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# of High Activity Radioxenon and Radioargon Sources

Detection of noble gas fission and activation products resulting from underground nuclear tests is a key component of On-Site Inspections, the most confirmatory of the three verification regimes of the Comprehensive Nuclear-Test-Ban Treaty. Radioxenon and radioargon gases may reach the surface through several mechanisms, each with a characteristic timeline. In order to provide empirical data on these various mechanisms, a series of tests will be carried out. These tests will release tracer gases underground and require the production of operationally significant levels of radioxenon and radioargon - up to 100 Ci. The method of producing these gases through the irradiation of specially prepared targets will be described, along with proposed potential future uses such as testing the operational readiness of On-Site Inspection noble gas measurement techniques.

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