

JUDY TREICHEL
Las Vegas, Nevada

An Interview by

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Nuclear Technology in the American West Oral History Project

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**THE FOLLOWING IS AN INTERVIEW WITH JUDY TREICHEL
CONDUCTED IN LAS VEGAS, NEVADA NOVEMBER 13, 2009 BY DANIELLE
ENDRES.**

[The opening portion of the interview was lost due to a technical problem]

DE: And your current residence.

JT: I live at 4587 Ermine Court, Las Vegas, Nevada, 89147.

DE: Okay, and how long have you lived at that residence?

JT: I've been in that house just since March of this year, but in Las Vegas for over thirty years.

DE: Okay, and your occupation.

JT: I'm the Executive Director of the Nevada Nuclear Waste Task Force and also a consultant to the attorneys that are representing the State of Nevada in the Yucca Mountain case.

DE: Okay great.

[recording paused]

DE: Okay. All right so I'll start with some background information. Can you tell me your birthplace and birthday?

JT: I was born in Minneapolis, Minnesota, March 3, 1940.

DE: Okay, and do you have siblings?

JT: I have one brother who is still in Minneapolis [Minnesota] and my mother is still alive in Minneapolis [Minnesota].

DE: Great. And what brought you to move from Minneapolis [Minnesota] eventually to Las Vegas [Nevada]?

JT: Well, I got married and we were married at the very end of December. And in April that year it was still snowing—still getting below zero on Easter. And we had come to Las Vegas [Nevada] for the honeymoon and decided, ‘well it was really nice in December, it’s got to be even nicer now.’ So we decided to just come and give it a try. So we moved out here in I think it was 1969.

DE: Great. And then what sort of ethical influences or role models did you have in your life either growing up or that you developed over time?

JT: I’m not sure. I suppose it was my father who was not at all religious but incredibly ethical when it came to society. And he was very concerned over the bomb that was dropped in Japan to end the—at the end of the war. And he also believed at that time that we should be in the process of banning the bomb because it was such an atrocious kind of thing and I heard all that stuff. And my parents were very involved in politics—left type of politics. And I remember as just a kid listening to the [Senator Joseph] McCarthy hearings in a room full of adults where there was all sorts of—it was like a spectator sport. And all sorts of, “Isn’t that awful. Oh my gosh, how could they be doing that?” So we grew up in an extremely progressive atmosphere. We had all sorts of people. We were almost thrown out of an apartment at one time because my mother liked jazz piano very much and we had a piano. And she had—we’d gone to a jazz club and a piano player there had offered to help her with the kind of music she wanted to play—to give her sort of informal lessons. So they said, “Well, that would be wonderful.” And they invited him over to the apartment. And he was black and she was white and my dad had gone to work. And the manager came and told us if that situation was ever to happen again that we’d have to leave. And we had—they had an interest in art. So we had a lot of

association with people in the art world and all sorts of various political points of view. And we were exposed to all kinds of people. And I never thought there was anything unusual about being gay because we had friends who we knew were same sex couples. But it never seemed unusual because you start that way as a child. So I guess as an adult this world's been kind of a disappointment. [laugh] So those were a lot of the influences that I came away with.

And I went to a high school that was an experimental school on the University of Minnesota campus. And it was very small and they were trying out what turned out later to be the Minnesota model for high school education. And we—it was just kind of tried out on us—so it was very informal. We were used to being able to talk easily with the teachers at school, to have access to things—anything we wanted on the U of M campus. And so it never seemed unusual either to be dealing with people that supposedly were the authorities or to just go get something you wanted if it was for the right reason. And you never think about that when you're a kid. But afterwards...And when people have asked because I was fighting something like Yucca Mountain or working for world peace or something, people will say "Why in the world...how can you keep doing that? Why are you doing it?" And I guess I always say, "Cause I'm from Minnesota and we know how to come through unbearable winters. And we know how to do all these things." But I think it was a lot of the background and growing up and having that kind of opportunity accidentally.

DE: So what got you first involved in nuclear issues?

JT: I think my very...Well I opposed Vietnam and did a lot of letter writing and so forth. But it was mostly just from home. I wasn't part of demonstrations or anything, but I had a

child at that time and so I wrote letters. I made it known how I felt. And then once I came to Nevada my son was nine. And in 1970, I had a daughter. And in 1972, I had another daughter. And when Reagan was elected sort of during the whole Cold War thing, I was concerned about him being elected but incredibly concerned at the time when I guess it was when he had the assassination attempt or something but Alexander Haig [United States Secretary of State under Ronald Reagan] announced that he was now in charge. And he seemed like such a warmonger and so awful. And it was at the very same time that the first Lenten Desert Experience demonstration was going on here down at the federal courthouse downtown. And they were opposed to testing at the Nevada Test Site. And I had these very tiny little girls and a boy child as well. And I thought this is insane. I can't not do something actively about this. So I went down to the courthouse. I saw the big demonstration going. So I parked the car and just kind of tried to look like a passerby but I must have been giving off some sort of signals because they immediately said, "Oh come join us." So I did and just became very involved in trying to stop testing.

DE: And so from nuclear testing how did you get to Yucca Mountain nuclear waste issue?

