

Mr. LAUTENBERG. I thank the Chair.

(The remarks of Mr. LAUTENBERG pertaining to the introduction of S. 527 are located in today's RECORD under "Statements on Introduced Bills and Joint Resolutions.")

# RECESS

The PRESIDING OFFICER. The Senate will stand in recess until 2:15 today.

Thereupon, at 12:54 p.m., the Senate recessed until 2:14 p.m.; whereupon, the Senate reassembled when called to order by the Presiding Officer [Mr. COATS].

## NUCLEAR WASTE POLICY ACT AMENDMENTS—MOTION TO PROCEED

The PRESIDING OFFICER. Under the previous order, the time between 2:15 p.m. and 5:15 p.m. shall be for debate equally divided on the motion to proceed to the consideration of S. 104, which the clerk will now report.

The legislative clerk read as follows:

A motion to proceed to the bill (S. 104) to amend the Nuclear Policy Act of 1982.

The Senate resumed consideration of the motion to proceed.

Mr. REID addressed the Chair.

The PRESIDING OFFICER. The Senator from Nevada.

Mr. REID. Mr. President, I have been requested by Senator KENNEDY—and it is my understanding Mr. HATCH has requested of Senator MURKOWSKI—to give 15 minutes of our time to Senator KENNEDY and Senator MURKOWSKI will give 15 minutes to Senator HATCH. I ask unanimous consent for that at this stage.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. KENNEDY addressed the Chair.

The PRESIDING OFFICER. The Senator from Massachusetts.

Mr. KENNEDY. Mr. President, I would like to express appreciation to Senator MURKOWSKI and Senator REID for their willingness to give Senator HATCH and myself an opportunity to introduce our children's health bill. I see my colleague, Senator HATCH, on the floor now. So, I yield the floor.

Mr. HATCH addressed the Chair.

The PRESIDING OFFICER. The Senator from Utah.

Mr. HATCH. I thank the Chair.

(The remarks of Mr. HATCH, Mr. KENNEDY, Mr. DODD and Mr. KERRY pertaining to the introduction of S. 525 are located in today's RECORD under "Statements on Introduced Bills and Joint Resolutions.")

The PRESIDING OFFICER (Mr. KEMPTHORNE). The Senator from Nevada.

Mr. REID. Would the Chair report the matter that is now on the floor?

The PRESIDING OFFICER. The matter pending before the Senate is a motion to proceed on S. 104, the Nuclear Waste Policy Act.

Mr. MURKOWSKI. Mr. President, if I could make an inquiry relative to the time we will have on the bill this afternoon.

Mr. REID. It is my understanding that the proponents and opponents have an hour and 15 minutes each, and I say to the chairman of the committee, I was going to speak for about 20 minutes.

The PRESIDING OFFICER. The Chair announces that under the previous agreement, an hour and a half is divided. However, 15 minutes from each side has been allocated to the previous speaker, so there is an hour and 15 minutes remaining for each side.

Mr. REID. We both understand that.

Mr. MURKOWSKI. I thank the Chair.

Mr. REID. If the chairman of the committee desires to go first, I have no problem.

Mr. MURKOWSKI. The Senator from Nevada should proceed. I went first yesterday. I suspect we will be taking turns.

Mr. REID. I yield myself 20 minutes.

The PRESIDING OFFICER. The Senator from Nevada is recognized.

Mr. REID. Mr. President, as we indicated yesterday, this matter is on the floor for one reason and one reason only. That is the nuclear power industry. That is the reason we are here. There is no other reason. The fact of the matter is that the situation here is the same as it was last year.

What I indicated, Mr. President, yesterday, and it was confirmed by the chairman of the committee, we are not here because of science. We are here because of politics. We underline and we underscore that.

