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at the  
Site Decommissioning Management Plan (SDMP) Workshop  
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**SDMP SITES: THE VIEW FROM NRC**

INTRODUCTION

Good morning ladies and gentlemen. Thank you for joining us today at this important workshop. We are here to discuss a matter that is of great interest both to us, the Federal regulators, and you, the regulated community, State and local authorities, citizen groups, and the public.

When I say that the SDMP sites are of great interest to NRC, I'm sure that you in the audience who are responsible for those sites are concerned about what that means. There are few statements from a government regulatory agency more likely to cause anxiety in corporate management than one which says that the Federal Government has taken a strong interest in your firm. It's like getting a phone call from the IRS saying that they've taken an interest in your tax return, and would like you to stop by for a chat.

I hope that I can dispel some of this uncertainty in my comments today. If your plant or site is one of the 46 that have been assigned to NRC's Site Decommissioning Management Plan, our SDMP list, you already know that NRC believes that your site needs special attention. You have each had varying levels of contact with the NRC to discuss "decommissioning" of your sites, a term which may be confusing to some of you.

Whether you are a "veteran" NRC licensee, with a staff to handle your frequent contacts with the NRC, or if you are just beginning to understand the difference between a "regulation" and a "regulatory guide," I would conjecture that most of you still have some questions about exactly what membership in this elite SDMP club will mean to your bottom lines.

In this workshop, we will give you NRC's view of the SDMP. We will try to explain NRC's expectations of you, the SDMP site owners. Since the SDMP is new -- barely two years old -- we will also tell you about changes we anticipate in the program, in terms of cleanup criteria and new guidance that NRC is preparing. We will try to prepare you for the steps that you will have to complete in order for the NRC to "release" your site.

As you will hear in the presentations today, several aspects of this program are still pending or are in draft form. While we are pressing site owners to make progress in their decommissioning activities, at the same time the NRC is working in several directions to complete technical initiatives that will formalize "the rules of the game." In my talk, I will try to address concerns you might have about being caught up in this transitional period.

One of the purposes of this workshop is to improve communication about the process of site decommissioning -- not only between the NRC and site owners, but also among site owners who face similar technical problems. Many of you own sites contaminated with similar materials, such as depleted uranium or thorium slag. It is to your advantage to use this workshop as an opportunity to get to know each other and to share information on cleanup techniques and approaches.

We encourage your comments and suggestions in the development of technical criteria and other mechanisms to accomplish these site cleanups. Throughout the workshop we will be open to your questions. Furthermore, we hope that these sessions will alert you to issues on which you will want to provide formal comments to NRC as our preliminary standards and guidance are presented for public review. This program will work best if you participate in the development of its requirements.

Another objective of this meeting is to look for suggestions on how Federal and State regulators can work together in a smooth and timely fashion, since most remediations will also require State permits. We owe it to the licensees to reduce, as far as possible, the risk of their getting caught between a rock and a hard place.

#### HISTORY OF SDMP

Let me start off by giving you a brief history of the SDMP, and put the program in perspective with other site cleanup activities. The NRC, and its predecessor agency the Atomic Energy Commission, have terminated approximately 33,000 material licenses during the past four decades. Currently, over 350 NRC material licenses are terminated each year. Most of those sites do not involve large amounts of residual radioactive materials. However, certain sites with significant amounts of material have not been decommissioned properly, were decommissioned using cleanup criteria differing significantly from the current criteria, or have been engaged in the

decommissioning process for an extended time.

NRC responded to this situation by developing the Site Decommissioning Management Plan, or SDMP, in March 1990. The SDMP listed forty radioactively contaminated sites that were determined to require special attention from the staff before the applicable licenses could be terminated.

NRC established five criteria any one of which could make a site a candidate for the SDMP:

- ▶ Lack of a responsible party, both willing and able to provide for site decommissioning;
- ▶ Large amounts of contaminated soil or material in unused settling ponds or burial grounds, which may be difficult to dispose of;
- ▶ Contaminated buildings which have not been used for an extended period of time;
- ▶ Contamination or potential contamination of groundwater; or
- ▶ Cases where a license was terminated, but further decontamination may be needed.

In 1991, finding inadequate progress on this plan, the Commission asked the NRC staff to identify and propose resolutions for the technical and legal issues that were impeding progress in cleaning up the sites. The staff responded with the "Action Plan to Ensure Timely Cleanup of Site Decommissioning Management Plan Sites," which the Commission approved and published in the Federal Register in April 1992. That Action Plan describes the approach NRC will use to accelerate the cleanup of sites listed on the SDMP.

