Thoughts on Verification for Nuclear Weapons Dismantlement
James E. Doyle

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START Delivery Vehicle Elimination Under Cooperative Threat Reduction

- Silo Launcher Elimination
- Heavy Bomber Elimination
- Solid Propellant ICBM/SLBM and Mobile Launcher Elimination
- SS-24/SS-25 Mobile Launcher Elimination
- SSBN/SLBM Dismantlement & Elimination
- Liquid Propellant ICBM/SLBM Elimination
### Joint U.S.-Russian Radiation Measurements on Classified Nuclear Weapon Components

<table>
<thead>
<tr>
<th>Location/Date</th>
<th>Measured Items</th>
<th>Objective</th>
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<tr>
<td>Rocky Flats Plant, U.S./July 1994</td>
<td>Plutonium pit</td>
<td>Determine presence of plutonium and threshold mass of plutonium</td>
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<tr>
<td>Siberian Chemical Combine (SKhK), Seversk, Russia/ August 1994</td>
<td>Plutonium pit and ingot</td>
<td>Determine presence of plutonium and threshold mass of plutonium</td>
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</table>
| Oak Ridge Y-12, U.S./November 1996 | HEU weapon component | Demonstrate:  
- receipt of a weapon component  
- HEU presence  
- that two sealed components are identical |
| Oak Ridge Y-12, U.S./August 1997 | HEU weapon component | Demonstrate conversion of HEU component into metal shavings behind a metal barrier |
| Oak Ridge Y-12, U.S./December 1997 | weapon components | Demonstrate operation of RIS and CIVET radiation measurement systems |
| LANL, U.S./August 2000 | Zero Power Physics Reactor (ZPPR) plates; fuel-grade plutonium metal; 1.75 kilograms of plutonium oxide; and a nuclear-weapon pit. | Demonstrate operation of Attribute Measurement System with Information Barrier (AMS/IB) |

Integrated tamper-indicating device, Pantex Plant, Oct.-Nov. 1999

Active radiation measurement of a fully assembled weapon at the Pantex Plant

The Trusted Radiation Attributes Demonstration System, or TRADS, Sandia

Warhead Attribute Measurement System with Information Barrier (AMS/IB), August 2000, Los Alamos FMTTD
Sources for the Verified Dismantlement of Nuclear Weapons


Simplified Flow Diagram for Nuclear Warhead Dismantlement