JT: Well I was actively working against testing and for world peace, of course like any beauty pageant candidate always decides to do. [laugh] And then in the midst of all that all of a sudden we're starting to hear about Yucca Mountain and bringing nuclear waste too. So it seemed absolutely insane when you lived at a place where they were blowing up bombs underground and then to put the waste underground as well just adjacent to where all of that was happening it just seemed totally crazy. And so I had been involved in this enough by starting out in the—about 1980 with that, but I kind of learned a lot

about radiation and the dangers of that to people. And then just kind of transitioned over into the work on opposing Yucca Mountain. I had some good friends who began the organization called Citizen Alert at that time in opposition to having waste come to Nevada. So I was working with them. And they were opposed to testing also. So we both were kind of doing all the same things.

DE: So what's the relationship of the Nevada Nuclear Waste Task Force with the State of Nevada? Are they connected?

JT: No.

DE: Okay.

JT: The Nuclear Waste Task Force is a non-governmental organization, nonprofit sort of grassroots group but we are not membership. And the role that kind of opened up that the task force took, unlike Citizen Alert and some of the other environmental organizations that have opposed Yucca Mountain, is that we became sort of the bureaucratic end. And I was attending meetings and was shocked when I got there. And some of the meetings were...All I could think of in my mind was the old black and white war movies where you'd have generals standing up and big—had long sticks and they're looking at tables that have all the little toy soldiers. And they're planning out these maneuvers. And they'd push off the table a whole battalion of guys because they were killed. And then you'd go on. And they were talking about people, in regard to Yucca Mountain and the radiation that would be there, as 'dose receptors.' And the—some of the dose receptors would in fact wind up with health effects. So of course the dose receptor is probably going to be an Amargosa [Nevada] farmer who I probably would know because there aren't that many people in Amargosa [Nevada]. And a health effect wasn't like getting the H1N1 or

seasonal flu, it was being dead because of an exposure to radiation that resulted probably in a cancer but maybe something else and—that killed you. So that’s a pretty serious effect. And so at one of the meetings where I was, it was at the National Academy of Sciences, it was I guess the first time I piped up and said just that: “The dose receptors you’re talking about are Nevadans and those with health effects are dead Nevadans.” And it was kind of an unsavory kind of thing. You know the looks on their face was like the way you’d look like if you like a good steak but they took you to the packing plant. [laugh] So then I just realized that there needed to be somebody there that was hearing this stuff and also representing a voice for the people that they were talking about. So that’s what I did. And the task force, ever since 1987, has been providing information, answering a lot of questions, being the place where people can call, or now email, to ask questions and get answers.

DE: Great. And you said that you moved kind of to the bureaucratic end and you talked a little bit about some of the ways that that might be different than working as a more on the ground activist. I don’t know if I’m making a good comparison there, but can you speak a little bit more about what changed in terms of what you started doing once you moved into the bureaucratic realm?

JT: Well the task force was formed in about 1986-87 when we became sure that Nevada was going to be the sole target for this and Yucca Mountain was going to be the only site. And shortly after the task force was formed, we put in a grant application to the State of Nevada who at that time was looking for an organization or contractor to provide public information and to be able to work with the public throughout the state to let them know what was going on—let them—give them channels in which to be involved if there was

any place they could be. So we got that contract and the task force served that function for about nine or ten years. And that money allowed me to do those things. And it was where you needed to be if people would call and say, “Well, I see what the DOE [Department of Energy] says in the paper but what are they actually doing?” or “I see that there’s this meeting.” And if you’re a regular person who works a regular job, you can’t go to these meetings even if they’re in town, which most of them were not at that time. A lot of that stuff was happening in Washington [D.C.] and so it’s just very difficult to do. And the meetings that DOE [Department of Energy] held for the public that would accommodate—be held in evening hours and at times to accommodate them were so superficial and silly that they weren’t doing any good. And Nevada wasn’t a naive audience for the Department of Energy. This wasn’t our first time around because we’d already had the [Nevada] Test Site and we had dealt with the Atomic Energy Commission and its various names that finally ended up being the Department of Energy. And the state knew a whole lot about nuclear bomb testing because you saw the flash from some points in the state, from almost all parts of the state, and certainly in Las Vegas you felt the ground move when they did the underground test. So everybody knew what was going on and then they had this same department of the government telling them that there was no danger from that at all. And people were very much aware that rural Nevadans were being hurt a lot and particularly people in Utah as well. So you knew that you had a government that did things that weren’t necessarily good for people and in addition to that lied about it. So then they come to tell you that Yucca Mountain’s the perfect spot and there’s absolutely nothing for you to worry about. So, you know, it was pretty hard to even believe it if you wanted to. And the people they had doing that

were all transplants here. They all came in with the project and couldn't imagine why those of us here already were so jaded so difficult to deal with. So yeah. [laugh]

DE: So now that Yucca has gone into the licensing process, what's the main role of the task force?

