized Body	SDS	
AFX	Netherlands	UA		No information found		
XI'AN Westpeace	China	UA		No information found		
ATK	USA	UA		No information found		

Note: this list only includes examples of selected FSDDs. There are others without publicly available information and new products enter the market annually.



## Questions?

For further information please contact:

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[eruggles@statx.com](mailto:eruggles@statx.com)