What I said I would do yesterday I want to do today. That is, indicate to the Members of the U.S. Senate that there are approximately 200—I repeat, 200—environmental groups opposed to this legislation. I am not going to read the names of the environmental groups, but I ask unanimous consent the entire number and names of the environmental groups be printed in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

## ENVIRONMENTAL AND CITIZENS GROUPS AGAINST THE BILLS THAT WOULD REPLACE THE CURRENT ACT

Nuclear Information and Resource Service, Greenpeace, League of Conservation Voters, Public Citizen, U.S. Public Interest Research Group, Physicians for Social Responsibility, Sierra Club, Military Production Network, Natural Resources Defense Council, Office for Church in Society, United Church of Christ, Project on Government Oversight, League of Women Voters of the United States, Union of American Hebrew Congregations, United Methodist General Board of Church and Society, Nuclear Free America, National Ministries of the Presbyterian Church (USA), Nuclear Waste Citizens' Coalition, Safe Energy Communication Council, Friends of the Earth, Citizens Awareness Network, Missouri Coalition for the Environment, 20/20 Vision, Prairie Island Coalition, Environmental Action.

Native Youth Alliance, Nuclear Control Institute, Clearwater, Citizens for Alternatives

to Chemical Contamination, Rocky Mountain Peace Center, Snake River Alliance, Citizen Alert, Redwood Alliance, National Environmental Coalition of Native Americans, Campaign for Nevada's Future, Southwest Research and Information Center, Clean Water Action, Free the Planet, Blue Ridge Environmental Defense League, Kansas Sierra Club, Envirovideo, Kansas Natural Resources Council, Greens/Green Party USA, Fellowship of Reconciliation, Good Money, Inc., Wyoming Outdoor Council, Nuclear Resister, Three Mile Island Alert, Western North Carolina Alliance, GE Stockholders Alliance, The Peace Farm, Tennessee Valley Energy Reform Coalition, C-10 Research and Education Foundation, Northwest Environmental Advocates, Oyster Creek Nuclear Watch, Green Party of Ohio, Grass Roots Environmental Organization, Physicians for Social Responsibility, Los Angeles, Alliance to Close Indian Point, Sierra Club Legal Defense Fund, Louisiana, Toledo Coalition for Safe Energy, Wilmington College Peace Resource Center, Grandmothers for Peace, Student Environmental Action Coalition, U. of Wisconsin, Milwaukee, Orange County Greens, U. of Florida Environmental Action Group, Eco-Action, Penn State U., Austin Greens, Student Environmental Action Coalition, U. of Northern Iowa, Los Gatos Unitarian Fellowship.

Alliance for Survival, Nuclear Democracy Network, Stop the Organizations Raping Mankind, Pennsylvania Environmental Network, Heart of America Northwest, Desert Citizens Against Pollution, Eco Sense, American U, California Communities Against Toxics, Nuclear Energy Information Service, Nuclear Age Peace Foundation, People's Action for Clean Energy, Iowans for Nuclear Safety, New England Coalition on Nuclear Pollution, Physicians for Social Responsibility, Kansas, Student Environmental Action Coalition, U. of Delaware, St. Joseph Valley Greens, Economists Allied for Arms Reduction, Kwanitewk Native Resource Network, Physicians for Social Responsibility, Atlanta, Los Alamos Study Group, Abalone Alliance, Fernald Residents for Environment, Safety & Health, Womens Action for New Directions, STAND, Center for Energy Research, Humans Against Nuclear Waste Dumps, Mescalero, Physicians for Social Responsibility, Colorado, American Friends Service Committee, Denver, North American Water Office, Students for Social Responsibility, CalPoly, War & Peace Foundation, North Carolina Waste Awareness & Reduction Network, Ohio Sierra Club Nuclear Issues Committee, Downwinders, Women's Environment & Development Organization, Mississippi River Basin Alliance, Ygdrasil Institute, Nukewatch, WESPAC (Westchester People's Action Coalition), Oregon Peace Works, San Luis Obispo Mothers for Peace, International Institute of Concern for Public Health, Save Ward Valley, GRACE Public Fund (Global Resource Action Center for the Environment), Environmental Defense Institute, Citizens Regulatory Commission, The ZHABA Collective, Northwest Ohio Greens, Arizona Safe Energy Coalition, Indian Point Project, No Escape, Citizens at Risk: Cape Cod, E-3, Wesleyan University, Wolf Creek Citizens Watchdog Group, Indigenous Environmental Network, Pax Christi USA, University of Maine Student Government.

The cities of Los Angeles, Denver, St. Louis, Philadelphia, Decatur, GA, Mt. Rainier, Takoma Park & Greenbelt, MD, Beacon NY, Falls Township, PA, Amherst, MA, Wadesboro, NC and Ventura, San Luis Obispo, Santa Barbara (CA), Marshall, Anson (NC), and Bucks (PA) counties.

