

RESUMED

[12.31 pm]

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COMMISSIONER: We'll reconvene at 12.30, and I welcome Professor Jenkins-Smith. Counsel assisting.

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MR JACOBI: Professor Hank Jenkins-Smith is a professor of political science at the University of Oklahoma where he is currently a co-director of the University Centre for Risk and Crisis Management. He is also the co-director of the Centre for Energy, Security and Society, a joint research centre at the University of Oklahoma, and Sandia National Laboratories focus on issues such as nuclear facility siting, nuclear security and national security.

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Professor Jenkins-Smith obtained his PhD in political science and public policy from the University of Rochester in 1985. His work in recent years has focused on public understanding and response to a range of societal risks, including climate change, nuclear technologies, natural disasters, radioactive materials and vaccines, and the Commission calls Professor Hank

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Jenkins-Smith to the Commission, and he's joined in the background by one of his post-doctoral students, Ms Kahika Gupta.

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COMMISSIONER: Professor, I might start. In our international visits, we've come to understand the criticality of public engagement and consent, and we also appreciate that there's not one model to meet all community needs.

Perhaps you could just walk through your work with looking at the Blue Ribbon Commission on America's nuclear future, and particularly walk us through the siting process, just the key characteristics of how the Commission thought it was important to engage with the community on siting.

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PROFESSOR JENKINS-SMITH: Yes. The reason for the Blue Ribbon Commission was in large part because the siting process had ground to a halt here in the United States, and it did so in large part because both the local and the political opposition to a facility in Nevada. The siting there had been essentially top down in nature and the federal legislation had been written that designated Nevada as the sole site that would be considered, and the state, as a result, felt that it was - many of the citizens there felt that they were essentially being forced to be a considered group. They were concerned because it was

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forward regardless of the safety or the interests of the affected communities and the state as a whole. So not surprisingly, there was substantial opposition.

5 It's interesting to think about the siting in a region like that. I mean, states are artificial boundaries in some respects, and the physical site of the facility that was being considered at Yucca Mountain was in the middle of a big chunk of federal land. It was about 95 miles away from the city of Las Vegas, which, for much of the period that they were considered Yucca Mountain, was the fastest growing county in the United States. Much population growth there, 10 particularly with casinos and the other gaming interests that were going on.

And so in a context like that, the little towns that were close to the facility tended to be responding quite differently than the big cities that were just a little bit further away. The local community tended to express less opposition 15 and in many instances, support for continuing to consider the siting of the facility. Clark County and the city of Las Vegas where the population density was much higher tended to be much more opposed to the facility. And so when you think about consent, and you think about the locales that are involved, there really are regional diversities that are involved. Different 20 people are affected differently, depending on how proximate they are to the site. So you get different reactions at the outset.

So in the Yucca Mountain case, that level of opposition led to steady opposition to the facility by state level officials and their representatives in 25 Washington, and eventually that opposition ground the program to a halt and President Obama withdrew the licence application in 2010 and now we're basically looking for other options. But the reason we got there is in large part because we had such strident opposition in the state of Nevada to the siting of that facility.

30 COMMISSIONER: So the Blue Ribbon Commission obviously then viewed consent-based approval as essential?

35 PROFESSOR JENKINS-SMITH: They do. You know, in part it's a practical consideration and in a representative political system, a federal system like the United States and Australia, if you don't have sufficient support for a facility there are multiple opportunities for blocking it, and time is of greatest importance here, because even if you had consent at a particular point in time, you could have changing winning coalitions in governance that could overturn 40 a decision that had been made earlier. That's clearly the case in the United States.

45 You know, we had a scientific decision made by the Department of Energy that the facility could be safely built. It was then vetoed by the state of Nevada and overturned by congress, and so all of those things happened and then later you

get a change in presidential administration and a complete switch in policy. So you have to build that base of support or there is no assurance that you're going to be able to proceed forward with a complex policy of this kind.

5 MR JACOBI: I just want to pick up the Blue Ribbon Commission's recommendations, and I'm just interested to understand the extent to which you considered how much did it represent a change in strategy from what had gone before.

10 PROFESSOR JENKINS-SMITH: That was a substantial change. The policy that had existed under the still extant Nuclear Waste Policy Act in the United States stipulated that a single site would be evaluated. Prior to the amendments that singled out the state of Nevada, there had been a more open process, but it was still one that was designated top down by federal facilities, and essentially
15 candidate sites would be evaluated and technical feasibility would be assessed and the provisions for extensive public involvement would kick in late, if at all. In some of the iterations of the Nuclear Waste Policy Act we had specific political entities that were charged with negotiating with states and counties - the Nuclear Waste Negotiator it was called - to try to generate more global
20 support, but again it was seen as a top down process. In one particular instance, the State of Wyoming was being considered and there was a county there that had been somewhat receptive to being an interim nuclear waste facility. The governor of the State of Wyoming vetoed their involvement, and when he did so he said it was because, "Working with the Federal Government
25 and the US Congress and the Department of Energy was dancing with a 900 pound gorilla," in that they called the steps.

