PHYSICS DIVISION
ESH BULLETIN 04-10

June 29, 2004

NUCLEAR MATERIALS REVISION 2

This information, taken from the ORNL Nuclear Material Control and Accountability Plan, dated 4/30/00, replaces that given in ESH Bulletin 99-5. According to DOE Order 5633.3B, 17 types of nuclear materials are required to be controlled and accounted for by ORNL. Without going into details of the classifications of nuclear materials, following is a table of the materials and the quantity **AT OR ABOVE** which you must report to the Physics Division Materials Balance Area (MBA) Representative. He will then ensure that the material is properly registered and tracked. Note that these amounts are larger than previously allowed.

Material	Reporting Quantity
Depleted Uranium	1000 g(rams)
Lithium enriched in 6Li	1000 g
Natural Uranium	1000 g
Thorium	1000 g
Deuterium	100 g
Americium-241	1.0 g
Americium-243	1.0 g
Curium	1.0 g
Neptunium-237	1.0 g
Uranium enriched in 235U	0.050 g
Plutonium	0.050 g
Plutonium-242	0.050 g
Uranium-233	0.050 g
Plutonium-238	0.0050 g
Tritium	0.00050 g
Berkelium	1.0 micrograms

Californium	1.0 micrograms

Some of the above material may be in the form of radioactive sources, and while they are tracked by Source Control people at ORNL, they must also be registered as Nuclear Material if the amounts are at or greater than shown above. Deuterium is also used as a feed stock for Division ion sources. Any transfer of Nuclear Materials between 6000 and 6010 must also be approved by the Physics Division Materials Balance Area (MBA) Representative. Notification to the Physics Division's MBA Representative must also be made if any of these materials will be purchased and/or otherwise brought in to ORNL.