And, according to a December 1995 poll, 70% of the American people.

These bills override environmental laws, pre-empt state environmental laws and regulations, weakens radiation protection standards, makes taxpayers liable for nuclear waste accidents, and threatens 50 million Americans with a Mobile Chernobyl.

It's a disaster for the environment.

Mr. REID. Among those that are opposing this legislation are the Physicians for Social Responsibility, Clean Water Action, the Students Environmental Action Coalition of the University of Northern Iowa, Eco-Action of Penn State University, Southwest Research and Information Center, Snake River Alliance, Alliance for Survival, San Luis Obispo Mothers for Peace, Los Alamos Study Group, Desert Citizens Against Pollution. These are only a few, Mr. President, of the organizations that oppose this legislation. There is not a single environmental group in the United States of America that supports this legislation.

We heard yesterday and we have heard time and time again, Mr. President, that the State of Nevada had nuclear testing, therefore, why do we not have open-armed acceptance of storage of nuclear waste? I say, Mr. President, some have said that since the Nevada desert has already been degraded from nuclear weapons testing, it is a logical place to store nuclear waste.

Somehow, this logic seems to contradict the old saying that two wrongs do not make a right. The suggestion assumes that these two activities have something in common. The only thing they have in common is posing danger to Nevada citizens and its environment.

We have just recently finished 50 years of the most dangerous period in America's history. During this period of time, the Soviet Union and the United States had tens of thousands of nuclear warheads pointed against each other.

Mr. President, as I said, just a few years ago, tens of thousands of nuclear warheads were pointed toward the Soviet Union and toward the United States. This dangerous era was ended successfully, I believe, Mr. President, in large part, because of what was done at the Nevada test site. That is, we tested the new weapons, the safety and reliability of those that were in existence. This, Mr. President, was a time of national crisis. All were called upon to do what they must in order to protect our country's security. The urgency of this national mission required things to be done in ways that, under less stressing conditions, would never have been permitted.

Well, just like the promises made by advocates for waste storage in Nevada, that was then and this is now. Then was a period of national crisis and danger. Now is one of peace and prosperity. Now is a time when we can surely do things right. There is no danger presently that would drive us to endanger our environment or our public by reckless and ill-conceived actions.

I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll. The bill clerk proceeded to call the roll.

Mr. MURKOWSKI. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. MURKOWSKI. Mr. President, with respect to disposal of high-level nuclear waste, this Nation is today at a crossroads. The job and the responsibility of addressing the disposal of spent nuclear fuel from our Nation's powerplants—is an obligation of this body. The time for fixing the problem is now.

There has been a lot of progress made. We have selected a permanent repository at Yucca Mountain. That is already done. It is underway. We have expended about \$6 billion, and that 5-mile exploratory tunnel will soon be completed. This is a positive commitment by the Congress to proceed with a permanent repository. We can build on this process.

This bill, Senate bill 104, continues the site characterization activities for a permanent repository. Make no mistake about it. But this is an ongoing process. In the meantime, we have an obligation to take this waste next year, in 1998. Well, this Senator from Alaska and the majority of my committee are of the opinion that a contract is a binding commitment.

The Federal Government, 16 years ago, entered into a contract with the nuclear industry to take this waste in 1998. We have no place to put this waste because Yucca Mountain isn't completed. We face penalties; we face litigation. It is estimated that the damages associated with the inability to fulfill the contractual commitment will run somewhere between \$40 billion and \$80 billion. That is an additional load on the taxpayers of this country. We need a temporary storage facility or we will continue to be storing this waste across the Nation for decades to come.

Where is the waste? Well, let's look at this chart. We have commercial reactors represented on the chart. We have shut down reactors with spent fuel on sites represented on the chart. We have 110 of the commercial reactors, 110 reactors in about 41 States. We have 10 shut down reactors, represented on the chart. We have one existing site for spent commercial nuclear fuel storage on the chart, is in the State of Illinois. Non-DOE research reactors—we have 38 shown on the chart. We have naval reactor fuel up in Idaho, up in Washington, and in Georgia. There are 10 of those sites. Department of Energy-owned spent nuclear fuel sites, about 12, are indicated on the chart.

