



NAPSR R&D Priorities

PHMSA R&D FROUM

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NAPSR

National Association Of Pipeline Safety Representatives

- Represents 48 of the 50 States plus Puerto Rico & D.C.
- Performs inspections of virtually all distribution facilities to insure compliance with Part 192
- States have jurisdiction over approximately 99% of the 1.2 Million miles of distribution main in the country.
- Distribution has 3 times the mileage as transmission

NAPSR

- ▶ NAPSR is primarily a distribution driven organization.
- ▶ Some states do act as interstate agents and perform inspections of interstate pipelines within their respective states.
- ▶ The NAPSR R&D Committee has polled the membership and we have developed R&D priorities within the organization.

1. Ability to predict the future performance of distribution pipe materials.

- ▶ There are many pipe materials that are in use that are generally considered to be prone to failure.
- ▶ Little publicly available information on current pipe performance.
- ▶ Need for comprehensive listing of Manufacturer, resin, material etc.. Showing current performance.
- ▶ Suggest the testing of in service plastic piping to determine its material properties.
- ▶ Would help in assigning risk factors in DIMP

1. Ability to predict the future performance of distribution pipe materials.

- ▶ Has implications for an effective DIMP compliance in the area of threat assessment.
- ▶ Would be useful in prioritizing replacement programs.

2. Develop system to detect graphitization in cast iron pipe.

- ▶ The goal is to develop a system to detect graphitization of cast iron pipe in the field.
- ▶ Graphitized pipe is a major cause of cast iron pipe failure.
- ▶ This would aid in the implementation of DIMP

3. Permanent marking of pipeline components.

- ▶ Develop markings that can fit into a small space and be informative.
- ▶ Current code requires material be identifiable until installed.
- ▶ There would be benefits in marking the component to enable identifying it after installation. (DIMP)

4. Study the effects of hydrocarbon permeation on plastic pipe.

- ▶ Hydrocarbon permeation may impact the ability to properly heat fuse pipe
- ▶ There are no definitive studies that quantify the effects of hydrocarbon permeation on fused pipe.
- ▶ Pipe manufacturers are recommending the use of mechanical fittings as an alternative, which may create more problems in the future.

5. Develop the ability to monitor cast iron pipe for failure due to frost heave.

- ▶ Identify areas prone to frost damage
- ▶ Develop monitoring equipment capable of detecting pipe failure.
- ▶ Ultimately develop the ability to predict areas where pipe may fail.
- ▶ This also has DIMP implications.

6. Develop device for inside meter sets to continuously monitor for flammable gas concentrations and notify operator.

- ▶ Would most likely be used in conjunction with AMR device.
- ▶ Could significantly cut down on emergency response times.
- ▶ Would also aid in the reduction of reportable incidents.
- ▶ Stand alone device could also be developed

7. Study of EFV's

- ▶ The development of a device that can be used on commercial services with a wide variation in flow rates.
- ▶ Develop criteria for device selection (safety vs. reliability)
- ▶ Not an overly technical project.



The ultimate goal of R&D for Natural Gas
Distribution.....

To Prevent this