Not only that, the governor's position was that congress could always change its mind, and so an agreement struck with a sovereign entity like the US
30 Congress is a bit dangerous in that congress can't tie its own hands, and so there's no such thing as a permanent deal that could be made between a state and a federal government, and so part of their concern was institutional. When the Blue Ribbon Commission made its changes, they did so in light of the experience that we had with the Nuclear Waste Policy Act.

35 Part of their recommendation was much more extensive and open involvement with engagement with public, that it should be a long-term investment in determining whether there would be public support for nuclear waste disposal or interim storage at any particular site. Part of the recommendation was also
40 institutional. They were attempting to come up with a design for a nuclear waste authority that wouldn't have the kind of uncertainties that would be associated with trying to make a deal with the legislature that could, in some future iteration, change the rules.

45 MR JACOBI: I understand that the BRC also made recommendations in

terms of the conduct of research with respect to past consent based sighting activities, and I'm just interested in your perspective having done some of that work about what you think that sort of work might tell us.

5 PROFESSOR JENKINS-SMITH: Their chief point was that we need to learn as much as we can from what has gone on historically and we also need to continue to engage to build the body of knowledge that's necessary to effectively engage communities to ascertain whether consent can be obtained. The Blue Ribbon Commission and its staff in discussions and reports and in the
10 kinds of questions that they asked for those of us who testified seemed to indicate that they understood and wanted to see a multi-disciplinary, multi method approach to understanding this, so they were very interested in seeing long-term commitments to quantitative and qualitative research that could be synergistic and that would actually build a robust body of knowledge that could
15 be used for (indistinct) consent.

MR JACOBI: I think that's where I wanted to come to. I'm interested in your view about the respective value in doing quantitative and qualitative work in making an analysis of consent based efforts.

20 PROFESSOR JENKINS-SMITH: Yes, I think you can't do one without the other, they're synergistic. Reliance on either alone gives you big problems. Reliance just on qualitative research is somewhat challenging because it's difficult to understand in many circumstances how broadly one can construe
25 the findings, whether they are local to a particular experiment or set of observations and whether they hold over time. Quantitative research misses much of the underlying meaning of the kinds of measures that are being taken and how they are understood, and in some cases even how they may be changing over time if you don't couple it with qualitative research.

30 My own view with these kinds of methods as you're approaching a problem like this, one of necessity is going to be running over decades, it's going to be dealing with beliefs and attitudes. It's going to have to grapple with changing trust, even modification of institutional designs in our governments. We have
35 to have to have both. It takes quite a variety of types of expertise working jointly across qualitative methods, such as focus groups, citizen conferences, ethnographic work, coupled with high quality panel survey data so you're able to track changes over time and test hypothesis, and these things work in a cycle.

40 In my lab, we think of qualitative research as providing the foundation for the quantitative work that we do, and that over time you have to retest and recalibrate the quantitative work with further qualitative work. In my of our research, we have ethnographers and psychologists and economists and policy
45 scholars all working and using very different methods simultaneously on large

scale problems. In my view, that's what Blue Ribbon was pointing to, was the need for that kind of coupled dynamic interdisciplinary work to address these kinds of problems.

5 MR JACOBI: I'm interested in you offering some insight into what the quantitative output looks like and the ability to be able to then interrogate that quantitative analysis to test hypothesis.

10 PROFESSOR JENKINS-SMITH: Right. It can take several forms. The work that we do right now on nuclear attitudes involves nation wide surveys that are conducted annually. These are large nation wide studies in which we talk to essentially a censused balanced panel, we weigh two censuses to make sure that we're capturing the full range of perspectives. These are done annually with the core kinds of questions, kinds of inquiries, really, that we engage
15 people to think about the context within which nuclear issues are situated, how those factors are understood, what they think the future holds for energy mixes and how much they perceive the generation of nuclear energy that pose threats of different kinds, what benefits there may be from that, and then from there we inquire much more specifically into options for nuclear materials
20 management.

Parked in the United States' context, and this would not apply so much in Australia, we have to look at a legacy of 50 years of the production of civilian nuclear energy and the waste by-product of that, and so we don't really have
25 the option of deciding not to store used nuclear fuel, it's here. What we're doing is we explore the trade-offs that people make when they consider continued onsite storage at existing nuclear reactors and what they want to do with shutdown sites, how they consider transport of that material and the risks that may be involved with that.