So there is where we are. We have this stuff scattered all over the United States. We can choose now whether the Nation needs these 80 sites, or just 1—1 in the arid remote Nevada test site, where we exploded a series of nuclear bombs during the cold war, a site that

has been determined to be safe. It is a remote location. It has been well monitored by an experienced work force and a security force as well.

Now, if Yucca is licensed for a permanent repository, it will simply be a very easy task to move the spent fuel to the permanent repository from the interim facility this bill would authorize. Now, the problem is that Yucca isn't going to be ready until the year 2015. Some suggest, well, what happens if Yucca is not licensed or is found to be unsuitable? Will we need a centralized interim site anyway so that we will be way ahead of the game? The answer is, yes, regardless of what happens at Yucca, this is a step we should take and take now.

Critics have claimed that we can't store waste safely, that we don't have the technology. Nature itself suggests that a geologic repository, which this bill supports, is the best long-term answer. Let me refer again to a natural geological nuclear waste repository that has been in existence for a long time. Such a repository is in Gabon, in Africa. There, approximately 1.8 billion years ago, at a place called Oklo, scientists have proven that naturally occurring, highly enriched uranium began a spontaneous nuclear reaction producing almost a ton of plutonium, as well as all of the other fission by-products that occur in spent fuel from modern nuclear power plants. That is the history. That is a fact. It actually happened, under the watch of Mother Nature. Now, Mr. President, when it happened, it happened just a few feet beneath the surface. No geologists studied the site before the waste was "stored" there. There was no engineering barriers around the so-called spent fuel. However, scientists have proven that the plutonium and the other fission products did not migrate away from that site. There is nothing unique, Mr. President, about the geology of Oklo. This "experiment" shows that radioactive waste can be successfully contained within a geologic repository. Mother Nature did it 1.8 billion years ago. Now we are talking about the science, the technology, and the application of mankind in the process. Well, it certainly seems to be taking equally as long.

When I said that we had designated Yucca as a permanent repository and that we spent some \$6 billion in the process, and will probably expend as much as \$30 billion, it is important to recognize what comes next. First, it has to be deemed viable. That means the scientific information gathered by 1998 will show that nothing is there that would disqualify Yucca Mountain for a permanent repository. That is done next year, in 1998. What are the odds on that? They tell us about 90 percent.

The second factor is the suitability. Yucca Mountain must be suitable. It must be a suitable site for a permanent repository under the guidelines issued by the Department of Energy. When is

that supposed to be completed? In the year 2001. What are the odds on that? They tell us about 80 percent. Then, of course, it has to be licensed, licensed by the NRC, who issues the license for a permanent repository. Well, for the date of that we can only rely on the former Secretary of Energy O'Leary, who indicated that would be about the year 2015.

Talking about this waste brings us to the reality that we are going to have to transport it. You simply can't leave it at these sites. So let's talk a little bit about the transportation issue, because this is on the minds of many Members. This map accurately shows, from 1979 to 1995, the movement and transportation routes of 2,400 individual shipments of waste around the country. The interesting thing, Mr. President, is that they go through every single State of the 48, with the exception of South Dakota and Florida. All the States are represented here. That is the harsh reality. We have been moving this waste for 16 years. Why hasn't it been on the front pages of the papers? Because it has been a nonevent. It has moved safely. It has moved from reactors. It has moved from Navy facilities and from Army facilities, and it has been on railroads and on highways, and it has been under the auspices of the Department of Energy, and it has been safe.

We have heard in this debate, primarily from my good friends from Nevada, that somehow this waste is a new threat that America has never faced before. That is just poppycock. Emotional statements have been made time and time again, suggesting that somehow the health and safety of 50 million Americans will be threatened. And there have been references to the unfortunate Chernobyl accident. That accident, as everybody knows, involved a graphite reactor without a containment building. Electricians were in there doing an operation they weren't supposed to be doing. They didn't have the training. They bypassed the safety procedures, took the reactor critical, and the results were very unfortunate. But it was human error, Mr. President. The graphite reactors are not the type that we have in the United States. Yet, this effort to try to address an obligation to our Nation's waste has been referred to as a "mobile Chernobyl."

