

**Federal Fire Working Group Meeting**  
**(Hosted by National Institute of Standards and Technology)**  
Federal Emergency Management Agency/U.S. Fire Administration  
16825 South Seton Avenue, Emmitsburg, Maryland 21727  
June 22, 2016 Time: 9:15 a.m. – 11:30 a.m.  
**Call in#: 1-888-603-9069, PIN#: 17658**

**ATTENDEES**

Chuck Whitmarsh  
Peter J. Collins  
Rik Khanna  
Patricia Adair  
Sharon Steele  
Ross Mowery (via phone)

**ORGANIZATIONS**

Navy  
DOJ/Federal Bureau of Prisons  
CPSC  
CPSC  
DOE  
EPA

**PRESENTERS**

Matt Cherry, U.S. Forest Service  
Matt Mattfeldt, U.S. Forest Service  
Gabriel Taylor, NRC  
Arthur Lee, CPSC  
Nelson Bryner, NIST

**USFA ATTENDEES**

Dr. Denis Onieal (via phone)	Deputy Administrator, U.S. Fire Administration
Alex Furr (via phone)	Director, National Fire Programs Division/USFA
Sandy Facinoli	Chief, Prevention & Information Branch, National Fire Programs Division/USFA
Ken Farmer	Chief, Education, Training & Partnerships Section, National Fire Academy
Brad Pabody	Chief, National Fire Data Center National Fire Programs Division/USFA
Larry McKenna	Fire Program Specialist, National Fire Data Center/National Fire Programs Division /USFA
Rebecca Ryan	Fire Program Specialist, Prevention & Information Branch, National Fire Programs Division /USFA

**Opening**

On behalf of Ernest Mitchell, USFA Fire Administrator, Dr. Denis Onieal, Deputy U. S. Fire Administrator, welcomed all to the meeting and expressed his interest and appreciation to the members for their participation in this group. Dr. Onieal mentioned

Larry McKenna, USFA, and his work with sprinkler systems in FEMA housing units used in disaster response. Dr. Onieal also mentioned we are in the vetting/final stages of hiring a National Fire Academy Superintendent. He also mentioned that Administrator Mitchell will be attending the National Association of State Fire Marshals (NASFM) meeting in Albuquerque, NM in July. Dr. Onieal advised that the National Professional Development Symposium will begin on Sunday, June 27 at USFA/NFA and conclude on Thursday, June 30. The Symposium attendees represent higher education, training, and fire prevention personnel.

Roll Call was taken followed by the first of several presentations.

The following presentations were provided:

**Matt Cherry and Matt Mattfeldt**  
**Emergency Management Specialists**  
**U. S. Forest Service**  
**Presentation:** *Outlook for the 2016 Fire Season*

Mike Cherry began the presentation by mentioning that record temperatures in AZ and other western states were in progress. Although fires occur all over the United States, some regions are more prone to fires than others. As an example, the Southwest has above average potential for fires due to their warmer temperature regime and drier climate. It was mentioned that record temperatures in AZ and other western states were in progress. Mike also mentioned that the Hawaiian Islands show above normal and increasing to above normal for the June through September timeframe. While the monsoon season is starting to bring moisture to the southwest and predicted to return to normal, western wildfire season is entering into above normal.

A variety of models were displayed which support predictions for the country. Drought, temperature, precipitation, and climate were discussed. Modeling and predictions displayed were for large scale; local areas would need to consider site specific influences such as topography, fuels and weather. Many of the national and regional products shown can be found at <http://www.predictiveservices.nifc.gov/predictive.htm>.

A question was asked regarding interagency coordination in the southwest and Mike Mattfeldt explained that fire co-operative agreements are in place with local, state, and other federal agencies to provide firefighting resources. There are local to national tiers of mobilization, or dispatch centers, that work together to bring in resources. These resources have limitations. As an example, civilian aviation is limited above 120°.

A question was asked about the use of social media to alert and share information. A discussion ensued about how fire agencies realize the potential of social media and are working on methods to share, and gain, quality information through this media. Mike

Cherry identified a new national initiative, **Wildfires Near Me**, which is an interactive app to inform the public (see link below).

A question was asked regarding the potential for terrorists to use wildfire ignitions to disrupt emergency services and threaten the public. It was noted that there has been much discussion and increased awareness about this, but there has not been any identified trends of incidents of significance. It was noted that many of the wildfires occur in less populated areas and may not be a favored target for terrorism.