JT: Well it became very clear as the process rolled along that I, on behalf of the task force, could play a pretty important part in meetings, conferences, workshops, things that went on with both the Department of Energy or the Nuclear Regulatory Commission or the Environmental Protection Agency or any—the Technical Review Board, any of the big bureaucracies that were working on it. It was easy to get in because they sort of liked the idea they could have one member of the public and say that they had involved the public. And I guess I had the right personality too. I didn't get excluded because of being angry or something. There was—it was pretty easy to work through that. But once you found out about the licensing and you realized that the only way in was to have contentions that would...which are things that you disapprove of in the site. They are written in very legal type language so you almost have to be represented by an attorney. The only way that you can also be really involved is to have a pretty good computer which back at that time most of us didn't have. The computer revolution kind of happened during all of this time. We started out with typewriters and fax machines and that was about it—a copy machine—and slowly came into computers during this time. And the first one I had was about the size of this table. And I was still way more comfortable with the typewriter. But you had to have computers with a lot of storage. And you had to have travel budgets and you had to have attorneys. So there was no way that anybody that was working in a nonprofit and, you know, seeking donations from nice

people could ever do that. So as it came down the real parties now in the licensing and even some of the [Nevada] counties that get pretty substantial money by comparison with non-profit groups, some counties in Nevada still don't believe that they can actually be real parties. So there's four counties that have joined together to be one entity. There's a few counties that are just governmental observers in the thing and there are no public groups that are involved. And I know that you are familiar with the PFS [Private Fuel Storage] licensing and there you did have Native American groups and you had some others. But this one is so huge with this electronic data system that they have where everything has to be put into an electronic data system, it has to be entered by using PDF formats. I mean it really takes a lot to do that. And I was playing along up until the license application went in during prelicensing opportunities. I was still part of the whole process. And I had people at NRC [Nuclear Regulatory Commission] that were helping me to get stuff. I had people in other offices who were taking things I wrote in Word and reformatting them into Acrobat so that they could be put in. I just had to have a whole lot of help in order to be able to do that. Then once it became formal there was no way. So I'm still attending hearings and keeping up with what's going on as far as licensing activities are concerned—but not an active player.

DE: And then you also said that you work as a consultant for the State of Nevada's law firm.

JT: Um hum.

DE: What's your role with that?

JT: Well, just strictly as a consultant and my job has been sort of bringing to them the knowledge that you have as being just a part of the public with involvement in this. And

when they were first setting up for getting all of their ducks in a row for knowing the history of the thing I had a huge file with a lot of clippings back at that time before newspapers were on the internet and files with letters back and forth that I had written that I had gotten responses back from. So it puts—it allowed for kind of a good background on the whole thing. And now I'm part of the telephone conversations that they have and just able to deal with the public on things that are going on and feed that information in to the attorneys which makes it helpful to them.

DE: Great. So it really sounds like your—one of your major roles in the Yucca Mountain controversy is helping the public be represented or having some sort of connection with the public.

JT: Right. Yeah and the people understand now that it's up to the state to get them out of this dilemma. There was nothing that the public did here. Even if you wanted a nuclear waste repository really bad, you couldn't get a national—you couldn't achieve that yourself. So if you want to get rid of one, you're also not in a position to do that. It's up to the people representing you. And people in this state are very much aware of that as are the politicians. And you aren't going to run for a statewide office in Nevada and say that you're for Yucca Mountain. It isn't going to work. So the public votes and that's about it.

DE: Alright I'm going to transition to talk a little bit about some more nuclear waste issues and kind of where you fit in with those and perceptions of those. So what is the problem with nuclear waste from your perspective?

JT: Well it's very dangerous and it's something that's hard to understand. And people just know that it's dangerous and that you have to keep the danger from getting near you

because it's not something that the average person feels like they can control or help themselves with. You can—you know that the street that runs outside your house is dangerous if you've got a little kid that could toddle out there but you know what to do in order to avoid that. And that's a lot of the junk that you hear from government people too who say "Well for heaven's sakes you fly on an airplane all the time. You're getting a little radiation when you're flying on that airplane. It could have an accident." Well yeah but if you're really worried about planes going down, then you don't fly; you drive or you take a train. And there's no informed consent. You know yourself when you go to the doctor if you're going to have an x-ray you're going to sign a lot of stuff. Well they're giving you a whole lot of doses beyond an x-ray and you don't even know you're getting them. You can't see them, you can't feel them. So nuclear waste brings you all of those kinds of things without any consent on your part.

DE: And then what about with Yucca Mountain as a site? What is your perception of the problem with that?

JT: Well, a lot of that is the same way where it just all of a sudden was there because DOE [Department of Energy] put a pin in the map and decided that's where they were going to be without ever asking the people of Nevada if they would agree with that. They just had assumptions that because people had been willing to put up with nuclear weapons testing, which was a very different thing—it was a government defense operation at the time of the cold war that got set up. As time went on people didn't agree with nuclear testing. But at the beginning it just became something that was patriotic, was part of keeping the Russians at bay because the Russians had nuclear weapons and it was a whole different deal. Everybody realized that Yucca Mountain was being done as a sort

of government gift to the nuclear industry because ninety percent of Yucca Mountain would be for commercial nuclear waste. And these people are making a lot of money on creating electricity through nuclear power and then giving the waste problem to the government, and the government was going to be giving it to Nevada. So it was a whole different setup. And as I say this was a population that had had very bad experiences already with radiation and with the federal government in charge of radiation.

DE: And so do you see that most of the people that you interact with are opposed to the nuclear waste siting at Yucca Mountain?

