Abstract Submitted
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Seaborg's Plutonium? A Case Study in Nuclear Forensics[1] ERIC B. NORMAN, KEENAN J. THOMAS, Univ. of California at Berkeley, KRISTINA E. TELHAMI, San Diego State Univ. — Passive X-ray and gamma–ray analysis was performed on UC Berkeley's EH&S Sample S338. The object was found to contain ^{239}Pu. No other radioactive isotopes were observed. The mass of ^{239}Pu contained in this object was determined to be 2.0 +- 0.3 μg. These observations are consistent with the identification of this object as containing the 2.77-μg PuO_2 (2.44 μg ^{239}Pu) sample produced in 1942 and described by Glenn Seaborg and his collaborators as the first sample of ^{239}Pu that was large enough to be weighed [1,2].

[1] G. T. Seaborg, "The Plutonium Story,"LBL-13492 (1981) and http://www.osti.gov/scitech/biblio/5808140.
[2] B. B. Cunningham and L. B. Werner, "The First Isolation of Plutonium," Journ. Amer. Chem. Soc. **71(5)** 1521-1528 (1949).

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Eric B. Norman
Univ. of California at Berkeley

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