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**ACTION:** Appropriate  
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**UNITED STATE OF AMERICA  
THE NUCLEAR REGULATORY COMMISSION**

**BEFORE**

**THE COMMISSIONERS**

**DR. JACOB PAZ PETITION TO REJECT DOE'S YUCCA MOUNTAIN LICENSE  
APPLICATIONS AS AN INCOMPLETE AND POTENTIAL NON COMPLIANCE WITH  
FEDERAL ACTS AND REGULATIONS.**

**June, 2008**

The department of Energy (DOE) submitted its license application to the Nuclear Regulatory Commission (NRC) in June 3, 2008. The License Application (LA) which is deficient since it failed to address the issue of risk assessment of complex mixtures first: Mixtures of Chromium and Nickel highly potent carcinogens. Next, in the Final Environmental Impact Statement (2002) for the Yucca Mountain Project, the composition and the amount of various substances to be buried included 86,000 tons of Alloy 22 containing 22.5% Cr, 14.5% Mo, 57.2% Ni and 0.35% V; along with 140,000 tons of stainless steel which is 17% Cr, 12% Ni, and 2.5% Mo with Fe comprising the remaining percentage in the (FIES 2002).

Next, in addition to the 77,000 tons of high level nuclear waste to be buried at YMP the proposed nuclear waste repository. I believe that the health risk posed by the potential releases of a large amount of these heavy metals along with radionuclides poses a very serious public health risk for example mixtures of (Pu-249, Np-237 and Ni, and Cr). The DOE have failed to address this issue in the Final Environmental Impact Statement and in the License Application (LA). Regulatory agencies have been informed about the potential health risk of complex mixtures. But, DOE failed to address the issue scientifically and legally as required by Federal Acts and its regulations (see a summary of laws and regulations).

#### **CITATION of FEDERAL ACTS And REGULATIONS And RISKASSEMENT OF COMPLEX MIRTURE**

##### **A. First:**

##### **Citing NEPA Act 1969 Sec. 101 [42 USC § 4331].**

- (a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.
- (b) In order to carry out the policy set forth in this Act, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. **attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;**
4. preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice;
5. achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of delectable resources.

A. Second:

**Citing NEPA regulations 40 CFR Sec 1508.7**

**Cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.**

**"Effects" include:**

**(a) Direct effects, which are caused by the action and occur at the same time and place.**

**(b) Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.**

Effects and impacts as used in these regulations are synonymous. Effects includes ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, **whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.**

**B. Next, EPA Drinking water Amendment 1996**

Next, EPA Drinking water Amendment 1996 Sec. 300j-18. (a) Subpopulations at greater risk

(1) In general

**"The Administrator shall conduct a continuing program of studies to identify groups within the general population that may be at greater risk than the general population of adverse health effects from exposure to contaminants in drinking water. The study shall examine whether and to what degree infants, children, pregnant women, the elderly, individuals with a history of serious illness, or other subpopulations that can be identified and characterized are likely to experience elevated health risks, including risks of cancer, from contaminants in drinking water."**

**(2) Report**

Not later than 4 years after August 6, 1996, and periodically thereafter as new and significant information becomes available, the Administrator shall report to the Congress on the results of the studies.

b) Biological mechanisms. The Administrator shall conduct biomedical studies (1) understand the mechanisms by which chemical contaminants are absorbed, distributed, metabolized, and eliminated from the man body, so as to develop more accurate physiologically based models of the phenomena;

(2) **understand the effects of contaminants and the mechanisms by which the contaminants cause adverse effects (especially noncancer and infectious effects) and the variations in the effects among humans, especially subpopulations at greater risk of adverse effects, and between test animals and humans;**

And (3) **develop new approaches to the study of complex mixtures, such as mixtures found in drinking water, especially to determine the prospects for synergistic or antagonistic interactions that may affect the shape of the dose-response relationship of the individual chemicals and microbes, and to examine noncancer endpoints and infectious diseases, and susceptible individuals and subpopulations.**

**(c) Studies on harmful substances in drinking water**

**(1) Development of studies**

### C. Final, NRC Regulations

**Section 63.10 (a) and (b) of 10 CFR 63 which stated the following "require the DOE must submit a complete and accurate license application; and § 63.10 (b) report a significant implication for public health and safety... licensee fails to notify the Commission of information that the applicant or licensee has identified as having a significant implication for public... Notification must be provided to the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, within 2 working days of identifying the information.**

### D. Conclusion

In conclusion, DOE-LA did not provide complete and accurate license application; according to Sections 63.10 (a) and (b) of 10 CFR 63 (b), and report a significant implication for public health and safety... The licensee fails to notify the Commission of information that the applicant or licensee has identified as having a significant implication for public... Since, DOE-YMP did not address the issue of complex mixtures and risk assessment in the LA both scientifically and legally. Therefore, the NRC should be returned the LA to DOE to addresses these issues of public health and risk of complex mixture to DOE.

Yours,

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