JT: Yeah, it was very different from being opposed to testing at the Nevada Test Site because people felt that—a lot of people supported that because at the time, it was a major employer in Nevada and they felt it was something patriotic that we were providing as protection to the rest of the country. So you were really fighting an uphill battle on that one. You were going to be losing jobs and being somehow or other unpatriotic. Whereas with this you may be lose—if you get Yucca Mountain you probably would lose jobs because there may be people that don't want to follow a nuclear waste truck to Nevada. Or if there is any sort of an incident or accident on the road, or if there's a thought that maybe Yucca Mountain isn't working the way its supposed to, or if people just don't like the idea being this close to a nuclear waste dump, they don't have to come to Nevada. They can go vacation anywhere they want to. Somebody who's having a convention can put it anywhere, and we've seen that now. So, yeah this was something that was easy as far as getting the people to agree with you. It's very difficult to get people to take an active role because it's a technical project that it's hard to understand. I work at it all the time and as a non-scientist it takes a whole lot for me to

understand all facets of the thing. And it's also such a difficult thing to fight. You know if you're just someone with a regular job and a few kids and not much money, it doesn't seem like it's going to be terribly effective for you to take time to write a letter to the editor. Or go to some meeting that's very dull and late at night getting somebody to take care of the kids or hauling them around with you or something, it's just not easy to do.

DE: Makes sense. So what do you think are the potential solutions to nuclear waste? And you can talk about Yucca Mountain, whether or not you think that's...

JT: Well Yucca Mountain's not the solution and I'm not sure that the people who are calling Yucca Mountain a solution, I'm not sure what that means in their mind. For many of the people in the nuclear industry, finding a solution to nuclear waste means that you're able to load it onto a truck or a train and have it moved away from the reactor site so that you can build new reactors and so that you can keep making waste. And a lot of the allies that I have on the public end are many many groups that live in communities with reactors and they want them shut down. And if that's not possible, they don't want the license extended and they don't want a new reactor put next to the one that's already there. They want to run out this reactor as soon as possible, transition to something else and stop making the waste. So one of the things they often talk about, and it makes a lot of sense, is the current existing waste that you know has to be put somewhere and then future waste. And we want very little if any future waste. And Yucca Mountain's not going to take care of future waste because Yucca Mountain reaches capacity in next spring, say March or April, you're going to have already created the amount of waste that would legally fit into Yucca Mountain. So anything being produced after that time has got to look for some other solution. And the waste right now is being stored on-site. But

that hasn't stopped anybody from having a license renewal or an extension on an existing license. So I'm not sure what anybody means by solution and I think it depends on who's saying it and whether they're making money on making waste.

DE: So making that link to nuclear power, do you think that nuclear power needs to be stopped to have kind of a solution to nuclear waste? Well I shouldn't use the word solution cause you say it not or...

JT: Yeah well I—stopping nuclear power doesn't do anything about the waste that already exists but it does keep you from having the stack get higher. And yes, I believe that nuclear power should be phased out. I'm certainly enough of a realist to understand that you just don't pull the plug on the plants and shut them down one day and then start worrying about how to turn the lights on. That's kind of how we got into the situation where we are right now. One day they flipped the switch on without ever thinking about what they were going to do with the garbage that came out the end. And it's insane for business people. I mean who builds a subdivision with a lot of houses and moves in a lot of families and then "Whoa look at this mess we've got. They're all throwing stuff outside." And so yeah, you have to have something figured out for what you're going to do with the end product that comes out of the thing.

But right now we're in a situation where everybody's thinking about electricity because of climate change. And there's this myth that's being floated out there that nuclear power is a good answer to that. Well, yes, an operating reactor is not throwing off smoke out a smokestack like a coal plant does, but before that reactor goes on you have to make the fuel. And when you look at all the processes that go through from the time you mine the uranium until the rods are loaded into the reactor it creates a whole lot of

carbon because the uranium has to go through a lot of processes that are all run with conventional sorts of power. And we're sitting here in the southwest at the same time we're fighting Yucca Mountain. We're also fighting to try and get solar installations put in, to try and tap into all the geothermal power that's already here and there's tremendous amount of power here. I'm beginning to think that perhaps we're not—we should move away from having base load energy where you have these humungous plants like a nuclear power plant or a fabulously huge coal plant that then feeds into a grid to take all over the country. I think it's like, I'm sure you've heard people and you may be one yourself, that is looking at the idea of eating more local food. Well, we should exist on more local power. If we're living in a place that can create a tremendous amount of solar power, we should be using that. And if we have excess, throw it on the grid for somebody else. If you live in the quarters in the country that have a lot of wind, you should be running yourself on that and giving away the excess. We also have the geothermal stuff. We have the parts of the country that are on the coastlines. There's now a lot of research going into wave power and to run some sort of power production off of the tides that go in and out. And so if you take what you have right there that takes the burden off of this national grid and also allows you to—you know if things were set up right at this hotel where you are, they could be running a lot of it on solar power that was on the roof and for all of the parking that's out there in July, when you walk to your car and get in, it's probably a hundred and forty degrees in there. It's like a low oven and you can't touch the steering wheel. And if you put a covering over that and put solar panels on that you'd also be feeding this hotel and providing covered parking. So and with cars you know they're looking to get them off of gasoline to have electric cars where you've got

batteries that can be charged up while they're sitting outside or while they're plugged in and you can use that sort of thing. We're just ripe. We need jobs, we need to take care of climate change, we need all sorts of things and it's just a matter of having the gumption to switch over and do this. But you don't have the kind of enthusiasm for solar and wind power production and geothermal as you do for nuclear because nobody owns the fuel. So you don't get real rich with this stuff. And the one thing that makes, that really cuts into their profits on nuclear power is the waste. And that's going to be taken away. So it's a perfect deal. It's kind of like the big banks that took all the risks and then whoa they got help. So yeah I think a lot of this stuff is relative.

