BARRIERS TO THE USE OF INNOVATIVE DECOMMISSIONING TECHNOLOGIES, AND HOW TO OVERCOME THEM

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Idaho National Laboratory

INL

THE USE OF NEW AND INNOVATIVE TECHNOLOGIES FOR D&D IS NOT A NEW CONCEPT

▶ **Surplus Facilities Management Program (1978)**

▶ **D&D Integrated Demonstration Program (Decontamination and Decommissioning)**

▶ **D&D Focus Area (Deactivation and Decommissioning)**

▶ **D&D Dark Ages (Someone believed we didn't need any new technologies)**

▶ **D&D Multi Year Program (Community of Practice)**

▶ **All the above (except Dark Ages) identified needs, developed new technologies, demonstrated their performance, and deployed them at D&D sites**

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IN SPITE OF 30 YEARS OF PRACTICE, BARRIERS STILL EXIST TO THE USE OF NEW TECHNOLOGIES FOR D&D

▶ **Concept that D&D is a low-tech field**

▶ **New technologies are expensive**

▶ **Don't trust them to work**

▶ **Have had bad experiences with new technologies**

▶ **Don't believe we need any new technologies**

▶ **Unaware that better technologies exist**

IN SPITE OF 30 YEARS OF PRACTICE, BARRIERS STILL EXIST TO THE USE OF NEW TECHNOLOGIES FOR D&D (continued)

▶ Don't understand the real needs of the project

▶ Didn't include technologies in initial planning

▶ No time to investigate them

▶ No time to develop them

▶ No funding to develop/include them

▶ No incentive to use them (the more this thing costs, the more profit I make)

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IN SPITE OF 30 YEARS OF PRACTICE, BARRIERS STILL EXIST TO THE USE OF NEW TECHNOLOGIES FOR D&D (continued)

▶ **Human nature resists change**

▶ **We're experts, we know how to do this**

▶ **Incentives to reduce footprint as rapidly as possible**

▶ **No outside input or review at the planning stage**

▶ **Consequences of taking risk**

▶ **Lack of centralized D&D program at many sites, always new faces**

▶ **No longer a centralized location for new and innovative technology information**

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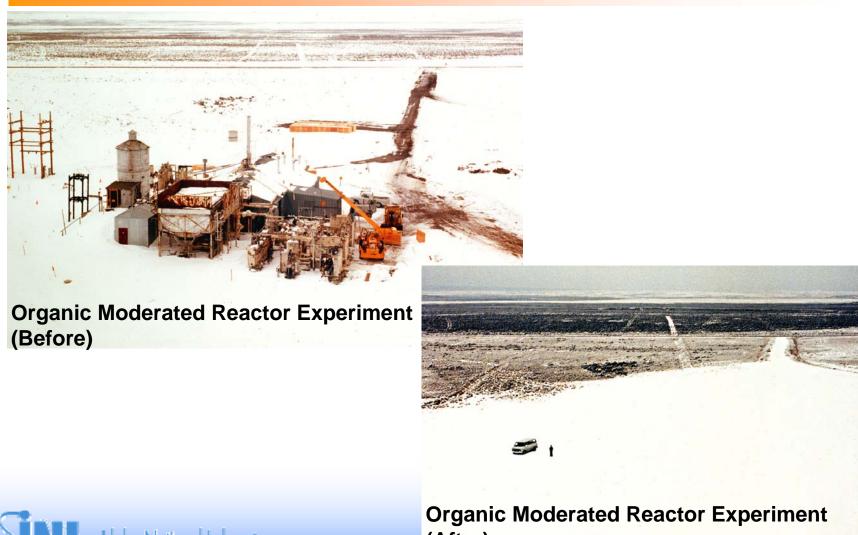
How Can We Overcome These Barriers?

► Better job of characterizing and identifying needs

► Communicate the success of past innovative technology uses (Show they will save money and time and improve safety)

► Use effective and innovative scouting for new technologies and approaches (look outside the nuclear industry)

► Provide expert input/guidance during the planning process

► Recognize good performance with new technologies

► Provide a clearinghouse for new technology information

► Fund the development of new technologies so they are available when needed by future projects

► Assist with the selection, demonstration, and personnel training for new technologies (Involve workers so they experience results)

► Solutions to these barriers are provided in the new D&D Multi Year Program Plan, implement and follow it!

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We Need To Go From Before To After In A Safe and Cost Effective Manner

Organic Moderated Reactor Experiment (Before)

Organic Moderated Reactor Experiment (After)

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We Just Don't Want To Do It Too Quickly!

Experimental Organic Cooled Reactor (EOCR)

PN99-0521-03-04

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We Need To Go From Before To After In A Safe and Cost Effective Manner

CONCLUSIONS

▶ **The D&D industry has over 30 years of experience in the use of innovative technologies, their use is not a new concept**

▶ **However, there are still barriers to their use**

▶ **These barriers can be overcome through implementation of the new D&D Multi Year Program Plan**

▶ **Safety and efficiency in the D&D industry will be a function of how well that plan is implemented**