30 We explore a variety of different aspects of interim storage and the design of facilities that are associated with that, and we also focus on permanent disposal options. You have to spread a fairly wide net when you do this, and obviously we can't do all of that in every year, so we have a core of questions that we
35 track and then depending on what is most urgent for understanding the current stages of policy design we focus in on more specific issues.

MR JACOBI: I'm interested in the extent in which - - -

40 PROFESSOR JENKINS-SMITH: Does that answer your question?

MR JACOBI: It does, and I'm just interested in picking up from it and understanding whether that puts you in a position to make some educated statements about why particular programs have failed.

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PROFESSOR JENKINS-SMITH: I'm sorry, that was breaking up a little bit. Could you state that last sentence one more time?

5 MR JACOBI: I'm just interested in the extent to which that quantitative information enables you to isolate elements that might enable you to understand why a particular program has succeeded or failed.

10 PROFESSOR JENKINS-SMITH: Yes. We actually – we do quite a bit of experimental work to try to tease that out, looking at variations in programme design, looking at levels of trust in the institutions that are involved. Of course we measure a great deal of people's broader concerns and we look at the way that their concerns and attitudes might be related to support and/or opposition to a particular programme. But probably the most extensive work we do is in evaluating the relationship between both programmatic and facility designs for
15 nuclear waste management and public support. And the reason we do this is that when people consider an issue that is as complicated as this which is as fraught with risk perceptions and concerns as nuclear materials management, we are trying to understand how to respond to the concerns that people have to the perceptions that they have of appropriateness and distribution of risks and
20 benefits and so on and when we design programmes for siting, for determination of who is likely to be a host community for one of these facilities, how the material is going to be transported. You are inevitably having to work with issues that are of importance to individuals, how equity is understood, how compensation may be understood. These are deep and
25 important moral and ethical considerations and so programme designs can respond to those in different ways and so part of what we're doing is we're exploring how programme designs can better address the concerns that people have.

30 MR JACOBI: Can I - - -

PROFESSOR JENKINS-SMITH: Similarly, when we talk about – when we experiment with differences in facility design such as how should a facility be structured? What co-processes should be associated with it. How active
35 should it be, in the sense of direct monitoring of the facility or testing or experimenting with the waste or looking at new options for managing it. All of those are facility design considerations that have a huge impact on what it is that would actually be built. And those features actually matter a great deal to people.

40 MR JACOBI: I'm going to come – I want to come back to some of those elements in due course, quite specifically but I am just interested, perhaps at a higher level to start with, the idea about your view as to really whether it's possible to say that there can be recommended as any one form of process?
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PROFESSOR JENKINS-SMITH: You're asking whether there is one form or process that could be recommended based on the kind of research that we do?

MR JACOBI: Yes, that's right.

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PROFESSOR JENKINS-SMITH: Absolutely not. And let me explain what I mean by that. The – what we can understand from the kind of quantitative work that we do is that people are viewing this process as complicated (indistinct) with potential risk and potential benefit, with big implications for the well-being of the nation as a whole, as well as the potential host communities that might be facilitating it. And so when you approach something that is as big and complicated as that, you have to be very careful about prescribing a single way for addressing potential host communities. Every one of these communities is going to have its own history, its own mix of values and norms. It's own geophysical considerations. For example one of the things that was a big deal in – for Yucca Mountain was the very rapid growth of Clark County with a specific economy. It was an economy that appealed to leisure industries. There was a gaming industry, gambling, there's a big aspect of what was going on there and of course Las Vegas has grown a great deal of entertainment associated with this, that is not necessarily gambling and they wanted to be able to appeal to a broad portion of the population to go there.

So I think extraordinarily rapidly growing area with an economy that was based on something that could be very – that might be sensitive to a nuclear accident, raised real concerns on the part of that community. Other communities might have different considerations. With the case of the single licensed deep geologic disposal facility that we have in the United States, the waste isolation pilot plan, there was – it was a very different set of considerations. That was an area that had been heavily invested in potash mining and oil and gas production and ranching in a fairly arid region. And so their geophysical set up was different and was differently affected by the potential for facility siting. And many of those communities have – have and continue to pursue a role in the future disposal and management of nuclear materials in the United States. And so there is no one size fits all. You have to take in to account the features of a site, as well as the local cultures. And so that means that processes themselves have to be part of what is negotiated as you move forward in a siting process.

MR JACOBI: That was where I wanted to come and I am just interested in the idea about do you have views about the process you need to do to design your process?

PROFESSOR JENKINS-SMITH: Mm.

