



Sustainable Fuel Cycle TASK FORCE

Sustainable Fuel Cycle Task Force Science Panel

July 28, 2016

U.S. Department of Energy, Office of Nuclear Energy
Response to IPC
1000 Independence Ave SW
Washington, DC 20585

The Science Panel of the Sustainable Fuel Cycle Task Force is pleased to provide its response to the U.S. Department of Energy's *Invitation for Public Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities*.

As scientists who have independently worked for many decades to support a sound approach for safely managing and disposing of our nation's used nuclear fuel and high level radioactive wastes, it is our view that the decades of extensive international scientific analyses support moving forward promptly to establish an operable geologic disposal repository. In theory, we support the proposed concepts expressed, however this should not be used as an excuse to not finish the nearly complete licensing process for the Yucca Mountain site. Thus we strongly recommend that these concepts be added as a supplement to the continuation of the Yucca Mountain licensing process rather than to replace it.

It is the collective view of our Panel that the need for progress to promptly develop a geologic repository is more critical now than ever. Used nuclear fuel accumulations at both shutdown and operating reactors continues to grow imposing significant societal burdens; disposal of defense high level radioactive waste needs are not being met; and important legal contractual obligations and state agreements are not being achieved. In addition to restarting Yucca Mountain licensing, we note the need for urgent action expressed by the Blue Ribbon Commission (BRC). The BRC did not preclude continuing Yucca Mountain licensing and we believe continuing the Yucca Mountain licensing review is the most reasonable and prudent means to address this issue with a sense of urgency. We strongly believe that the legally mandated Yucca Mountain licensing process should continue now and that the addition of proposed consent based concepts can help with Yucca Mountain and with the establishment of other future waste management facilities such as supplemental Interim Storage facilities and a potential second geologic repository as stated in the Nuclear Waste Policy Act. We urge the NRC and DOE to now be proactive and move forward with both Yucca Mountain licensing and development of consensus concepts rather than accept the unrealistic unscientific politically motivated inaction excuses of the past few years.

Detailed responses to the requested questions are attached.

Yours sincerely for the Science Panel

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Ruth Weiner, Ph.D.

Isaac Winograd, Ph.D.

Wendell Weart, Ph.D.



Attachment
U.S. Department of Energy, Office of Nuclear Energy,
Response to IPC

Sustainable Fuel Cycle Task Force Science Panel, Response to Invitation for Public Comment to Inform the Design of a Consent-Based Siting Process for Nuclear Waste Storage and Disposal Facilities

How can the Department ensure that the process for selecting a site is fair?

A definition of “fair” is difficult because it is a value judgement that means different things to different people. To us a “fair” process is one that is open, transparent, and defined and once established should not be altered by any party, including the federal legislative and executive branches.

What models and experience should the Department use in designing the process?

The business community affords examples with siting of industrial facilities. Agreements are made with local and state governments and confirmed by contracts.

The experience of the WIPP is relevant, as is that of other countries such as Sweden, Finland, UK, Canada, Switzerland, and Spain. All societal experiences are different and there has been considerable difficulties in successfully implementing a theoretically desirable consensus process in the real world where there are strong emotional, but often un-scientifically based fears.

Who should be involved in the process for selecting a site, and what should be their role?

Any person or group that wishes to be involved can provide their views, however the host landowner/applicant, local government, and state governments are the primary entities that should formally be consulted with. Consensus does not mean that everyone agrees because there will always likely be some group of people that will oppose any solution anywhere. All are listened to, but only the actual applicant and local and state governments are the parties that should have to agree to provide a consensus agreement.

What information and resources do you think necessary to facilitate your participation?

All information should be available to everyone. For example, the NWPA Licensing Support Network (LSN) established by NRC and populated by NRC, DOE and State of Nevada, is an example of providing all information to members of the public. DOE could establish such an LSN concept from the very beginning of site selection all the way to site closure. Hopefully a future LSN type system would be more user friendly from a computer software aspect, for simpler access by the general public. But the principles of information availability and transparency are the same.

Local governments should be provided educational grants to study options and participate. No other funds need to be paid to special interest groups.



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What else should be considered?

Safety and environmental protection is provided by NRC and EPA regulations, so nothing else is needed other than a willing applicant and a working arrangement that the applicant has made with the willing local and state hosts.

Questions for Input

(1) How can the Department of Energy ensure that the process for selecting a site is fair?

Fairness is a difficult definition because siting involves tradeoffs between various aspects of an integrated waste management system. Positive aspects in one part may not be positive in another, especially when it includes emotional aspects such as “my back yard” versus “your back yard”. So whatever process DOE selects should be adhered to over time so that everyone knows the rules and the process at all times.

(2) What models and experience should the Department of Energy use in designing the process?

The creation of and implementation of the Nuclear Waste Policy Act provides considerable positive and negative experience.

Currently the main obstruction to a consensus on the Yucca Mountain repository is from the State of Nevada. The NWPA addressed the right of the host state to “disapprove” the site and that the site was terminated unless it was overturned by positive votes by the House and Senate and President.

The Concept of Consultation and Cooperation: section 117(b) of the Act includes provisions for a Consultation and Cooperation agreement: “.... the Secretary shall consult and cooperate with the Governor and legislature of such State and the governing body of any affected Indian tribe in an effort to resolve the concerns of such State and any affected Indian tribe regarding the public health and safety, environmental, and economic impacts of any such repository.” And section 117 (c) “.... the Secretary shall seek to enter into a binding written agreement.”

Thus the NWPA already has elements of a consensus program within it and it started out fairly well, however the truncation of sites being evaluated in 1987 made the Federal-Nevada relationship very difficult in the end. This truncation was an example of changing the process for site selection after the process had begun that undermined the federal-affected units of local government relationships.

At some point, however, a national decision has to be made and implemented and a societal decision has to be made. In our view, if the site has been found by an independent regulator, such as the NRC, to technically meet all protective safety and environmental requirements in a publicly open and transparent process, and the sponsor of the site, such as the federal government or commercial sponsor, has made a good faith effort to establish a consensus relationship with the Local and State hosts, then a State or Local government should not have an absolute veto over the facility without a reason other than “we don’t want it here”.

(3) Who should be involved in the process for selecting a site, and what is their role?

The Federal government and host land owner/applicant, local government, and state government. There is no need for others.

(4) What information and resources do you think would facilitate your participation?

Just a publicly open and transparent process is all that we would need.



(5) What else should be considered?

Implicit in the answer to each of the above questions is the assumption that the proposed disposal site is undergoing (or has undergone) a reconnaissance study and potentially meets accepted technical criteria for spent fuel disposal. That is, a fair selection process is a necessary but not a sufficient criterion for site selection.

Additionally, whatever repository is to be considered, there should be applicable EPA and NRC protection standards established well in advance so that potential hosts understand what the levels of risk are and what they are potentially agreeing to. Such scientific and legal standards already exist for Yucca Mountain, but do not exist for other potential geologic repository settings. Thus if there is to be a meaningful consideration of other geologic settings, the EPA and NRC should establish regulatory standards very early in the process because creation of such standards takes many years.