

**From:** Barrett, Harold  
**Sent:** Friday, June 29, 2012 12:29 PM  
**To:** Wertz, Trent  
**Cc:** Frumkin, Daniel; Klein, Alex; Moulton, Charles; Giitter, Joseph  
**Subject:** Photographic Example of the Use of New Technology as Part of NFPA 805 Transition  
**Attachments:** HNP Incipient Detection 2.JPG

Trent,

Attached is a photograph of one of the Very Early Warning Fire Detection Systems (VEWFDS) installed at the Harris Nuclear Plant during the transition to NFPA 805. These very sensitive fire detectors have been installed to monitor potential fire conditions inside risk significant electrical cabinets. This is the first known application of a VEWFDS monitoring conditions inside electrical cabinets in a nuclear power plant in this country. The Harris Fire PRA credited a risk reduction factor of approximately 100 (a scenario that originally had a risk of 1E-05/yr CDF would result in a risk of 1E-07/yr CDF with the VEWFDS).

The attached picture shows the detection module in the center, with the piping that connects the monitor to the individual electrical cabinets that are being monitored (there are four sensing lines that exit the top of the detection module and run through the overhead to the cabinets. Each of these pipes draw a small volume of air from the cabinet being monitored, and pass that air past the sensitive fire detector in the detection module.

Let me know if you have any questions.

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UNIVERSAL I/O  
MODULE FOR  
18FD-E080

INCIPIENT FIRE DETECTOR ALARM  
AND TROUBLE CIRCUIT  
18FD-E080

INCIPIENT FIRE DETECTOR 24 V  
POWER SUPPLY  
18FD-E080-099

**IN PROCESS  
WORK / STORAGE**

WORK PACKAGE # 29301  
LEAD Jimmy Atkins  
PON SUPV Carol Price II EXT.  
WORK GRP Matt Diaz EXT.  
DATE