And it's just that I'm not sure this country is very good at having pivotal moments when you make huge changes. People kind of get used to the stuff they know and it's pretty scary to think about making a huge transition as happened I suppose after the war or after the Great Depression where because we now have safeguards in place with unemployment payments that went to people that have lost their jobs and so forth. And if we didn't have that and people are on the streets and in bread lines like they were during the Great Depression, they'd probably be pretty eager to have national infrastructure projects and new national energy projects and anything that would give them a job. Whereas we've kept our financial system still clicking along and they're still making decisions about "Na we're doing pretty well with this stuff already. We'll just stay there." So yeah it's—we're allowed to be a little more comfortable. There's a lot more inertia and difficulty in change.

DE: Makes sense. So who has been or will be affected by nuclear waste disposal?

JT: Well nobody has been because we never had a nuclear waste dump. Nevadans would have been and not just Nevadans but people throughout the country because they selected Nevada to put the waste but they created almost all of it in the east—along the eastern seaboard, most of it, and then east of the Mississippi almost all of it. So the first thing that could go wrong with the Yucca Mountain project would be trying to get it there and having this stuff on barges, on railroads, on highways. The people in the Great Lakes sort of break out in a rash when you tell them that the plants along the Great Lakes will load their waste onto barges to go to railheads to be loaded off. And the Indian Point plant in New York is located on the Hudson River. So you'd be offloading that stuff on a barge that would come right down through Manhattan over to New Jersey where it would get loaded onto a rail to come. And there's just millions of things that can go wrong all the way through that system. And you know that accidents happen and that they will. So Yucca Mountain would have exposed a whole lot of people to accidents that we couldn't really predict. I would guess that if Yucca Mountain stopped and immediately they started looking for something else—and the nuclear industry we know is looking for places they can take waste either as interim storage or for a new spot that you would try and site a reactor—it's probably going to be a poor community because they need jobs. They need some kind of income. You're not going to find Westchester, New York looking to have the first waste dump. [laugh] And you know places like Beverly Hills [California] don't necessarily want that under one of their hills. So it's going to be a poor community that's willing to put up with danger in order to have an income just like communities that you know of that have large chemical plants or incinerators or any of the stuff that we really don't want to deal with, factory farms. You know it's all the same

kind of populations that wind up with getting tagged with this sort of stuff. And they've tended to like to look to Native American communities as well because many of those are rural, they're also incredibly poor. And you have a situation where if this thing will bring you a clinic for the kids and a school that provides them maybe the opportunity to leave there and go to college, they'll take a look at that.

DE: So in your interaction with members of the public through the Nevada Nuclear Waste Task Force, what types of concerns or ways did they think they might be affected by the Yucca Mountain project? Or did that even come up? Maybe it was more people asking questions or ...

JT: Well here in Las Vegas [Nevada], they worried that they'd be affected by the transport of the waste because well the national highway system and the national rail system were all initially built to connect large cities. So when you put something on them, whatever's on those trains goes through the large cities. And so they worried because the Union Pacific Railroad lines go right down the back of The Strip. You'd be right behind all of the hotels that it parallels on Las Vegas Boulevard. And the I-15 also runs that very same route. It runs—the railroad tracks and the freeway go right behind The Strip. So there was concern that you could not only have an accident that would effect people with radiation, but you'd also have a tremendous chill factor in people deciding "I don't want to sit in a room in New York, New York [casino] and look out the window and see nuclear waste trucks below me."

DE: Let's see. How about effects on the environment of the region around Yucca Mountain? Has your organization dealt with how the nuclear waste, if it had gotten there would it effect the environment?

JT: Well for one thing the environment should have eliminated the site from consideration in the first place because it's an area that's prone to earthquakes that are fairly large. It's—we rank—in Nevada we rank third after Alaska and California in the number and severity of earthquakes. So you've got a very active zone. You've got one of the few places in the United States that's also in a volcanic field. And having a volcano come up to a repository isn't something you want to have happen—or even nearby. And when you stand on top of Yucca Mountain and you look out, you're looking at volcanic cones. And they're very recognizable. You know exactly what that is when you look out. And in addition to that, Yucca Mountain borders the Nevada Test Site and part of it lies under the Nellis Air Force Range where you have a lot of testing of aircraft as well. And you have war games being played and all the big jets and the military aircraft is tested out there. They use it for not only testing the aircraft itself to see what it can endure and how it works, but also testing with fighting war games and so forth. So there are a lot of crashes out there because they test them very hard to see how they'll work. So you do have these large heavy bombers that are racing back and forth over the thing in addition to commercial air traffic that goes between here and northern Nevada. So there's just a whole lot of stuff that's wrong. And you have very precious water systems in the west. We have problems with having enough water. So Yucca Mountain lies over a pristine aquifer that right now is being used by a farming community. And you can't afford to poison any part of water source in the west. And that's eventually what would happen and the Department of Energy or the Nuclear Regulatory Commission, everybody agrees that at some point those metal containers go away and then the aquifer becomes contaminated and the argument is about how long it takes for that to happen and how

much contamination there actually is when it happens. So there's nobody that says that water is never going to be affected at all no matter how long you go out or how many years you're looking out.

