


# INFORMATION COLLECTION: Particles in Aqueous Film Forming Foam (AFFF) Tank on Aircraft Rescue Fire Fighting (ARFF) Vehicles

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## FAA Survey: Particles in Aqueous Film Forming Foam (AFFF) in ARFF Vehicles

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Thank you for participating in our survey. Your feedback is important.

We have learned that at least four airport Aircraft Rescue and Firefighting (ARFF) departments have found crystallized particulates in the AFFF tank of their ARFF vehicles. These crystals have not yet been found to affect the firefighting capabilities of the AFFF, but the crystallization might restrict the foam proportioning system and alter foam production or nozzle discharge.

As discussed in FAA CertAlert 16-XX, Particles in Aqueous Film Forming Foam (AFFF) on Aircraft Rescue Fire Fighting Vehicles, we recommend that all ARFF departments at FAA certificated airports inspect the foam tanks on all ARFF vehicles (and in any bulk storage tanks) and report the results (positive or negative) to us via this survey. If you find crystals in foam tanks or plumbing, please also follow the instructions in the CertAlert for collecting foam samples and shipping the samples to the FAA Technical Center for analysis.

The data provided as well as analysis of any crystals found in foam tanks will be shared with foam manufacturers to assist them in developing any necessary remedies.

\*Indicates required responses.

## Airport Demographics

### Airport Information

3-Letter Airport Identifier*	<input type="text"/>
Name of Airport	<input type="text"/>
State*	-- select state -- <input type="button" value="v"/>
ARFF Index	<input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E

### Contact Information for Person Completing This Survey

Name*	<input type="text"/>
Rank or Title	<input type="text"/>
Department	<input type="text"/>
Email*	<input type="text"/>
Telephone Number*	<input type="text"/>

## General Questions

1. How many ARFF vehicles with foam tanks are in your Department's fleet:

2. Are all ARFF vehicles carrying foam garaged in an area where they are protected from freezing?

- Yes  
 No  
 Yes, but they may have frozen at some time

3. How many bulk foam storage tanks does your Department have?

4. Are all bulk foam storage tanks protected from freezing?

- Yes  
 No  
 Yes, but they may have frozen at some time

5. How does your airport purchase foam concentrate? (select all that apply)

- 5 gallon pails  
 55 gallon drums  
 Totes  
 Bulk tank delivery

6. How does your airport store foam concentrate? (select all that apply)

- 5 gallon pails  
 55 gallon drums  
 Totes  
 Bulk tank delivery

## INFORMATION COLLECTION: Particles in Aqueous Film Forming Foam (AFFF) Tank on Aircraft Rescue Fire Fighting (ARFF) Vehicles

### AFFF Foam Concentrate

The following information will help us determine if any foam found to have crystals is specific to a certain manufacturer, batch, lot, percentage, or vintage. Please provide as much information as you can.

**Note:** Airport purchasing department may have records from foam deliveries showing batch numbers, dates of manufacturing, and lot numbers.

7. Please provide the following information for each type of AFFF concentrate currently on ARFF vehicles or in storage to be used in ARFF vehicles.

Foam Manufacturer	<input type="text"/>
Foam Brand	<input type="text"/>
Foam Percentage	<input type="radio"/> 3% <input type="radio"/> 6%
Batch Number(s)	<input type="text"/>
Lot Number(s)	<input type="text"/>
Year Manufactured	<input type="text"/>

### Mixed Foam Concentrates

Foam concentrates that meet Mil Spec (MIL-F-24385F) can be mixed. For analysis, however, we ask that you provide information about all foams, including those meeting the Mil Spec, that have been mixed.

8. Have you mixed foam concentrates together in ARFF vehicle foam tanks or in bulk foam storage tanks (different manufacturers, brands, batches, etc.)?

- Yes  
 No

### Mixed Foam Concentrates

9. Are any of the concentrates in use (or that may have, at some time, been mixed with those in use) UL 162 (a foam that could be purchased before the FAA began requiring Mil Spec foam, effective July 2006)?

- Yes  
 No

10. What foam concentrates were mixed together?

Foam 1:  Foam Percentage:  3%  6%

Foam 2:  Foam Percentage:  3%  6%

11. Were any of the tanks with mixed foam concentrates found to have crystals?

- Yes  
 No

12. If you answered "yes" to Question 11, please identify the impacted vehicles by call sign or identify the bulk storage tank.

### Vehicles Found to have Foam Crystals

13. Did you find foam crystals in any ARFF vehicle foam tanks or associated plumbing?

Yes

No

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### Vehicles Found to have Foam Crystals

14. For each vehicle where foam crystals were found in the tank or associated plumbing, please provide the following information. (If more than 3 vehicles were impacted, please use the comment section at the end to provide this information for the additional vehicles.)

<b>Vehicle Year:</b>	<input type="text"/>
<b>Vehicle Manufacturer:</b>	<input type="text"/>
<b>Vehicle Model:</b>	<input type="text"/>
<b>Vehicle Capacity:</b>	<input type="text"/>
<b>Vehicle Call Sign:</b>	<input type="text"/>
<b>Type of Proportioning System:</b>	<input type="text"/>
<b>Foam Percentage:</b>	<input type="radio"/> 3% <input type="radio"/> 6%
<b>Foam Manufacturer, Brand, Batch and Lot Numbers (provide as much information as is available)</b>	<input type="text"/>

**Add Another Vehicle**

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## Bulk Storage Tanks Found to have Foam Crystals

15. Did you find foam crystals in any bulk foam storage tanks or associated plumbing?

- Yes
- No
- NA

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16. For each bulk foam storage tank in which foam crystals were found, please provide the following information.

<b>Tank Capacity:</b>	<input type="text"/>
<b>Type of Construction:</b>	<input type="text"/>
<b>Type of Proportioning System:</b>	<input type="text"/>
<b>Foam Percentage:</b>	<input type="radio"/> 3% <input type="radio"/> 6%
<b>Foam Manufacturer, Brand, Batch and Lot Numbers</b>	<input type="text"/>
<b>Identifier for storage tank:</b>	<input type="text"/>
<b>Is the bulk storage tank in a climate-controlled area protected from freezing?</b>	<input type="radio"/> Yes <input type="radio"/> No
<b>Was foam from this tank used to top off or re-service ARFF vehicles?</b>	<input type="radio"/> Yes <input type="radio"/> No
<b>Were the ARFF vehicles topped off or re-serviced from this tank found to have foam crystals?</b>	<input type="radio"/> Yes <input type="radio"/> No
<b>If yes, identify by call sign vehicles that were topped off or re-serviced.</b>	<input type="text"/>

**Add Another Tank**

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## Comments

Please provide any comments or observations that you think may be helpful.

**Submit Survey**

## You Have Completed the Survey!

Thank you for completing our survey. We are grateful for your assistance.

**If you did not find crystals** during your inspections, please let us know if you find any in the future.

CONTACT LINK

**If you found crystals** in your vehicle foam tanks/plumbing or in bulk storage tanks, please follow the guidance in CertAlert 16-XX and send a small sample of crystal from each tank found to have crystals. Each sample should be individually wrapped and labelled.

Place each sample in a jar, seal, and label as follows:

Airport Name

Person Sending Sample

Vehicle Sample Was Taken From

Foam Manufacture, %, Batch and Lot Number

Wrap each jar in bubble wrap and ship the jars to:

Keith Bagot

FAA William J. Hughes Technical Center

Building 296, ANG-E261

Atlantic City International Airport

Atlantic City, NJ 08405