Virtual Facility Tours as a Communication Tool - 11581

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ABSTRACT

In Spring 2010, AREVA produced a virtual tour of its La Hague recycling facility in the Normandy region of France. The virtual tour was aimed at promoting understanding of commercial recycling and how AREVA recycles nuclear fuel safely and efficiently. It also focused on creating consensus in support of nuclear growth in the U.S., and support for the option of recycling as part of an integrated used fuel management strategy.

The virtual tour included a full-motion video of the La Hague facility, taking the participants on a "walking tour" of the site, interspersed with a live Question & Answer session with AREVA executives. Consequently, participants could see plant activities as they were happening without traveling to the facility.

The tour was originally presented to press representatives and Congressional staffers. Additionally, there was a real time national computer link for other interested parties. Subsequent to the real-time virtual tour, videos of the tour have been provided to AREVA employees, Federal Groups, Congressional delegations, commercial partners and customers, national laboratories, universities, industry groups, and other stakeholders.

INTRODUCTION

This virtual tour, entitled "Nuclear Fuel Recycling: A Proven and Practical Solution," showed people in the U.S. that recycling used nuclear fuel is a solid answer to the

question of how best to manage nuclear fuel. AREVA and its employees not only have proven experience in recycling nuclear fuel, but we have proven that we can do it in a way that is efficient, economical, and environmentally friendly. We believe recycling offers a robust solution for the U.S. and this comes from one of the maxims of environmental stewardship – reduce, reuse, recycle. With AREVA's process, we reduce the amount of fresh uranium, reusing the energy-rich material contained in used fuel.

There are many powerful arguments for considering recycling nuclear fuel in the United States. Recycling nuclear fuel is a proven solution that makes waste management easier, conserves natural resources, is cost competitive and reduces proliferation concerns. This is an important consideration given that the volume of used fuel stored at America's nuclear plants (about 60,000 metric tons) already would fill the legislated capacity of the Yucca Mountain repository that was recently cancelled.

Recycling also conserves natural resources. By reusing material from used fuel, we reduce by 25 percent the amount of fresh uranium fuel that must be mined and enriched. If we recycled and reused the used fuel stored at our plant sites, it would provide enough fuel to power America's nuclear power plants for six years. The recycled material also would provide us with a domestic source of supply.

Today, we can recycle approximately 96 percent of the material in used fuel; the remaining 4 percent is sent for disposal. The recycling process reduces the amount of radioactive waste requiring disposal by a factor of at least four and reduces the toxicity of the waste by a factor of 10. The remaining waste is vitrified—embedded in glass logs that are extremely resistant to the forces of nature (proven to resist water for more than 300,000 years) – and stored in stainless steel canisters.

The virtual tour tool has enabled AREVA to reach a large number of stakeholders and educate them on the principles and advantages that recycling offers. It has provided AREVA with a valuable communications tool as part of a U.S. campaign to educate our stakeholders on the advantages of recycling used nuclear fuel – creating a positive image of recycling, breaking down preconceptions about this technology, and creating a forum for open-minded discussions on its benefits. Many stakeholders are not aware that AREVA has successfully recycled nuclear fuel for decades. Over the past 25 years, AREVA has safely and successfully recycled more than 23,000 metric tons of used fuel.

The impact of climate change and the renewed interest in nuclear energy have sparked a much needed debate on the current U.S. approach for managing used nuclear fuel. Although federal agencies have confirmed that used fuel can be stored effectively at U.S. plant sites for decades, recycling offers a safe, competitive, and more sustainable alternative. That is why nearly every nation with a significant nuclear power sector, with the exception of the U.S., has embraced recycling.

Clearly, the nuclear waste issue is one the main concerns that the public has with generating electricity with nuclear energy. But, we recycle paper, plastic, aluminum—why not nuclear materials? Recycling is indeed an ecological necessity in modern

societies. Why do some regard the notion of nuclear recycling with such suspicion? The answer is that France and other nuclear energy countries have proven that it can recycle safely and efficiently and have been doing so for decades. AREVA is justifiably proud of its facilities near Cherbourg and Avignon where much of this work takes place.

AREVA must engage many different entities to kick-start a recycling program in the U.S., but one key group is the nuclear energy industry itself. AREVA has a large technological and industrial lead in recycling, making it the preferred partner in this field worldwide. With the virtual tour, AREVA is working to create an understanding of the recycling technologies and services that we could provide to the U.S. nuclear industry. Those goals include:

Position AREVA as the leader in used nuclear fuel recycling
Enhance the image of the closed fuel cycle
Enhance understanding of proliferation/non-proliferation issues
Ensure understanding of the cost impact of recycling – that recycling is comparable to the once-through approach
Prove that responsible waste management through recycling is actually a plus for nuclear energy
Create social acceptance of recycling in the U.S.
Sustain the nuclear revival with a sustainable fuel cycle

Recycling is indeed a competitive solution compared to the once-through, direct disposal approach, according to a 2006 Boston Consulting Group study. While there are uncertainties regarding the ultimate costs of the once-through approach, we know the costs of recycling because of our industrial experience over the past decades. It is also a great for job creation: AREVA's recycling plants have been responsible for more than 10,000 direct and indirect high skilled jobs for decades. Growing demand from countries expanding their nuclear sectors, including China and India, could increase uranium prices to the point where recycling becomes an even more attractive option.

Critics often cite the issue of nuclear waste management as a reason for opposing nuclear energy's expansion. However, sound, economic solutions for managing our used nuclear fuel exist, and as our virtual tour clearly illustrates, we are pursuing them as a matter of course. U.S. used fuel is stored safely and securely at plant sites, and ultimately could be disposed at a dedicated repository, but this unique multimedia packages shows that recycling offers us a more sustainable approach. Through recycling, it points out we can conserve our natural resources, promote energy security, and reduce the volume and toxicity of byproducts that we must send for disposal. As we search for more sustainable approaches to meet our nation's energy needs, recycling is a natural choice.

In conclusion, the virtual tour is providing AREVA with a valuable communications tool as part of a U.S. campaign, to educate our stakeholders regarding the potential advantages of recycling used nuclear fuel in America based on our international experience – creating a positive image of recycling, avoiding preemptory statements, and creating a forum for open-minded discussions on its benefits.