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MR JACOBI: Are there particular elements that one needs to - - -

PROFESSOR JENKINS-SMITH: Yes. I certainly have – my group is working right now on the kinds of framework that one could design to build a process. And some of the features of that framework would be that you would be simultaneously developing a consent plan while you are developing a technical evaluation plan for the repository itself, if you are thinking about a deep geologic repository or a deep well injection, or any of the other options that we have for disposal. And so what I think has to be done is you have to treat the consent process on a par with the technical considerations for the prospect for building a safe facility. What that means is that you would have to approach a community, provide them with sufficient resources to divide – to develop that plan. You have to have the same kind of oversight over the building of a consent plan that you would have over a technical evaluation of the geophysical aspects of the site. We would recommend that the National Academy of Sciences have a board that is charged with engaging an oversight and review for the consent plan, just as it does for the physical and engineering aspects of a plan. So I think in that process, you also have to set up a mechanism for inclusion of a breadth of stakeholders that is really kind of unusual.

There needs to be a place at the table for a wide array of kinds of actors that are involved in nuclear race policy. And as you know, because of the controversial nature of the technology, it draws a range of actors from those who are opposed to everything nuclear, to those who think that it is going to – that it is the essential technology that is going to avert climate change and so you have to – you have to be ready to address very diverse points of view, very diverse notions of what it means to be a stakeholder. In the case of Yucca Mountain there were groups that want – that were – that actually had claims to be stakeholders that had no physical proximity to the site at all. There were Indian tribes that had – that were located at hundreds of miles away from the site but had relatives and linkages in other tribes that were quite close to the site and therefore they wanted to have involvement. Similarly, with the siting of a potential interim storage facility in Utah, we had stakeholders that wanted to be involved that were not proximate to the site. So you have to be ready for that.

But at the same time there has to be a way to determine what the role of different stakeholders are, and that requires a process that takes place that involves those who live close to the site that are within the geophysical boundaries of the state itself and the state officials, and the reason you have to do that is because our political institutions are built on a system of representation that you can't ignore in this process, that has to take some degree of precedence over many of the other kinds of claims that are brought to bear in these system, and so institutions matter in this instance.

MR JACOBI: Do you have a view about the sorts of tools that you'd use in the process of developing a consent plan, that is, the plan that you would use to test whether the community consents. The Commission received submissions which make suggestions to all sorts of forms of community engagement. Do you have a view about the particular tools that you would need to use?

PROFESSOR JENKINS-SMITH: Well, as I mentioned before, you need multiple types of tools. There are the traditional types of approaches that one would expect to take in the very early stages that would involve focus group work and surveys, but what I would suggest is in a case like this what you're looking for is a considered judgment on the part of citizens, and part of what you're trying to do is simulate a circumstance in which citizens have had the opportunity to acquire a level of knowledge that might not be expected on the part of most citizens for a case like this. I mean, people are busy and they have limited attention.

So what we have to do is we have to create a circumstance in which a cross-section of ordinary citizens have had the opportunity to develop the level of information, the level of expertise, for the case that they can make a considered judgment, that they can deliberate with one another and actually bring to bear the critical values and beliefs that are associated with the local area in light of the information that technical experts can provide them. One mechanism for doing that is called a citizen conference.

This would be a process that would use a random selection for drawing individuals into groups of, say 20 individuals who would be charged with addressing the kinds of questions that that would need to be answered for a consent process, such as, you know, which stakeholders should be involved, what should their roles be, how should information be provided, what kind of resources are going to be needed, and in order to do this they should be able to draw on a range of expertise, the kinds of individuals who are involved in the policy process, who understand the technical considerations that are involved and the sorts of information that would be required.

The interesting thing about a citizen conference is watching the change in the way that citizens who are involved think about the issues as they learn more and as they engage in discussion and as they're able to call on experts and even recall them for further consideration as the discussion progresses. This is actually done in a variety of mechanisms in the United States. The state of Oregon has a deliberative process in which they evaluate many of the valid initiatives that are brought forth in their political system, and they have citizen conferences that come up with a position statement. That position statement is provided in a voter pamphlet so that voters can read what citizens like them concluded after having engaged in a deliberative process.

I think it's a mistake to do just one. I think in a case like you're considering you'd want to have several of them so that there would be some range of perspective that would be derived from these citizen conferences, but they
5 would probably iterate in on a set of common solutions. And then the citizens more broadly who, because they've living busy, ordinary lives, wouldn't have time to engage in that process, could have reference to the kind of deliberative outcomes that came from people who, like them, live in the area, who have the kinds of concerns that they themselves would experience in a case like that.
10 And that's the best way to get a direct input of considered, informed decision-making on a problem like this, in my opinion.

