

# Integrity of the project

[Experience](#), [Human Nature](#)



The grave environmental issue at hand in this project is the estimated radiation emissions for 10, 000 to 1 million years in the future. The Environmental protection Agency in August 9, 2005 had proposed a limit of 350 millirem yearly. Several agencies had continuously supported the selection of the site. In March 2006, majority of the U. S Senate Committee on Environment and Public Works relayed their conclusions regarding the project.

The Senate had these conclusions: They attributed the studies to be a proof of Yucca Mountain's suitability as a repository site, the cost of not pushing with the project is high, nuclear waste disposal capability is an environmental imperative, nuclear waste disposal capability supports national security and the demand for new nuclear plants also demand disposal capability. Added to this, the DOE has announced the conduction of study of an independent expert team, the Oak Ridge Associated Universities/Oak Ridge Institute for Science and Education, to review scientifically and technically the suitability of the Yucca Mountain.

(" Yucca Mountain") The issue concerning the health of the people living in close proximity of the site is important to be determined with regards to the establishment of the Yucco Mountain Repository project. Radiation effects caused by nuclear waste disposal can be attributed to the decaying process of these materials. The process produces ionizing radiation which has sufficient amount of energy to strip electrons from atoms or break chemical bonds. Ionizing radiation can greatly affect any living tissue in the human body.

The immune system and repair mechanism of the body will sometimes be not sufficient to reverse the effects of ionizing radiation. Alpha and beta particles, gamma and x-rays are examples of ionizing radiation materials. (Bertell) Based on a person's duration in the radiation process, the health effects differ by type or severity. Two broad types characterize the effects: stochastic and non-stochastic. Stochastic effects are effects associated with long-term, low-level exposure to radiation.

The increase level of exposure does not determine the effects or severity of the radiation but defines how radiation will more likely have health effects. A primary health effect of radiation is cancer. Cancer is the uncontrolled growth of cells. It also inhibits the body to disrupt processes of repair and placement. The ability of ionizing radiation that can break chemical bonds in atoms and molecules makes the body prone to radiation such a potent subject for the development of cancer cells.

As ionizing radiation cause disruption in the normal processes of cell replacement and reproduction, changes in DNA is also more likely to occur as exposure time to radiation is increased. Changes in DNA are referred to as mutations. When mutation happens, the “ blueprints” of a person' genetics change. Teratogenic mutations are caused by exposure of the fetus to radiation, but the effect is only seen at the individual who is exposed, whereas genetic mutations are passed on to offspring. Non-stochastic health effects appear with exposure with high-level of radiation.

The severity of the effects will increase as exposure to radiation materials increases. Acute exposure refers to short-term, high-level exposure to

radiation materials. The effects of acute exposure include burns and radiation sickness. Radiation sickness or radiation poisoning causes premature aging or even death. The symptoms of the radiation poisoning includes weakness, skin burns hair loss and others. (" Radiation: Health Effects") SOLUTIONS: The Yucca Mountain Repository project experts are still studying regarding how to reduce the radiation affects if the project must be implemented.

Several suggested measures include developing a strong evidence base in which radiation effects will be limited to population surrounding the project site. Experts are also task to develop recommendations for radiation safety standards and protective measures for both facility staff and the people around the vicinity. The project also plans to create support in case of nuclear or radiological accidents to address medical attention needed in such incidents. The U. S had also implemented the National Nuclear Waste Act to build national capacity and enforcements to address this problem.

And last, information and education regarding the Yucca Mountain Repository project is also continuously implemented. (" Yucca Mountain Repository") SUMMARY: The Yucca Mountain Repository project has long been the subject of continuous debate. To be opened on March 2017, the site aims to accommodate all nuclear wastes of the United States. Nuclear waste described in the projects is spent nuclear reactors and other radioactive wastes. The Department of Energy, with the approval of the President has seen the Yucca Mountain located in Nevada as the most suitable area for nuclear waste disposal.

Many of the Nevadans contest the study and fear for the health effects that may greatly cause their lives to perish. As discussed, the main health concern with the implementation of the project is the radioactive hazard the site may induce to people. Ionizing radiation may cause adverse health effects that are harmful for the population around the project site. Cancer is one primary adverse effect of exposure to high-level of radiation. Acute effects include hair loss, nausea and others. These symptoms will be caused due to prolong exposure to high-level of ionizing radiation.

The Yucca Mountain Repository project has promised to conduct more extensive research to plan for the health hazards of the nuclear wastes produced by the project area. As more research and conclusions be considered, the project can plan and strategize on ways and methods in which they can lessen or prevent the harmful effects of the radiation. The project must be made aware of all aspects that concern the implementation of the project. It must place the interest of the people more than providing a solution as to where the government should dump the nuclear waste produced.

Health should be one of the most primary concerns to be taken by the project to ensure that the lives of the people around the vicinity will be given more importance. It should be noted that extensive research will prepare experts to create and strategize a plan to be undertaken by the government in implementing the functions of the repository site. Information dissemination and education of the project will help in maintaining the integrity of the project. <http://www.nuclearactive.org/docs/YM2.html>