NRC had two primary objectives in publishing the Action Plan. First, NRC intended to facilitate more timely cleanup of the sites by formalizing the steps for decommissioning. Second, the NRC believed that all NRC licensees -- particularly those on the SDMP -- would benefit from a clearer understanding of the decommissioning process, its importance to licensees and the NRC, and the expectations of the Commission for timely and effective site cleanup.

#### SIGNIFICANCE OF THE SDMP

As a group, there is substantial variation among the SDMP sites in terms of potential radiological hazard, cleanup complexity, and potential cleanup cost. Some sites comprise hundreds of acres with potentially contaminated soil, whereas others have well defined smaller areas that will require cleanup, such as slag piles, settling ponds or buildings. Most of the sites on the list have

uranium or thorium contamination, but at a few sites other nuclides (strontium-90, cobalt-60) are the primary contaminants. Concentrations and quantities of wastes range widely from large volumes of relatively low concentrations (such as exists at one site where 500,000 cubic feet of soil are contaminated by low enriched uranium at 30 to 100 picoCuries/gram), to sites with hot spots registering at hundreds or even thousands of picoCuries/gram.

Despite the variation in the extent of cleanup required, however, SDMP sites share with other materials licensees the fundamental responsibility of timely and safe site remediation to ensure protection of public health and safety and the environment. For many SDMP sites, operations with NRC-licensed radioactive materials have ceased. For other sites, large inventories of wastes remain stockpiled or in settling ponds, posing a potential future risk for either airborne emissions or groundwater contamination. Of even more concern are the sites where no reliable inventory of radionuclides exists because of incomplete records.

#### TIMELINESS OF SITE DECOMMISSIONING

For a variety of reasons, many SDMP sites have delayed remediation of contaminated areas. Site cleanup -- whether of radioactive wastes, chemically hazardous wastes, or other wastes -- has historically been viewed as a low priority operation that generates no income and produces no product site restoration; it is rarely on a manager's priority list unless someone else, such as a government agency, puts it there.

Some of the current SDMP sites became subject to NRC regulation almost by accident. Their main business was processing of ores to produce specific metals, like zirconium, tantalum or niobium, or even ordinary scrap metal recovery, but the end products included concentrated quantities of naturally radioactive materials that required NRC licensing. Now, instead of an unsightly waste pile or sludge pond that would require only conventional restoration in the more distant future, these companies find themselves unexpectedly grappling with nuclear waste management and disposal questions, learning the hard way. When education becomes part of the decommissioning process, it too becomes a source of delay.

The tolerance level of the public and Congress for indefinite site remediation has changed markedly. The passage of the Resource Conservation and Recovery Act (RCRA) in 1976, and the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) in 1980 marked an era of growing public recognition of the need to clean up contaminated industrial sites. As we all know, further legislation and an extensive body of new waste regulations have ensued.

However, licensees of the NRC were generally not included in

this growing concern until relatively recently. Unlike many RCRA and Superfund sites, NRC's regulated sites were already licensed and regulated by the Federal government to work with radioactive materials. Although NRC licensees knew that they would eventually have to decontaminate their sites, there seemed to be no great urgency. And, even to date, the NRC has no regulation requiring completion of decommissioning within a certain timeframe after a facility ceases operation. As you will hear later in this workshop, we are moving to correct this oversight in our regulations.

Whatever the cause for indefinite cleanup delays in the past, the Commission has determined to set a new course. The Congress has now made it clear that prompt and thorough decommissioning of nuclear materials sites is an important public concern. The NRC has responded -- I believe effectively -- with the SDMP and the Action Plan, which are today's primary topics of discussion, among a host of other regulatory actions all directed toward improving the regulatory framework for decommissioning.

The NRC is now emphasizing its view that timely remediation of contaminated sites is a fundamental obligation of licensees. Safe and timely site cleanup is also an important factor in bolstering the public's confidence in the safe use of nuclear materials. The existence of the SDMP, and the Action Plan published earlier this year, should be an unambiguous signal to all that prompt cleanup of these sites is, and will continue to be, a very high priority for me and the NRC.

#### CLEANUP CRITERIA AND FINALITY

One of the stumbling blocks often cited in explaining the delays in site cleanup has been a lack of definition or clarity in the regulatory base for the decommissioning program. As you will learn in the course of today's workshop, several major efforts are underway within NRC to more clearly and unambiguously define the NRC's expectations.