COMMISSIONER: Professor, in terms of a disposal facility, for instance, would you have a citizens' conference at a state-wide level and then at a level
15 close to where the facility is proposed to be, different sorts of conference?

PROFESSOR JENKINS-SMITH: Yes, I think I would, because if you think of who it is that would be relying on that information, they're quite distinct constituencies. The considerations that come up locally are going to be quite
20 different than those that happen at a state level. Most residents of a state are probably at some remove from the actual facility. They may be more exposed to the transportation that would be involved or other by-products of the activity, and they would have perhaps less of the benefits associated with jobs, and so the kinds of considerations that would be come up would be quite
25 different at those different levels.

So, yes, I would say that the appropriate way to do it would be to have a set of citizen conferences that represented the broader state and others that were much more about the local area. In the United States we might think of it as
30 counties and states, or maybe even just a radius from the site, a physical radius rather than a geopolitical boundary, for the local considerations. You do run into problems though. In the United States, two of the main sites that are being considered are on borders of states. Yucca Mountain itself was close to the California border. So you have to be cautious when you think about what
35 counts as a constituency. Unless the facility is well inside a geophysical boundary you're going to have those kinds of funny problems that develop about who should be included.

COMMISSIONER: Just going to your example there, the sites that were
40 chosen, were they volunteered or was there some sort of scientific process behind their nomination?

PROFESSOR JENKINS-SMITH: Well, there's argument about whether there was a scientific or a political basis. In the case of Yucca Mountain, which is
45 sited in southern Nevada, not far from the California border, that was both

scientific and political. It was a site that was on federal land, for one thing,
which made possible jurisdictional control that would limit access and
therefore potential exposures. It also allowed for security for the surface
facilities. And so in that sense, it was not so much a scientific consideration as
5 it was one of ownership and control.

In addition, the state of Nevada had a relatively small political delegation. So
when the Nuclear Waste Policy Act amendments were passed that led to the
selection of Yucca Mountain as the sole site for inclusion, the vote in the
10 US senate to pass that amendment was opposed primarily by the two senators
from the state of Nevada. So you could say that it was a political decision
rather than a scientific one.

On the other hand, it's one of the few sites in the United States for which you
15 can find a disposal facility that is as far above the watertable as that site is. It's
a dry site. It's unique in that regard. So there were some scientific
considerations, and so there is no clean line here.

In the case of the sites that are now volunteering, one in the state of Texas and
20 the other in the state of New Mexico, there are scientific and technical factors
that make those sites attractive, and that is that the salt formations in those
areas have features that make disposal quite feasible, because of the elastic
nature of the salt. It basically encapsulates the material that you put into it.
But at the same time it's an economic consideration. Those areas are looking
25 for the economic boost that would come from those facilities, and so in that
regard, it's a political and a social consideration. It can't be done cleanly. All
of the social, political and scientific factors have to come together for it to
work and many times they are the stumbling blocks that cause the problem.

30 MR JACOBI: If I can build on the initial discussion we had about the process
to develop a process. I'm now interested in the question about the process that
you might use to screen volunteer communities. I'm just wondering whether
you've got views about the elements you would recommend that you would use
in such a process.

35 PROFESSOR JENKINS-SMITH: So let me make sure I'm understanding the
question. So you're asking what would be the elements that you would use to
either screen in or out potential host communities, volunteers?

40 MR JACOBI: Yes.

PROFESSOR JENKINS-SMITH: Yes. It becomes kind of a challenge here,
because as you begin to take in volunteers, you want to cast as broad a net as
possible so you're not excluding potential sites that might turn out to be good
45 candidates from both a social and a political and technological perspective, but

one of the things that we learned in trying to find potential host sites in the United States back in the 1990s was that in some instances you had proponents put together a proposal for hosting a facility who deliberately excluded certain members of their community from involvement, and so what appeared to be
5 enthusiastic engagement in the process was in fact doomed to fail, and it was doomed to fail because there were key stakeholders who had not been included in the process who will eventually be players.

In an open political system you can't keep people out. So you have to include
10 everybody at the outset. There has to be a sufficiently open process that if there are key stakeholders who are dead set in opposition to the facility, you need to know that early on. So one of the considerations for inclusion in the process, in my view, should be that there would be a broadly accepted
15 framework for how stakeholders would be involved in the process, one that doesn't lead to significant opposition from any of the major stakeholders in the early process.

Now, that doesn't mean that they're signing on to agree to bring a facility in, to
20 host a facility in their area. What it means is that everybody agrees that they see a process in which they can have a significant role.

MR JACOBI: Is the implication there are different steps to consent?