DE: So I'd like you to characterize public interaction with the Department of Energy and by that I'm asking kind of what opportunities did the public have to have input on the Yucca Mountain site? How did you see the DOE in terms of their openness to public comment and things like that?

JT: Almost nothing and that's part of the reason why the [Nevada Nuclear Waste] Task Force actually became fairly well known in the system because you can't call the Department of Energy and say, "I would like to talk to someone about my opinion regarding Yucca Mountain." They'll probably give you to some neophyte that might write down your name, address and what you said and then you'll get a little card saying "Thank you very much." But there was absolutely none and the decision about Yucca Mountain, whether or not it would happen and how it would happen, those decisions were made at the top of the Department of Energy in Washington [D.C]. People who came here were sent here to do the project. They really weren't here to make decisions about—you know when you ask somebody or complained about it, the number one answer you would get is "Well it's the law." And so that's what you got here. There was never any access to the Secretary of Energy or any of the under secretaries that were actually making those decisions. And in addition to them, Congress made a lot of the decisions and we had, at the time that this began, we had two Congressional rep—two representatives in the House and two Senators whereas many states have loads of Congressional representatives and their two Senators. So the people of Nevada had very

very little influence and the nuclear industry is extremely wealthy and has lots and lots of lobbyists. People who have access who have enough money to pay politicians for their campaign, make a lot of campaign contributions, they're very well connected through all sorts of the power structure in the country. So people have not had any luck at all in making their wishes known or in being able to play any sort of a meaningful role at all. And after someone calls the Department of Energy, they very likely will call us or call the State of Nevada and say "I really want to know this and I've called and I just get switched around, or I get only recordings, or I don't get any answer at all. What's the deal?" And so then we tell them.

DE: Great. And were you or your organization involved in any of the public hearings that the Department of Energy held over the...I know they didn't...

JT: I would say all of them. Yeah.

DE: And what was your opinion of the public meeting process?

JT: Well in the beginning they had what they called update meetings. And they would just show view graphs at that time. Later PowerPoint presentations about "Here's what we've done. Here's where we are. Here's what's coming up for the next year, for the next five years. Are there any questions?" And you, if you said "Well I disagree with what you're doing here," there was never—they'd listen to you but there was never really any impact that it would have. It was what they've always talked about was the DAD system—D-A-D—decide, announce and defend. And so that's all that's really gone on. I guess we've had, over the years, probably more influence in attending meetings of the Nuclear Waste Technical Review Board which is the governmental entity that was created with the Nuclear Waste Policy Act and they oversee and ask DOE [Department of

Energy] for presentations regarding what they're doing in the science, what they're doing in some of the transportation stuff. And they used to be pretty good about providing public comment, allowing you to ask questions. If you were—at the beginning of the day if there was a presentation and you had a real serious question about something that DOE [Department of Energy] had said to them, it was very easy to take a note of paper, go up there to the chairman's desk, put it in front of them and as he was asking questions of the DOE [Department of Energy] guy, he would say either "I want you to hang around for public comment because we've got somebody that's got a serious question in the audience. So don't just take off," or "Okay I want to ask you an additional question." And they'd read off your question and get you answers for it. So that was a really good forum for a time. Now that you know it's gotten past site—the site's been recommended, the license application is in, and I think people on the [Nuclear Waste] Technical Review Board feel that there's less opportunity to hold their feet to the fire as well.

DE: And then I think you mentioned before that with the licensing process and NRC [Nuclear Regulatory Commission] that there's not public hearings. They had to have gotten status in order to make a contention.

JT: Right and those—the few hearings that had been held are—they're either held in Washington [D.C.] at the—well in Rockville, Maryland at the NRC's [Nuclear Regulatory Commission] headquarters or NRC has set up a facility here that you can sit and listen but there's certainly nothing you can say. I mean it's like going to—you can go down to the courthouse and hear ongoing trials being held but you can't be in the fourth row and go, "Say, I think there's something wrong with what that guy just said." No, you're strictly an observer.

DE: Okay. Do you foresee any future entrees for more public involvement perhaps after licensing or potentially through [President Barack] Obama and some of the talk that's been happening...