Here is what we have been moving, Mr. President. Again, do we want to move it to one site in the Nevada desert now, as we wait for the development of our permanent repository? Or do we want to leave it for another 15, 16, or 17 years, actually, in the 80 sites in 41 States? No fatality, injury, or environmental damage has ever occurred in the United States because of radioactive cargo movement. That is just a fact. We have taken steps to ensure that the risk is as negligible as possible.

Some of our friends would imply that if this bill doesn't pass, then nuclear waste won't be shipped on our Nation's

roads. Well, that is simply not true, Mr. President. Let's take a look at the routes used—the routes used for 15 years, again, for the thousands of fuel shipments. Some say they didn't know the fuel shipments took place. Again, as I have said, that is because they are uneventful. Trucks carrying the casks have been in accidents, but the casks that contain the nuclear material have performed as designed. They have not broken open. The nuclear disasters that the Senators from Nevada have referred to, Mr. President, simply haven't happened.

Now, we have heard claims that the number of shipments that would occur under Senate bill 104 is an unprecedented amount. Well, that is simply not true. We have our storage in our reactors in the cells adjacent to the reactors and the pools, and those are filling up. We need to relieve that congestion, and that is the whole purpose of the interim retrievable storage. We currently have about 30,000 metric tons of spent fuel in this country. But the French alone have shipped that amount of spent fuel all over Europe—for that matter, all over the world. This is not just history. It is happening today. It is happening all over the world.

The Department of Energy, as a matter of fact, is transporting spent nuclear fuel all over the country and all over the world as we speak. Here it is in the country. Let's take a look at a chart of the world. Here we have it, Mr. President. There seems to be a double standard here when the Department of Energy claims that it cannot possibly fulfill its obligation to the U.S. electric ratepayers to take spent fuel. Why is it doing so in foreign countries? Well, here they are. In Europe, there is Austria, Belgium, Denmark, Turkey, Iran, Pakistan, Australia, throughout South America, and Peru and Canada. We are taking this now under agreements that have been made. Where is it going? It is going to the Savannah River in South Carolina. This chart shows the actual times of delivery from 1996 to 2009. These are the countries to which we have committed taking their waste. So it is a double standard, Mr. President. Why are we doing it for foreign countries? We are not doing it for our own nuclear industry.

You may ask why the taxpayers are paying for the Department of Energy to transport and store nuclear waste in foreign countries while American ratepayers are left out. All the countries in color on this chart ship fuel to the United States for storage at the Department of Energy facilities. It doesn't seem to be a mystery to some. But it is a mystery to me. Another mystery is why many of the same groups that most actively oppose resolving our domestic fuel storage problems were most supportive of taking nuclear waste from foreign countries. Think about it. We are taking waste from Russia—military waste—because we deem that lessens the proliferation

threat. If they support taking nuclear waste from overseas, can the safety of transportation be an issue? One wonders why it is now. How can it be safe for the Department of Energy to ship spent fuel halfway across the world but not across a few States? They don't explain that very well, do they?

Actually, if you look closer, you see that the Department of Energy transports nuclear waste across the United States. Let's take a look at a map of the United States. It goes into Hanford. It goes into Savannah; Hanford in the State of Washington. This shows the American research reactors at our universities. They ship fuel for storage at DOE facilities. They are scattered all across the country. The various universities are Ohio State, MIT, the University of Virginia, and Oak Ridge. We could go on and on. They are all across the country. That is why I contend that we have a double standard.

Why does the Department of Energy pay to transport and store nuclear waste from foreign countries but won't do its own duty to the U.S. power reactors that have paid for the service? They have paid for the service. The ratepayers that depend on nuclear energy paid \$13 billion to the Federal Government. Where is the money? It has gone into the general fund. It is not an escrow account. But there is a contract signed for next year. The Department of Energy will say that they take foreign fuel to help with the non-proliferation. That is all well and good. But spent nuclear fuel is spent nuclear fuel regardless of where it is. If transportation and storage is safe for some, why isn't it safe for all?

I think this just proves the point that the obstacles to moving our Nation's spent fuel are political. They are not technical. We have moved it. We move it from our research reactors all over the country. We move it from other countries in the world and bring it to the United States to Savannah, and have been doing it for some time.