Another question was regarding the cost of fires and that impact to the Forest Service (FS) budget. A discussion followed acknowledging that the FS uses its own funds to fight fires, that it does not have access to disaster relief funds. The rising costs expect to become more than 60% of the entire budget. This issue is a high priority issue for the FS and the Chief is working with legislators to reach a solution.

Further discussion ensued regarding wildfire research and NIST. It was mentioned that there was a new federal fire working group with the intent to share science and technology. Nelson Bryner, NIST, and Mike Cherry discussed a few groups under various White House Interagency Policy Committees (see links below).

In terms of Preparedness, Mike highlighted the FS/BLM Federal resources as follows:

- 14,500 firefighters (approx. 28,100 employees)
- 87 Type 1 Interagency Hotshot Crews
- 350 Type 2 Crews
- 1,617 Engines
- 465 Smokejumpers

A day after the meeting, Mike Cherry provided additional information which supports discussion on a few topics that were mentioned:

The subcommittee discussion is clarified as the Office of Science and Technology Policy (OSTP, <https://www.whitehouse.gov/administration/eop/ostp>), National Science and Technology Council (NSTC, <https://www.whitehouse.gov/administration/eop/ostp/nstc>), Subcommittee on Environment, National Resources, and Sustainability (CENRS, <https://www.whitehouse.gov/administration/eop/ostp/nstc/committees/cenrs>), Subcommittee on Disaster Reduction (SDR, <http://www.sdr.gov/>). The SDR established the Wildland Fire Science Technology Task Force. The Task Force Final Report (<http://www.sdr.gov/docs/SDR%20Wildfire%20S&T%20Task%20Force%20Final%20Report%20FINAL%202015-1109.pdf>, November 2015) recommended a standing Federal Science Coordination Council which met for the first time on Wednesday, June 8. It is co-chaired by the USDA Forest Service and the DOI Office of Wildland Fire.

**Wildfires Near Me** ( <https://www.wildfiresnearme.wfmrda.com/> ) is the App that provides alerts when fires are reported near chosen locations. It interfaces with a variety

of social media, has interactive map layers, and more. **NOTE:** The **Wildfires Near Me** app is currently in beta testing through development by the USFS. They are currently seeking a host agency or organization to move this forward when development/testing is completed. The USFA is coordinating a demonstration during the mid-July timeframe of the app and will advise when it is set.

A link to the Missoula and San Dimas Technology and Development Centers was also provided: (<http://www.fs.fed.us/eng/techdev/index.htm> ).

**Gabriel J. Taylor, PE**  
**Sr. Fire Protection Engineer**  
**Office of Nuclear Regulatory Research**  
**U S. Nuclear Regulatory Commission**

**Presentation:** *Determining the Effectiveness, Limitations and Operator Response for Very Early Warning Fire Detection Systems in Nuclear Facilities*

Gabe Taylor began his presentation by providing background on incipient fire detection systems. In 2008, the U.S. Nuclear Regulatory Commission (NRC) issued a staff interim position documented in a National Fire Protection Association (NFPA) Standard 805 Frequently Asked Question (FAQ) 08-0046, “Incipient Fire Detection Systems.” This staff interim position provides guidance on the use of very early warning fire detection (VEWFD) systems and the associated fire probabilistic risk assessment (PRA) quantification for in-cabinet applications. At that time, there was limited test data and PRA experience available for those applications and as such a confirmatory research program was needed.

The research program provides an evaluation of VEWFD and conventional spot-type smoke detection system performance, operating experience, and fire PRA quantification for applications in NPPs where these systems are expected to detect fires in their incipient (pre-flaming) stage. The results of this report show there is a wide variance in performance for both spot-type and VEWFD systems. It has been shown that variables such as ventilation, fuel type, system application/design, and operator response play a significant role in the performance of these systems to detect low-energy fires.

In addition to developing empirical data, this program also performed a risk scoping study to evaluate the potential risk benefits from the use of these systems and to support an independent evaluation of the interim staff guidance documented in FAQ 08-0046 for NFPA 805. These results identified several assumptions made in the FAQ that could not be substantiated and as such this study has shown a lower benefit than the FAQ proposed. In addition to developing this risk quantification methodology, the NRC staff also developed a calculation spreadsheet tool to allow for quick and concise estimation of the non-suppression probability used in fire PRA.