JT: Well I believe right now that Yucca Mountain is going to end and it will either end very soon or within the next year. And then the Department of Energy is in the process of setting up a Blue Ribbon Commission to figure out where we go from here. I'm concerned because we haven't heard anything about who the commissioners are; we haven't heard anything about what they're setting down as a charter or an agenda of a list—a menu of the items to be considered. And if they were going to do it right and if they had ever listened or taken the opportunity when they made—when they were involved in international conferences to listen to one of the many countries, whether it was Sweden or France or Germany or Canada or the UK, where they had active repository programs and they crashed they failed. And they had to start over again and the reason was because you had public opposition that was very very strong. And in many European countries the public is more active and they can really stop stuff. I mean they can have a huge effect because you can get several hundred thousand people all in the streets and just plain bringing things to a stop. And elections are held in a way that they aren't bought and sold like in this country. And they can call—you can call an election. So those countries had failures and the first thing they had to learn was that you go out and you try and find voluntary sites and you got to have the people buying in from the very beginning and you've got to keep them bought into it. And if you're starting to lose them, you've got to figure “okay if they just plain wanted out, they've got to be let out.” If there's something they want in addition like the site in Finland where they're

actively developing a repository now. The closest town really wanted a first class nursing home for elderly people. The town was getting older they didn't have a facility they thought was good and they were able to get a Cadillac-style nursing facility for people. And of course you can think that's a silly little short-term goal for something that's going to last forever. But that's what was important to them and that's what they're doing. And in Sweden the people in the community where the waste is going already have reactors there and they want an additional reactor. So that will be built there. And in fact in most countries you have the waste site very close to where the reactors are because people are used to the nuclear reactors running. They like the idea that they are producing the power that way because they have jobs there and it's turning on their lights. So here you have a state like Nevada that has no nuclear power but is being asked to shoulder the burden for the waste. So if the U.S. were going to start right and you were going to set up a commission of experts to decide what to do next, you should already be involving the public so that they're represented on the commission. You should be involving the public so that the kinds of things they worry about which are not necessarily the stuff that Congressional representatives or nuclear utilities worry about, those issues are taken into consideration or are at least there to be decided. That should have all started already. And maybe this commission is going to be so removed from everything that they could decide "okay we're going to enter a nuclear waste—new nuclear waste program and what we recommend is that it start in this kind of a way." And then we can either agree or disagree with that. But I guess for those of us that do what we do now when Yucca Mountain goes down we're going to be watching these people like hawks. And we hear things from time to time like the Nuclear Waste Commission won't be just managers from the Department

of Energy or elected officials or people out at the utilities. That it may have people like Colin Powell, or Lee Hamilton or [Brent] Scowcroft or people that have— that are very well known are respected—they aren't nuclear waste experts, they're public policy experts. And so maybe that's what it will be. I don't know but I still think it would be smarter to tell us beforehand. And if everybody hates the way it's being set up, they aren't going to listen to it in the first place. And if they really like it, that gives it momentum to go ahead.

DE: So you mentioned as you were talking about the Blue Ribbon Commission that the public issues might be different than politician or even DOE [Department of Energy] interests. Can you give an example of what a different issue that the public would bring up might be?

JT: Well, when the repository standard is developed by the EPA [Environmental Protection Agency] and then the NRC [Nuclear Regulatory Commission] has to enforce it, you hear phrases like “Well it's safe enough.” Well, safe enough for who? And when they make the standard—they use what they call the standard man which is a healthy male and what effects radiation would have. They should in fact probably be looking at a pregnant female. It's a very different deal. A healthy male can take some pretty sizeable doses and get over those. For a female you shouldn't even have an x-ray, if you're pregnant. So there's all sorts of things in the danger that people don't feel that they should be subjected to involuntarily. Where you get a guy that's chairman of the board of a nuclear utility saying “Come on, this is crazy.” And they had—I know at the very beginning when they first began looking at Yucca Mountain—you had old time farmers from Amargosa Valley [Nevada] or guys that had been well drillers, or people that were

really familiar with the area saying, “They’re totally wrong in what they’re saying about how the water moves. They’re completely crazy.” “And when they’re saying that this is not affected and that is, it’s crazy because we know that there is fast moving water underground in various places.” And it seemed to come as a surprise to the Department of Energy when some wells were drilled along the highway between where Yucca Mountain sits and where Amargosa Valley is and the water was very very hot in those wells. That’s because it’s a volcanic area—got a lot of heat down there. And one of the ranchers we know lives in Amargosa Valley [Nevada]; he lives in a trailer. Their water that runs out of the faucet runs about seventy-two degrees. So you need to know all of these things before you start. And sometimes you go out there and talk to a farmer that maybe never got past fourth grade, but he’s real familiar with the characteristics of the soils, with how deep the water is, how alkaline it is, how it works for growing, how it works for irrigation. All kinds of stuff like that that many of them [DOE scientists] didn’t know and had very—they had no respect at all for those people. And I remember when they first started doing site characterization, people in Amargosa Valley [Nevada] were furious because you have DOE [Department of Energy] trucks coming through and driving right into somebody’s yard. And I remember one of the women saying, “Here I was in my nightgown just making coffee and this guy is out here walking around in the yard just kind of looking around.” So they just sort of took command of this area.

DE: It sounds like they didn’t ask the locals for their expertise.

JT: No. No. And in fact I tried real hard to get a job for a women who worked—she lived in Amargosa Valley [Nevada]. She was a single mom; she was working at the library there, little library attached to the school and also working at a little general store trying

to make it. She had really good computers skills, she was right there. At that time they had a field operations center on the site, which would have been easy for her to get to rather than driving back and forth from Las Vegas [Nevada] like all their workers did. And there was just no way they were going to consider her. And they would have had a real fan and she talked to a lot of people. It would have been a big deal for that community to see her having that job and certainly others that were capable of having jobs. But no. So...

