



**I Challenged the Propose  
EPA Radiation Standard for  
YMP Based Upon**

**Scientific and Legal Grounds**

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# Yucca Mountain Project is Not a Radiological Waste Site but a Mixed Waste Site Since:

1. Large amount of heavy metals close to 300,000 or more will be deposited at YMP in addition to 70,000 tons of high nuclear waste
2. Canisters will be subject to corrosion both Cr, Ni, V Mo, V and Pu and Np radionuclide will be mixed and will contaminate the groundwater and will form a mixed waste

# Deficiencies in Final Environmental Impact Statements and Risk Assessment

1. Actinides such as Pu-239 and Np-237 as time progress will be converted into Pb
2. Therefore radiation standard for YMP must be based on mixed waste

# Natural Background Radiation and Proposed Standard for YMP

1. Why the EPA did not base the proposed radiation standard on the drinking water standard why?
2. Several reports in the literature clearly noted high scientific uncertainties associated with epidemiological studies using natural background radiation and cancer risk i.e., (Cox 2005)

# Why did the EPA ignore the National Academy of Science BEIR VII Recommendations

1. “Even exposure to background radiation causes some concerns, additional exposures cause additional risk”
2. Why the Radiation bystander effect and genomic instability were ignored by EPA?

## EPA is using X-ray Exposure to Justify Proposed Radiation Strand for YMP

This analogy is misleading due to the differences in the manner that receives radiation dose:

1. Pu-239 deposited in the entire body including bone marrow and other tissues
2. While, x-ray is a passing transit through the body

# For example

3. X-ray of 250 kV and gamma of about produce about 300 reactive oxygen species (ROS) per piratical per monogram per sec.
4. In Contrast,  $\alpha$ - emitter of 4 MeV such as Pu-239 generated up to 70.000 ROS less than in a microsecond Feinendegen (2002).

# Missouri v. Illinois 200 U.S. 496 (1906)

In 1906 the State of Missouri sued the State of Illinois that the discharge of sewage from Illinois river into the Mississippi river increased typhoid fever in St. Louis. The state of Missouri lost their appeal to US Supreme Court, due to the facts that experimental data raised at least serious doubt.

The same analogy can or may apply to YMP the EPA proposed new radiation standard.