PROFESSOR JENKINS-SMITH: Yes, very different, yes, and in the early
25 stages all it is is a consent to have a discussion, and in later stages there would be a process by which the players that are involved would come up with a process for moving ahead. The best example of this is the Canadian approach under NUMO that is saying a very long-term process to bring in communities and engage them in a process of discussion in which there is no commitment at
30 the beginning for either a fixed process or an outcome. And so everybody can engage in the process early on in order to learn what it is that is at stake, to learn what's technically possible and to learn what the implications might be for their community, what the real risks and real benefits might look like, and how that might refract through their cultural perspectives and value systems.

35 And in setting up a process in which people can simply agree that that's what they're going to do discuss, without anybody saying, "No, we simply can't do this," well, that gets you to the table, in my view. If you can't get that far, and if the only way to get there is to exclude parties from the discussion in the early
40 stages, then you know you've got trouble down the road, and what I would do would not be to exclude such a proposal but to say, "Now go back and see if you can find a way to draft the early stages of this process such that you don't have that level of opposition." What that would entail would be going back to those groups that are most significantly opposed and trying to reframe the
45 discussion in a way that doesn't preclude them from at least the initial stages of

discussion.

MR JACOBI: I'm interested in the concept of consent itself, and when one is dealing with an institution it will have its own concept of consent, that is, that
5 if one is dealing with a parliament, it will have its own rules as to what consent means. Do you have some perspectives on what consent is when you're dealing with a more nebulous - a community as a whole which isn't necessarily a government structure?

10 PROFESSOR JENKINS-SMITH: Yes. Yes, that's very challenging. If you were to bring together a variety of different players in a discussion like that, you'd probably get many different notions about what consent needs to look like. The notion of consent of course is deeply institutional and cultural, and, you know, it ranges from the notion that a majority believe in a particular
15 decision versus those that require super majorities or even unanimity, and one of things that's pretty clear in a case like this is that unanimity is going to be difficult.

And so there are two sides to this: one is the question of the mechanism by
20 which consent can be expressed, and what would that look like. Does it have to be a referendum? Can it be an agreement amongst leaders of groups? What does it have to look like? And the other is the question of what is being consented to at that process, and how do you define that. How is the objective that is being evaluated - how does that get framed in a process of consent?
25 And that is challenging in its own right. In a process that takes decades, like the construction of deep geologic repository, there's going to be multiple stages at which you're moving from one step to the next, and knowing how to frame that properly in order for people to be able to register consent is itself pretty challenging.

30 When you're thinking about consent, our position on that is that the definition of consent has to be something that is worked into the process itself. You don't know going into it precisely what is called for. We do a lot of work on trying to measure background cultural notions of what would count as reasonable
35 consent in a process like this, and we, for example, study people in different communities across the United States believe should be able to veto a process like this. This is the negative consent, and we try to understand from the perspective of the broader public if there are some critical groups that have to be in agreement before the process can go forward, and that's not to define a
40 process.

I try to identify the landscape from which people in the United States are going to be defining consent as they engage in this process. Would it need to be the
45 governor of a state, would it need to include a majority of the citizens in that state, would it need to include a majority of the people who live within a

particular distance of the site, would it need to include the leadership of the native peoples that are in the affected area, and so on, and various elected officials, obviously. In our case, it would be state legislatures, elected representatives from the districts to the federal government and so on.

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What we're trying to do in the case of the United States is to measure the landscape in the public's mind of who it is that's critical in making those kinds of choices, and there are interesting distinctions that are made in the United States. Governors and the public, and particularly the public that lives most proximate to the facility are always given prime place in our studies, and that's part of the cultural and institutional landscape of the United States, but you would have to do something similar in the affected regions, I would think, in Australia to know what is the foundation from which the idea of consent can grow.

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MR JACOBI: I just want to pick up from your summary of approaches report. One of the elements that's identified there that follows on from what we've been discussing is the need to develop stakeholder advisory groups or like working groups. I just wondered whether you could expand and explain what you had in mind by that.

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PROFESSOR JENKINS-SMITH: This would be the creation of groups that would have representatives from a wide variety of the different players that are involved, or the affected communities that are involved, that would have the capacity and the resources to develop a broader understanding of the problem who could be trusted by their local communities to evaluate the problem in a way that reflects the underlying values and concerns of the affected stakeholders. It's an alternative.

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This is an institutionalised process that would allow for change over time in people's perspectives. We've experimented with this broadly in policy in the United States, we have a variety of stakeholder groups that have been involved in our legacy nuclear weapons sites, in our super fund sites, and these groups have often not had an official role but they have an advisory role for policy makers as they consider steps for remediation, cleanup of sites, compensation and a variety of other factors like that. That's where that idea came from, and so that would be an institutional feature.