My bill, and the committee bill, S. 104 of Senator CRAIG and others, provides the authority to coordinate a systematic safe transportation network to move spent fuel to a storage facility under Senate bill 104. The Department of Energy is required to use—"required"; it is not optional—to use NRC-certified transportation containers to transport fuel along special routes chosen by DOT radioactivity transport regulations and considerations set out in the bill.

Let's take a look at how that is shipped because I think it is important to recognize the care that goes into this. This is a truck that is moving over the highways of the Nation probably today; moving some kind of fuel in a cask probably to the Savannah River site in South Carolina. It is moving safely. It is moving in a special container. These are probably spent fuel rods. They are radioactive. But by the same token, care and engineering technology has gone into this. I find it

surprising to note that—and the comment was made in the debate that the environmental groups don't support this legislation. I find it further perplexing that these groups on the one hand are opposed as we all are to the increase in greenhouse gases yet the only current technology available to reduce it dramatically is nuclear energy. Our use of nuclear energy reduces more than 140 million metric tons of carbon dioxide emissions each year, not to mention sulfur dioxide and various other pollutants. This is the contribution that nuclear energy contributes to air quality in this country. Some suggest that the opposition by the environmental groups is simply to shut down the reactors because they do not believe in or don't approve of nuclear energy or nuclear power.

But they don't want to recognize that about 22 percent of our Nation's power is generated by nuclear reactors, and, if you reduce or eliminate the nuclear power industry in this country, you will have to replace it with something. It will probably be replaced with carbon fuels. And there is an emission concern there.

So I say to those that are opposed to this legislation that they have an obligation to come up with something that answers the question of what we do with our spent fuel. I think that is what this bill does.

Further safeguards have been taken in this legislation to provide that transportation cannot occur until the Department of Energy has provided specific technical assistance and funding to States affected by the transportation route, Indian tribes, and for emergency response planning along the transportation routes. That isn't what is done now. But that is what is required in the bill to make it that much safer. The language builds on what is an already safe system for transporting spent fuel in this country. As I have said before, the public has never been exposed to radiation from spent fuel cargo even in accidents. Between 1971 and 1989 the Department of Transportation tells us that there were seven minor accidents involving trucks carrying waste: Flat tires, and various other things. But no radioactivity was released in any of the accidents. That is because transportation canisters are designed to maintain their integrity during severe accidents. They have been used for thousands of safe shipments over the years. As a matter of fact, they were designing casks at one time when they contemplated flying the fuel. It was suggested that the technology existed for casks to be designed for a 30,000-foot free fall. And I am told that they could design it.

Nevertheless, the canisters that are depicted here in the picture, the design approved by the NRC for spent fuel transport have demonstrated a remarkable ability to withstand falls of 30-foot drops. And these are tests that were made into a national unyielding surface. There was no penetration from a

drop of 40 inches onto a steel spike; no penetration being engulfed in 1,475-degree temperature fire for 30 minutes; no penetration, submerged under 3 feet of water for 8 hours; no penetration.

So, despite what you may hear, engineers at the national labs tell us that the test conditions that these casks are subjected to are much more rigorous than any that they would face in real, live accidents.

These casks have been tested in some more rigorous ways. Probably it would be interesting to watch because they have been run into by locomotives, and crashed into walls at 70 miles an hour. If any of the Senators or the staff want to see the video of these tests we would be happy to provide them with the tapes to view and to keep.

So I suggest that we face facts. The history of the nuclear waste shipments is that they are moving almost as we speak, continue to move, and will move tomorrow but they are not going to be carrying the waste that they were contracted for. They will be carrying other wastes from other countries from research reactors from our universities. And it fails me to know why we are excluding the waste that we contracted for 16-17 years ago to take next year, and we have no provision to take that waste. That is what this bill is all about. S. 104 provides safe transportation with a perfect record, and I think it makes it even safer.

So as a consequence, that tells the story of the transportation system.

Let's look very briefly at what we are proposing. This is the location for the waste storage at the Nevada test sites that we have used for the previous 800 nuclear weapons tests. That is what it looks like. It is a pretty barren area. You see some roads for access, and mounds where 800 nuclear weapons tests were made. Why was this area picked? Probably there are a lot of reasons. It is remote. That is certainly one. The weather is pretty stable out there. You can observe the testing very well. They had a trained work force. To some extent I suppose there was some economic reasons. But it is not my State, and it is not appropriate that I evaluate the rationale that went into it. But that is the site.