DE: Who is ultimately responsible for nuclear waste?

JT: Well, the people that make money off of nuclear power certainly are responsible for paying for waste management and disposal. People who have made the decision to make the waste, which are probably those same people because most communities don't welcome nuclear reactors. In fact many of them have huge demonstrations in opposition and they have to fight opposition all the way through. The new reactors that are not built yet but have now applied for licenses, there's large numbers of public interest groups in those licensing hearings opposing the licenses for new reactors. And they're having some success now because people have finally learned enough to know how to play the game. But the waste management has to be paid for by the people making the waste and ultimately probably the waste has to be the responsibility of the federal government because it's got all the makings for nuclear weapons in it. The uranium's there, the plutonium's there, anything that you need for a weapon. And that's how we got nuclear power in this country because people were becoming very nervous and opposed to nuclear weapons and [President Dwight] Eisenhower decided to announce Atoms for Peace. Now we have nuclear power. And they both seemed to prop each other up at the

time when you get the people really down on having nuclear power production then suddenly you're going to need nuclear weapons for some reason. Or if people are really opposed to nuclear weapons then nuclear power kind of carries the weight. And it's so dishonest and so easy to see through the veil that they're putting up. Like you look at Iran and North Korea, called the "axis of evil" by the previous administration, and they both have nuclear programs. They say "they're making nuclear power but we all know it's a weapons program." And yeah that's what it is, you produce power and you can produce bombs. It's the very same operation and to have people supposedly going along with you when you say you can't trust Iran, you just know they're going to be making bombs. But now in this country no, no, no we wouldn't be doing that we're strictly on nuclear power because it's clean, it's healthy and it's abundant; it's not the case. It's a dangerous stuff for more than just the radiation. It provides the ability to have the ultimate weapons.

DE: And so you said that you kind of began your journey being opposed to the nuclear testing that happened, then it kind of moved into the Yucca Mountain stuff. What do you see as your future and do you see nuclear weapons coming into some of the things you work on in the future?

JT: Well nuclear weapons are always a threat. You know when we began fighting the current series of wars where you got little guys running around with shoulder-fired weapons—you know in their hands. Then we're looking at building bunker buster nuclear bombs because they have these tunnels that we might want to disrupt. Yeah, I think it's insane. Nuclear weapons came in—they sort of evolved into the Cold War and we had to scare this huge superpower into not bombing us with their nukes because we had enough nukes to scare them off. And it was like little boys playing a game where like

you have to bluff and scare the others. Now we're engaged in conflicts with people that you know don't have running water. And still you're looking at this stuff. I guess people probably get tired of hearing me be opposed to things. I'm terribly opposed to the drone program that's right out there in the same area. They test those drones right in that same area with Yucca Mountain. And for this country to have kids sitting out there in Indian Springs [Nevada] essentially playing video games and killing people and Iraq and Afghanistan out of nowhere. Like you and I are sitting at this table and if there was a drone up there somewhere being operated by them and they thought that perhaps someone that had bad intentions for them was in one of these rooms we'd be collateral damage. We'd have no idea why that had ever happened, you'd just—poof—be gone. And I think that's insane. And I can't imagine why somebody else isn't putting together that technology to give us a run for our money and give us a few terrible surprises. And maybe they are, and if they are we shouldn't be horribly surprised. I mean it's only sportsmanlike that you fight on an equal basis. So no I don't like any of that sort of thing that we've come up with for warfare. And I think it's all overkill. I think war fought with nuclear weapons is like a temper tantrum on steroids. You know because you're just killing everything. You don't just kill the soldiers on the field, you kill all the civilians around either slow or fast and the environment as well. Nobody can live around Chernobyl; that's a dead zone and so would a place be that's been bombed. And nuclear power's the same thing. You're boiling water for God's sake. There's a lot of ways [laugh] there's a lot of ways to boil water—I've often said it's like setting your table for dinner and instead of having the butter knife you have a chain saw. It's just it's too much; you don't need all of that in order to keep the lights on. So...And after this you asked,

I'm probably going to a nursing home. I mean after all we've been doing this [laugh]—tomorrow I have a granddaughter getting married. So it's not like—and I'm already past retirement age. I would love to keep working. And I'd certainly like to stay involved in “Yeah, what do you do with existing nuclear waste?” and use some of this stuff that we've learned over the last thirty years to put it to use because the problem's not gone and in fact people still seem pretty eager to make the problem worse. So that would be it.

DE: Thanks. Well that's kind of most of my questions, but is there anything that you would like to add? Anything that I didn't cover that you think is important in discussions of nuclear waste siting?

JT: I don't think so. I just I just believe that we need some proof that someone at the top has learned some lessons from all of this. And that you just don't keep—that nuclear waste siting isn't simply a process of finding people that you can coerce into doing something that nobody would really like to do. You've got to get done with the coercion and the idea that this is an imperative that has to be forced on people. It's not. And if it's something that nobody's going to accept then you do something else. And it's perfectly easy to do something else.

DE: All right. Well thank you very much.

JT: You're very welcome and good luck, we've...

END OF TAPE