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**Statement of Arjun Makhijani  
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Remediating the nuclear weapons complex and managing the wastes from half-a-century of nuclear weapons production is the most expensive environmental project in US history. It is also one of the most technically complicated. We prepared [Containing the Cold War Mess](#) partly because of the failure of the Department of Energy (DOE) to produce a programmatic environmental impact statement (EIS) for environmental remediation (despite a legal commitment to do so) and partly because the \$31-million-dollar Waste Management EIS skirts the major issues.

We also felt a need to conduct some independent technical case studies of environmental management projects of the DOE, and correspondingly to propose specific approaches to solving those problems. Finally, the Focus on 2006 Plan, DOE's latest approach to the environmental management problem is, despite some positive features, so flawed and incomplete as to be unsalvageable. Given the lack of any workable approach to a program that is expected to cost well over \$200 billion, we decided to try and offer both an evaluation and some recommendations. Two cautions are in order. First, our study is not comprehensive -- the subject is far too vast and our resources too limited for that. Second, given the immense complexity of the subject, our recommendations must be seen as a starting point for a fresh national debate about a better approach rather than as a prescription for one.

There are two aspects to the job that faces DOE. First, short- and medium-term efforts need to be focused on reducing and, if possible, eliminating serious and urgent dangers. These include risks of fires and explosions in high-level waste tanks, and rapid migration of radionuclides into precious groundwater sources. Second, a plan for long-term waste management is needed to take care of the wastes from past operations and from remediation of the complex. These two aspects of the work need to be coordinated so that short-term actions do not jeopardize long-term efforts.

Unfortunately, a lack of coordination between waste management and urgent remediation tasks is one of DOE's many institutional problems. While the technical challenges are huge, we have concluded that institutional flaws are the main factor preventing the creation of sound remediation and waste management plans. DOE seems incapable of learning lessons from its many failures. It continues to rush into large projects without adequate preparatory work, grants

huge budget increases to contractors without engineering review, and repeats the same mistakes. For example, the estimate for processing about 10,000 cubic meters of radium-contaminated waste at Fernald has grown to about the same as the cost of the new terminal at National Airport. So far there is little to show for the project but a failed melter.

We have recommended some internal reforms to DOE which it should implement immediately. ([See recommendations.](#)) These include more thorough internal peer review and the creation of an external technical and financial review structure for large projects. DOE should also reinstate the Baseline Environmental Management Report, make it more comprehensive, and incorporate better project budget estimation procedures into its preparation. The Baseline Report was published for two years, and was the first detailed review of DOE's environmental management projects and sites. It was one among many important efforts that DOE has undertaken since 1989 to create a better understanding of the daunting task of containing the Cold War mess.

Despite the better understanding that we have of the nature of the problem, there is as yet no sound approach, much less a workable, comprehensive plan to address it. DOE has also opposed national clean-up standards, which are essential to creating a program that would protect the environment today and for future generations. DOE has wasted a lot of time. It has done a disservice to taxpayers and communities near its plants by spending \$40 billion over the last eight years without a sound plan or standards. It all too frequently resorts to a strategy of bury, cap, and forget, until the problem resurfaces more urgently and more expensively.

Our report makes many specific technical recommendations, including reclassification of wastes and creation of clean-up standards, but among the most important are those for institutional reform. Three things are crucial for a meaningful reorganization of the program. First, it must be more than putting a new nameplate on the same flawed operation. Second, there must be a set of stringent, national clean-up standards that are independently enforced. Third, there must be independent external peer review of major projects. We have spelled out some alternatives for institutional reform. Each has its own strengths and weaknesses.

One important weakness of all reform proposals we have examined is that reform may jeopardize funding of the program. That would be worse than the present muddle and it is one reason why many are reluctant to propose reform. The sites of the nuclear weapon complex cannot be abandoned as 'national sacrifice areas.' That would create unacceptable security, safety and environmental problems. For instance, there are many facilities where there is a risk of fires and explosions, or severe contamination of irreplaceable water resources. As to security issues, one need only note that there is a great deal of plutonium in the waste at many sites that could be recovered and wind up in a black market, were the waste not in secure facilities. These issues are far too dangerous and consequential to ignore. We have nonetheless recommended that presidential commission examine the institutional reform issue because too many projects that are very important to environmental protection are poorly conceived and implemented. But I do want to stress that no reform can work without assurance of adequate funding, oversight, and public accountability.

We have also come to the conclusion that DOE's "privatization" program is a poor choice for contracting one-of-kind projects, such as buried transuranic wastes or Hanford high-level waste

tanks. By privatizing Hanford tank wastes, DOE is repeating a major mistake it made with the Idaho Pit 9 project to recover and treat buried transuranic waste. ([Marc Fioravanti](#) and [Steve Hopkins](#) will provide you with more details of these projects.) DOE has taken a risky approach to Hanford tanks that has many of the same ingredients of failure that characterize past projects - only on a much larger scale. DOE's penchant has been to opportunistically pick and choose from advice offered to it and ignore inconvenient realities and uncomfortable suggestions and criticisms. The job facing the environmental management program is too huge and too important for such business-as-usual. We hope that the DOE will take this occasion of the publication of [Containing the Cold War Mess](#) to make the beginning it should have made years ago by preparing sound programmatic environmental impact statements.