

## **Radiation advisory and warning to citizens living in or traveling through the American West**

*December 8, 2010*

Considering that inhalation or ingestion of miniscule amounts of plutonium can inflict significant harm on human health<sup>1</sup> and un-remediated plutonium-contaminated soils on- and off-site several U.S. nuclear weapons laboratories and facilities in the American West remain vulnerable to wind erosion, a top priority of government agencies with responsibilities for safeguarding public health should be the prevention of additional human exposure to environmental plutonium. These agencies, however, haven't done enough to reduce or remove the specter of uncertainty<sup>2</sup> regarding population exposure to resuspended plutonium, especially in areas of greatest concern: on- and off-site areas of the Nevada National Security Site<sup>3</sup> (former Nevada Test Site) and the Rocky Flats plant facility. Residents and travelers in these regions - Denver metropolitan area and portions of Nevada and Utah<sup>4</sup> - should be aware of this potential danger.

Idealist is one of the few grassroots organizations that independently studies contemporary and historical environmental radiation dangers in the United States and in many places across the globe.

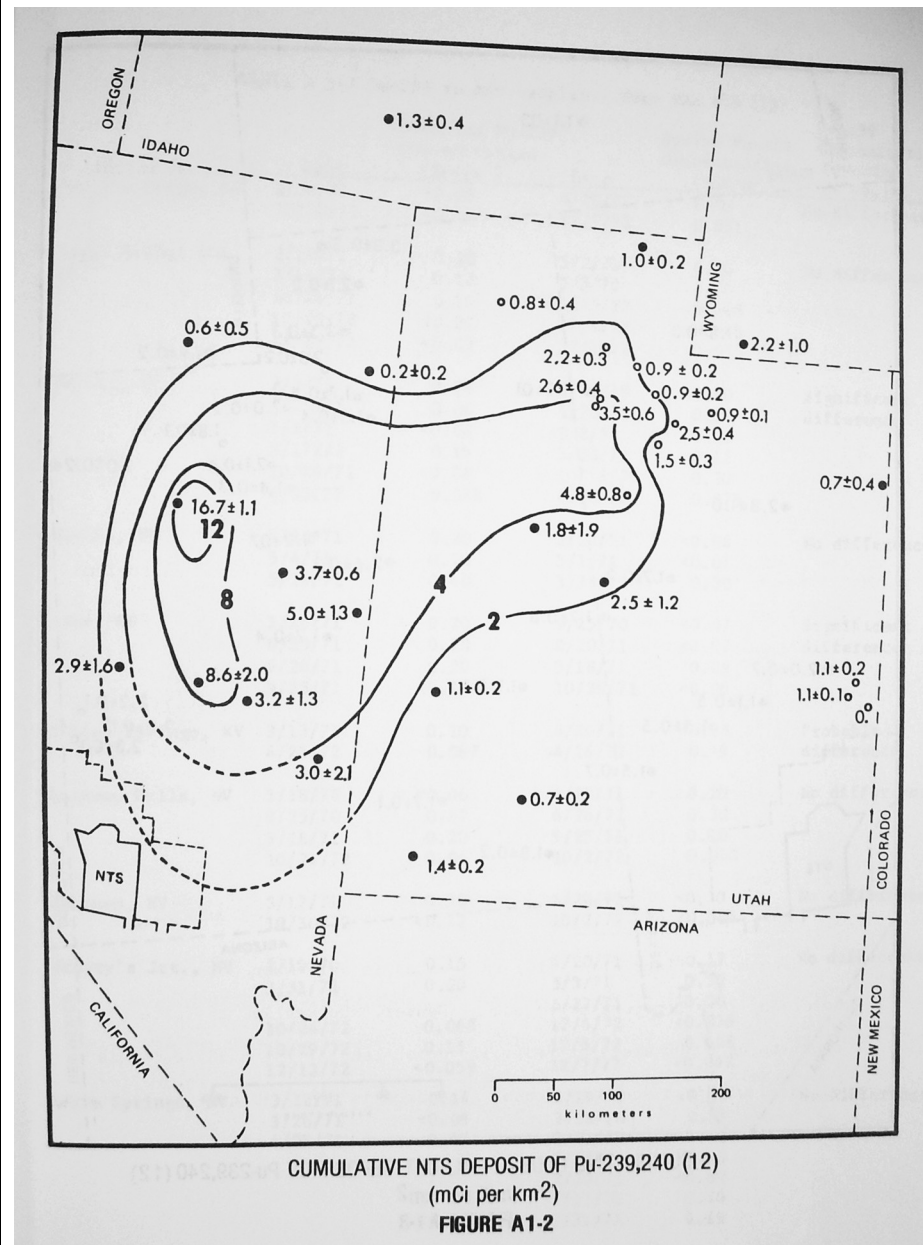
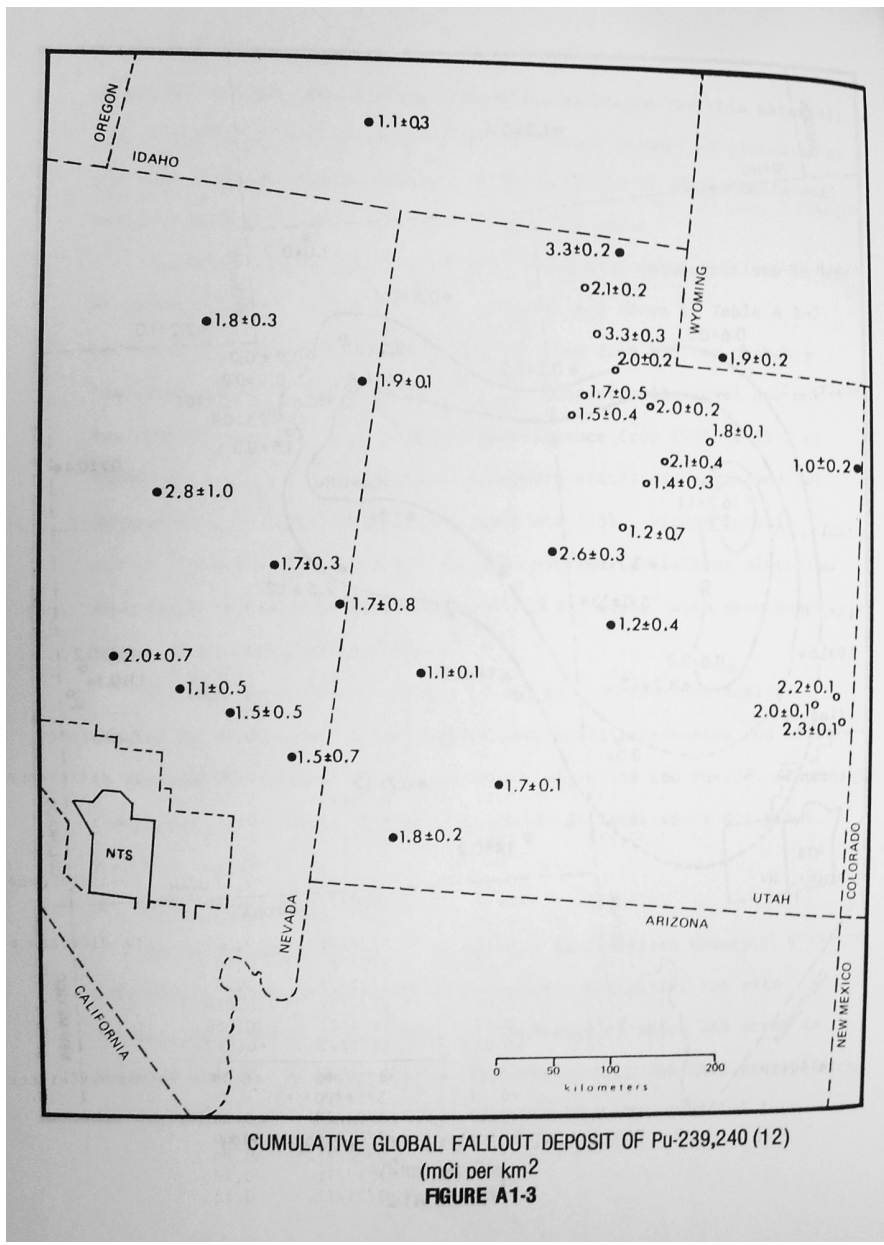
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<sup>1</sup> The late atomic scientist John Gofman asserted that ingestion of 375 nanograms (375 billionths of a gram) of plutonium-239 would induce fatal cancer. As an illustration of the extreme toxicity of plutonium, we have calculated that inhaling or ingesting the plutonium-239 weight-equivalent of 1/160,000<sup>th</sup> of a postage stamp would deliver a fatal cancer dose.