Guidance is being developed on the conduct of verification surveys and site characterization. We are developing rules on the timeliness of cleanups, and on radiological criteria for site decommissioning. The public, and particularly the people in this room today, are invited and urged to participate fully in the development of these rules and guidelines. This process, however, will take time.

In the interim, existing NRC guidance, criteria and practices will apply to SDMP sites. These cleanup criteria will be applied on a site-specific basis with emphasis on keeping residual contamination levels As Low As Reasonably Achievable, or ALARA. The interim criteria that NRC will use are spelled out in the Action Plan.

When I mention using interim criteria, I know the question that arises for you: What if we decommission a site today to interim criteria, and the NRC then decides two years or four years later to establish stricter criteria and revisit my site? Let me address that important question now.

As described in the Action Plan, the NRC's decision to terminate a license will relieve the licensee from any further obligation to the NRC to conduct additional cleanup, as long as the licensee decommissioned the site in full accordance with an approved decommissioning plan. Therefore, if a licensee or responsible party cleaned up a site, or was in the process of cleaning up a site, under an NRC-approved decommissioning plan, the NRC will not require the licensee to conduct additional cleanup in response to any future NRC criteria or standards established after NRC approval of the plan.

An exception to this case would be made in the event that additional contamination is found, indicating a significant threat to public health and safety. In such a case, a requirement to conduct additional cleanup may be established.

#### DO IT RIGHT THE FIRST TIME

Particularly in light of the history of delays in the site remediation process, there may be a tendency among some of you to wait and see what the new criteria may be. Driving that may also be the economic reality that tomorrow's money is cheaper than today's. Some of you may also have some doubt about NRC's ability to enforce existing regulations in the case of decommissioning programs. After all, the threat of license revocation or suspension is meaningless to a licensee who is no longer operating and whose chief desire is to get out of the nuclear business as painlessly as possible.

However, for economic and other reasons, I sincerely believe that any unnecessary delay in decommissioning would be a mistake. First, nothing is getting cheaper, and that seems to be especially true of radioactive waste disposal. And NRC's regulatory authority is in no way diminished simply because a licensee has made the transition from "operational" mode to "decommissioning" mode. We fully expect that our licensees will fulfill their commitments and satisfy all NRC and license requirements. However, if we discover that this is not the case, we will certainly not hesitate to act. NRC is prepared to exercise its enforcement authorities to the fullest extent allowed under the law to ensure that decommissioning actions are conducted in a prompt and safe manner.

Also, experience speaks for itself. There are numerous examples of companies that mistakenly thought they could gain from delaying an inevitable cleanup. In addition to spending large amounts of funds on legal and consultant fees, some of these companies have

also realized significantly increased cleanup costs. Given current trends in radioactive waste management and disposal costs, any hopes for net savings achieved by delay, even on a present value basis, may very likely become regrets that the cleanup was not done promptly and thoroughly the first time.

Also, it seems to be very tempting to shave costs by doing a less-than-fully rigorous site characterization, site cleanup or final radiation survey. However, the NRC will follow up your work with its own verification survey teams. Experience has proven repeatedly that gaps or flaws found at the end of a decommissioning process are much more inconvenient and expensive to deal with after the fact than if they had been found and included the first time through the process.

#### FINAL REMARKS

I want to end my remarks on a positive note.

The NRC is deliberately moving ahead to give you, the regulated community, and all others who are concerned, a very clear picture of what we will require in site decommissioning. In the next few years, formal guidance and regulations will be promulgated to eliminate most of the guesswork in site decommissioning, at least in terms of NRC's expectations and criteria. We intend to make decommissioning a recognized, understandable, and predictable process.

However, there are no easy solutions to many existing site decommissioning problems. The issues are tough, and often controversial. They will frequently require heavy involvement of concerned public groups and individual citizens, as well as regulatory agencies other than the NRC.

However, I do urge you to work together, and with us, to seek workable and perhaps innovative solutions to the vexing problems of site decommissioning -- in developing and implementing cleanup criteria for radiological contamination that ensure that residual radiation levels are as low as reasonably achievable, and in finding a disposal solution for the large volumes of low-activity, long-lived wastes that must be dealt with in many site cleanups.

Let us work together now in seeking and implementing sound and safe solutions for cleaning up contaminated sites. I sincerely believe our best opportunity for success lies in working cooperatively to develop the most cost-effective decommissioning approaches for providing the necessary degree of public protection.

In summary, the best advice we have is to take site decommissioning very seriously, do it the right way the first time,

and do it as soon as you reasonably can.

Thank you for your attention, and I hope you find the balance of today's program to be both thought provoking and worthwhile. I will be happy to answer any questions at this time.