Ultimately, this research has shown that (1) the state of knowledge regarding the duration of an incipient stage for electrical components found in NPPs, and the associated failure modes with regard to fire development of such components is low (uncertain and highly variable), (2) in cabinet smoke detection used to protect electrical enclosures provides the most effective and earliest notification of potential fire threats, (3) for area-wide applications the aspirated smoke detection systems when configured as VEWFD can potentially notify plant personnel of potential fire threats sooner than conventional spot-type smoke detection systems, and (4) plant personnel responsible for responding to smoke detection systems must be properly trained, follow plant procedures suitable for response to these systems, and ensure that every smoke detection system notification has adequate response time and necessary urgency. This research concludes with an updated approach to quantify the performance of these systems in Fire PRA for in-cabinet and area-wide applications in non-continuously occupied NPP areas.

**Arthur Lee**  
**Directorate for Engineering Sciences**  
**Div. of Electrical Engineering**  
**U. S. Consumer Products Safety Commission**  
**Presentation:** *Smoke and CO Alarm Survey*

Arthur Lee provided an update/overview of the following:

### **Smoke Alarm Performance Tests to the New UL 217 Performance Tests**

CPSC has contracted with NIST to conduct testing of 45 off-the-shelf presently available smoke alarms. The smoke alarms will be tested to the new UL 217 performance tests, i.e., smoldering PU foam, flaming PU foam, and nuisance resistance. The testing will determine how present smoke alarms perform to the UL changes and if smoke alarm messaging needs to be revised between now and 2020 (expected effective date). The data will also allow CPSC to verify the UL changes are significant enough that will cause an increase in the performance of smoke alarms. The testing and draft report is expected by the end of July, 2016.

### **Smoke and CO Alarm Survey**

CPSC conducted a national smoke alarm survey in 1994, approximately 25 years ago. The results of the survey allowed standards and codes to develop the path for performance and installation requirements for the last 25 years. CPSC has initiated a repeat of the 1994 study, but also to include CO alarms. The new smoke and CO alarm survey is a national in-home survey on the operational and usage of smoke and CO alarms. Interviewers (professional and fire services) will test smoke and CO alarms in consumers' homes. Nonfunctional smoke alarms will be collected and sent back to CPSC and NIST for further evaluation to determine the cause of failure to operate. The consumers will be interviewed to collect information on usage and maintenance. The

survey is expected to be a multiyear program that will extend into FY2018. The goal is to enter between 1,000 to 1,500 homes.

To support the survey, CPSC will have a public workshop to gather input from the public on the needs of the smoke and CO alarm survey. The expected time of the 1-day workshop will be in December 2016.

**Nelson Bryner, ChE**  
**Fire Research Division**  
**Engineering Laboratory**  
**National Institute of Standards and Technology**  
**Presentation:** *Update on Fire Research at NIST*

Nelson Bryner provided an update on two organizational groups associated with fire management issues. The first group, the First Responder Technology Coordinating Council (TCC), organized by the Inter Agency Board (IAB), is a group of Federal and research organizations that are committed to advancing and accelerating development of technologies for law enforcement, fire, and EMS. The TCC will support efforts to create a vision of the “responder of the future” that projects 10-20 years into the future that will inspire first responders, policy makers, and industry. The first task that TCC is working on is to identify Federal research projects, both within agencies and funded by grants, that are relevant to first responders. This committee intends to meet face-to-face quarterly and teleconference monthly. The current chair of TCC is John Delaney, a Captain with the Arlington (VA) Fire Department and he may be reached at: [Jdelan@arlingtonva.us](mailto:Jdelan@arlingtonva.us)

Secondly, the Department of Interior is beginning to form a new group, the Federal Fire Science Coordinating Council (FFSCC) for Federal research in Wildland Fires. The original draft vision was for “the FFSCC to become the trusted organization for issues and questions about Federal fire science in the US.” Nelson believes they plan to focus their efforts on the wildland side of fire and their revised vision should reflect that focus. They held a scoping meeting in June and plan to host an inaugural meeting in October. The contact person for FFSCC was Jim Douglas at DOI, but he is retiring this summer, so the new contact will be determined in the near future.

After the presentations were concluded Nelson provided a tour of NIST’s new fire protection lab.

\*\*No date has been scheduled for the next meeting; we will notify the FFWG members when a timeframe has been established.