<sup>2</sup> Efforts by state and federal entities to reduce the uncertainty of chronic population exposure in the American West to resuspended plutonium particles, including ambient air radiation monitoring capability, available sampling data of contamination in onsite and offsite soils, and studies of plutonium migration and resuspension – including study of plutonium accumulation in offsite areas due to chronic low-level inputs from transport from both onsite and offsite hot-spots - are unsatisfactory. See the section titled 'Environmental monitoring' at <http://www.idealists.ws/nevada.php>

<sup>3</sup> In 1998, the Energy Department – after showing astounding disregard for stakeholder input in drafting the proposal – put into motion its Routine Radiological Environmental Monitoring Plan, which gutted environmental monitoring around the Nevada Test Site and, through fiscal means, cut off the ability of the EPA to continue offsite independent sampling and monitoring that it had done for decades (that job, diminished in scope, was given to a contractor with less credibility and less, or zero, independent review abilities). A Las Vegas lab director in Nevada with EPA expressed in a letter to DOE his disappointment over the plan, and called attention to the reduction in receptor monitoring (high volume air samplers uniquely capable of monitoring airborne plutonium), asserting that 'Given the complexity of establishing a credible plutonium source term for the large and widely distributed quantity of plutonium on the NTS, receptor monitoring may be the only way to assure that the offsite public is not being unduly exposed.'

<sup>4</sup> See maps and explanation on page 2



The above maps were drawn using data collected for a special study conducted by the U.S. EPA in the 1970s ('Proposed Guidance on Dose Limits for Persons Exposed to Transuranium Elements in the General Environment,' EPA 520/4-77-016). The maps, when viewed side by side, support the conclusion that past NTS activities are responsible for the bulk of plutonium contribution to offsite areas relative to the plutonium contribution from global fallout – sources of lofted plutonium fines from the NTS include plutonium dispersal experiments and airborne-dispersal of unfissioned plutonium fuel from hydronuclear, above-ground and, most significantly, uncontained underground blasts. A high percentage of the plutonium derived from plutonium dispersal experiments that still contaminates Utah and Nevada soils is of the resuspendable soil size fraction – i.e., small enough to be picked up by wind.