



A secure storage facility for plutonium and HEU from dismantled weapons under construction at Mayak, financed by the U.S. Cooperative Threat Reduction program. The facility will provide a highly secure storage site, and is expected to be placed under international monitoring—but unless additional modules are built, it will not have the capacity to store all the material from Russia's dismantled warheads, and U.S.-Russian discussions of transparency for the facility have not yet reached agreement. Source: DOD

#### MAYAK STORAGE FACILITY

In parallel with the MPC&A program, which is largely designed to improve security for fissile material at the facilities where it has been located, the U.S. Department of Defense has been helping Russia design and build a new secure storage facility for plutonium and HEU from dismantled weapons, at Ozersk (formerly Chelyabinsk-65).<sup>16</sup> Russian officials had stressed in the early 1990s that the limited capacity of the available storage space for this material could pose a major stumbling block to continued warhead dismantlement, and that the locations where this material was then being stored did not meet modern safety and security requirements.<sup>17</sup> After years of

delays, the first module of the facility, capable of holding 25,000 fissile material containers (the result of the dismantlement of about 8,000 warheads, as each warhead results in 3–4 containers of fissile material), is now coming along well, and is expected to open in 2002. (The United States and Japan are also supplying the containers.) Originally, the facility was planned to have two modules, for a total of 50,000 containers, and indeed, a second facility of equal size was to be built at another site, to accommodate all the excess fissile material from dismantled Russian weapons. Costs have been rising

<sup>16</sup> Some of the background of this facility is summarized in U.S. General Accounting Office, *Weapons of Mass Destruction: Effort to Reduce Russian Arsenals May Cost More, Achieve Less Than Planned*, Washington DC: U.S. General Accounting Office, GAO/NSIAD-99-76, April 1999.

<sup>17</sup> For an account of storage of fissile material from dismantled weapons at Tomsk-7, calling attention to remarkable security deficiencies there, see Alexander Bolsunovsky and Valery Meshchikov, "Nuclear Security is Inadequate and Outdated," *Moscow News*, No. 49 (December 9-15, 1994).

as delays continue, however, and while the construction cost was once to have been split 50/50 between Russia and the United States, Russia has indicated that it will not be able to pay its half; as a result, the Defense Department has deferred anything beyond the first module of the first facility for now. If a decision is made to proceed with the second module, it could be completed by 2006.

This first wing will not be sufficient even to hold the material from all the weapons Russia has already dismantled, let alone material from additional dismantlement. Moreover, unless the Congressional requirement that this facility hold only material from dismantled warheads is modified in the future, it will not be possible to use the Mayak building as a secure place to consolidate vulnerable stockpiles of fissile material from elsewhere in the former Soviet Union (even if additional capacity for that purpose were eventually made available at Mayak). While it was originally envisioned that the material stored in Mayak would be in the form of metal plutonium and HEU components from dismantled weapons, in the wake of President Yeltsin's offer to make the facility available for IAEA verification, MINATOM decided to convert all the material to metal slugs no longer identifiable as components before placing them in the facility—even though the United States, Russia, and the IAEA are working to develop means to carry out monitoring of containers holding weapons components without revealing classified information (as described below). The United States and MINATOM are discussing the provision of substantial U.S. assistance for reshaping the plutonium components (or "pits"), packaging the resulting shapes, and shipping them to the Mayak storage facility, but this assistance is contingent on agreement on transparency measures for the process, and as of late 1999 there had been virtually no progress toward that objective. Indeed, for the Mayak project overall, no agreement has yet been reached on the transparency measures the United States has sought, in return for its assistance, to meet Congressional requirements to confirm that (a) the material in the facility comes from dismantled weapons, (b) the material is safe and secure, and (c) the material is not being returned to weapons (see discussion under monitoring, below).<sup>18</sup>

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<sup>18</sup> The principal transparency difficulty relates to confirming that the material comes from weapons, which is complicated by the fact that the material arriving at the facility will no longer be in the form of weapons components—which would be resolved if the negotiations over transparency for the conversion of the components could be addressed. For further description of the issues, see the discussion of monitoring stockpiles and reductions, below.