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I think that comes down the road a bit. When you're thinking about stakeholder groups of that kind, that's when you usually have a process in place and you're beginning to evaluate different sorts of options for moving ahead when scientific investigation is underway and you need stakeholder groups that can be kept abreast of what has been learned scientifically about the geophysical features of a site, but it's certainly a major piece of what you would want to have in place moving down the road.

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MR JACOBI: I just want to pick up two of the specific things that I think we touched on at the start, and that is the extent to which you were of the view that the design and operation of the facility itself should be part of the consent based siting process.

PROFESSOR JENKINS-SMITH: Yes, when you consider the values of a community and the kinds of things that they're concerned about you have to take into account what it is that people think they're being asked to do when you site a particular facility near their communities, and so the physical design of the facility, what it's intended to do, what its co-production might look like, what aspects are tied to that facility become in important ways the keys to how people understand what they're being asked to do.

In the case of the Nevada facility, the Yucca Mountain design, after a short period, was to be - after the nuclear waste was in place, there was going to be a period of observation and then the facility was going to be shutdown and permanently plugged with the idea that the design would preclude retrieval of that material. Now, when you do that essentially what you are telling the local community is that waste is not a resource, it couldn't potentially be a resource to future generations that you're trying to preclude its use.

If the values of the local community are that they would rather view their activities as being stewards of a resource than simply bystanders of permanent waste, the design of the facility changes, in fact, what people believe they're being asked to do. Most people in the United States are technological optimists, so they believe that future generations are going to have their own ideas about how to manage these wastes and they would like to preserve options for the future generations to perhaps find alternative ways of utilising those materials or faster ways of degrading them, or new alternatives for making their permanent disposal safer, and so designing a facility that precludes those types of options changes what it is people think they're being asked to do.

In the case of a resource, people are asked to be stewards of a material for future generations. If it's permanent disposal that precludes any kind of access in the future, then it's just a waste, it's something spooky to be isolated. Similarly, if the facility has an active monitoring and research process going on so that the waste itself is being observed and tested and research is undertaken to make sure that it's behaving in ways as was anticipated and there aren't geophysical properties of the site that we didn't anticipate, then it's an active process, and that is view quite differently than a passive process.

Particularly, if the community itself can view themselves as contributors to that process by hosting, you know, whatever research laboratories might be

necessary and maybe having their residents employed in such a facility. Again, it's a design of a facility that encourages the notion of active stewardship, and a permanent sense that this is an important activity that is going to remain critical to the communities. Those design features actually have a big effect on what
5 people think they're being asked to do and how they see the facility fitting into their community, and so you have to take that into account in a consent based process.

MR JACOBI: I'm interested to the extent to which those elements that we've
10 just discussed, and there might be many in addition to retrievability and associated testing and monitoring activities should be part of that discussion that you have about consent?

PROFESSOR JENKINS-SMITH: Yes.
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MR JACOBI: Or do you have a view about the need to involve the
community in a discussion about those aspects?

PROFESSOR JENKINS-SMITH: Well I do. I think that successful consent
20 based siting on a problem as difficult as this one is (indistinct) it. And that understanding what it is that people are willing to engage in is – and how they view the role of their community and whether they view it as a positive or a negative effect, or whether they are able to understand their role as a service on the part of their community to a broader public, all of those factors are going to
25 play a part. And in my view, it is – this is challenging because you are having to deal with larger policy questions that are inevitably going to involve legislative decisions and executive choice but there has to be some room for how the public see themselves involved – as involved in it. It could be a matter as simple as deciding that this facility for disposal is going to also have a
30 research function. And that changes the way people think about the activity that goes on at the site. They view it as an ongoing intellectual investment, one that is promising for their own community.

MR JACOBI: I wonder - - -
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PROFESSOR JENKINS-SMITH: The - - -

MR JACOBI: Sorry.

PROFESSOR JENKINS-SMITH: The retrievability question is a little tougher
40 because there you are dealing with issues that involve potential future exposures of the waste. You are dealing with intergenerational transfers of these effects when one of the norms that I hear discussed is the idea that this generation produce this waste, so this generation should bear the cost of
45 disposal and make the decisions associated with disposal but that is kind of

treating future generations as a bystander. They're not. And you know it raises interesting ethical questions about what their role should be. And I think those are the kinds of discussions you want to have your stakeholders involved with. What role do they want their kids and their kids' kids and their
5 grandkids' kids to play in this facility and in the activities that take place there and the risk and benefits that may flow from it? And those – I think precluding those kinds of discussions is going to seriously undermine the potential for consent to grow from the discussions that are had by potential host communities.

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MR JACOBI: The Commission has heard something about packages of benefits that are associated with some nuclear siting efforts and I am just interested, your report refers to them needing to be mutually negotiated and I am just wondering about whether you could explain that and the significance of
15 the mutual negotiation?

