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SECURE FACILITIES FOR NUCLEAR WARHEADS

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ABSTRACT

Nuclear weapons states have developed dedicated safe and secure facilities for nuclear warhead assembly and disassembly operations. These facilities are critical elements of material nuclear weapons infrastructures. Their broad operational responsibilities include the production of new warheads, the dismantlement of retired warheads, warhead modernization and refurbishment, stockpile surveillance and component testing, production of trainers, and modification of stockpiled warheads for flight-testing purposes such as an operation involving replacement of fissile components with inert materials and telemetry systems. The facility is defined as a nuclear warhead assembly/disassembly plant, if it conducts the operations of assembly/disassembly of nuclear explosive packages (NEP), an assembly containing high explosive (HE), components and fissile materials, and/or final mechanical assembly of warheads (Bombs). As such operations involve staging and handling of fissile materials components and assemblies including NEPs and fully assembled warheads. The facility's states could be defined as "Shutdown" or "Converted". If it no longer works with intact nuclear weapons or subassemblies containing fissile materials.

In this paper, I discuss and present the main secure facilities for nuclear warheads and the major monitoring options for former warhead assembly/disassembly facilities that could be used in combination with each other, and show some cases of nuclear forensic investigations.

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