PROFESSOR JENKINS-SMITH: The idea of benefits and compensation for posting potentially hazardous facilities is one that's really quite challenging in the sense that if the authority that is siting the facility simply wants to offer
20 cash benefits for example, it can be understood as a bribe. Now the notion of a bribe is particularly potent with the bribe applies to a current generation when many of the risks would be borne by future generations and so compensation – the idea of compensation gets you in to some very tricky territories. When you have mutual negotiation by the host communities, particularly in host
25 communities that are considering not just their own well-being but that of their succeeding generations, allows there to be a more open discussion that would involve the idea of benefits that not only hold this generation but future generations and that it may be more creative than simple cash.

30 It turns out that in a lot of the work that we have done, that when people think of potentially hazardous facilities, compensation can really be best understood is if it's commensurable to the risk. So for example if it is a health risk of some kind, perhaps the benefit to the community would be associated with some kind of improved medical care that is of direct relevance to that risk
35 rather than cash or just a straight economic benefit. But you know, this is one of the reasons that the idea of risks and benefits and compensation is so challenging, is that people are quite various in how they think about these questions. There is – we don't have one approach to this. A true individualist might well look at compensation as something that could be treated abstractly,
40 like as cash, and that people could simply be compensated. An egalitarian won't because they are concerned about the implications for everyone and want there to be a built in equity consideration that can completely flip the value of compensation from negative to positive. A hierarch might want to think of compensation in terms of what it is that the experts have approved.
45 And it's – and these are quite different ways of thinking about the

appropriateness of compensation, or the appropriateness of distribution of risk. And so the point of having discussion with the community, is a two-way flow of information and consideration of values from the bottom up as well as the top down, allows you to negotiate those considerations and provides a
5 legitimacy to the accord that is reached. The real challenge with compensation when it's top down, when it's provided by a developer for a facility is that it doesn't permit that type of discussion. It doesn't permit a reflection of the kids of people who are in that community and their concerns for future generations.

10 MR JACOBI: I think your report indicates that the reaction to such a package of benefits might depend upon the extent to which the community in fact understands the siting policy and the characteristics of the facility. I am just wondering about whether you could expand on the reason for you saying that?

15 PROFESSOR JENKINS-SMITH: Yes, the – in a case, particularly like nuclear facilities, there are the perceptions of risk and the understanding of what it is that is taking place tend to be quite diverse. The cultural underpinnings to perceptions of risk are as anybody who has watched the
20 cartoons, the Simpsons, or seen Spiderman, I mean you know that these kinds of ideas come – are very broad and they're very culturally embedded. As a result, when you first start with somebody who has had no exposure to what the facility is, or the technical information that's involved, they are going to have quite a different perspective on what those threats may be and what the potential benefits might look like. And as a result, the degree of understanding
25 and knowledge and engagement that the community has had, will have a huge effect on the way they think about compensation.

MR JACOBI: Can I just pick up your report finishes off with a discussion about the need to develop an effective partnership, and I think it – with –
30 between a proponent and a community, and I think we have discussed a number of the elements of that. I am just wondering whether perhaps in the broad you can explain what you had in mind by the idea of an effective partnership?

35 PROFESSOR JENKINS-SMITH: Yes. The – but in the end, what has got to be understood by the community is that they are a critical player in the process. And that their concerns are of sufficient importance that the developer or the authority that is doing the design work and making the ultimate decisions with respect to the facility has to take them into account.

40 The basis for a partnership is an understanding of all parties that their concerns will effectively be considered in that process, and again, in the failed cases in the United States, such as our Nuclear Waste Negotiator office, the considerations that undermined the effectiveness of that approach were that
45 people didn't see themselves as partners. They saw themselves essentially as

capable of engaging in a process that could be overturned or altered unilaterally by the nuclear waste authorities at a later date. When that happens there's no reason to invest. It's easy for opponents to the siting process to undermine its credibility, and so absent a real partnership, an effective partnership, it's very
5 difficult to get the kind of engagement and negotiation that can lead to consent. A partnership is going to be essential for this process.

COMMISSIONER: Professor, thank you very much for your evidence this evening. It's been very useful for us to piece together what's going on in the
10 States with their own observations from other countries overseas. I thank you for your work in helping us piece through this.

PROFESSOR JENKINS-SMITH: Well, you're most welcome. Let us know if there's anything additionally we can provide, and we wish you very well in
15 your process. It's fantastic that you're doing this and we watch with eagerness to see how you get along with this.

COMMISSIONER: Thank you very much. We'll adjourn until 1430.

20 **ADJOURNED**

[1.41 pm]