When we look at all other factors and recognize that nobody wants to store waste, the fact that we have it in 40 to 41 States, and the fact that we are going to have to move it regardless of whether it is being moved to a temporary repository or eventually to a permanent one, the transportation factor is a given.

So I hope that those that are concerned about transportation recognize a couple of things: One, they may have waste in their State already. It may be military waste. It may be naval waste. It may be waste from some other activity associated with their university, or they may have nuclear power. If you want it to stay there indefinitely with no action, then that is the status quo. And that is where we have been. But if

you want to move it out of your State, you have to move it someplace. The question is where do you move it?

We have determined that this is the permanent site for a nuclear repository. When that was chosen, it was chosen over potential sites in the 50 States. Why was it chosen? Because it was deemed to be, of all the sites that were evaluated, the best site with the highest likelihood of this being named the permanent repository when we get through with the process now underway. That is the process of viability, suitability, and licensing. Then it goes in there permanently under our policy. But the idea of moving now to accept this area for a temporary repository until we can complete Yucca Mountain is what this legislation is all about because it suggests that it would move in those casks by transportation routes, either surface railroad or highway, in these casks out to a pad, out in the desert where it would be monitored. And those casks would be held there so we can fulfill our contractual agreement as we recognized that the storage at our nuclear power generator sites are filled up. They would be moved out to this pad and be monitored until such time as the permanent repository is completed.

On the chance that the permanent repository is not licensed and it doesn't get through this viability, suitability, or licensing, this bill provides that we still have an obligation to address a resolve. That would require the President then to find another site. We have gone through all the 50 States. If this one is not suitable for a permanent repository, it requires the President to find one. If he doesn't find one, he comes back and designates that this be the site.

Now, some suggest there should be some other consideration. Maybe we should do something like the base closing procedure, where we name a group of qualified people to determine a site. The problem we have with this legislation is nobody wants to face the reality of making the decision now. They want to put it off. The administration does not want to have it happen on their watch. They would just as soon have it happen on another's watch. We could easily put this off to another Congress, but we are cheating the taxpayers because the liability for nonperformance of the contract is going to face us next year. The longer we keep that waste in violation of the contractual terms, the greater the liability to the taxpayer for nonperformance, because Government simply passes that liability on to you and me, and we pay for it.

As I said, we have spent \$6 billion here at Yucca. We are going to be spending about \$30 billion by the time it is completed. We have been transporting waste fuel around this country for 16 years. We sit, today, with 80 sites in 41 States and we are even having some Members suggest that all they want from this legislation is the assurance that it will not be put in their

State. I suppose we could go back to a 6th grade mentality—and pursue a series of amendments from virtually everybody, in all the 50 States with the exception of one. I would hope that would not happen. I would hope we can recognize our obligation as parliamentarians and address this with a resolve that suggests the way to move on this thing, and move now, is as proposed under this legislation, which would provide, after the viability is determined on Yucca Mountain as being a permanent site, which is anticipated sometime next year, to then allow a temporary repository to occur in the Nevada desert at the Nevada test site.

If somebody else has a better suggestion for a response to the obligation we have now, why, I am certainly willing to consider amendments to the pending legislation.

Mr. President, recognizing the time element that we have, I ask how much time remains on the side of the proponents?

The PRESIDING OFFICER. The Senator from Alaska controls 40 minutes and 50 seconds.

Mr. MURKOWSKI. I thank the Chair. Mr. President, I yield to my colleague at this time.

The PRESIDING OFFICER. Who yields time?

Mr. BRYAN. Mr. President, I yield myself 20 minutes.

The PRESIDING OFFICER. The Senator from Nevada is recognized.

Mr. BRYAN. Mr. President, I want to return to what I think is the fundamental flaw in this legislation, and that is that it is unneeded, unwise, and unsafe. When you ask who wants this legislation, the only one that is really pushing it, the driving force, is the nuclear utilities. That is where this all comes from. Every environmental organization in the country has expressed its opposition. The scientific community—the Congress established the Nuclear Waste Technical Review Board. I will repeat for the benefit of my colleagues, in 1989 a commission was part of the review process. They said there was no safety advantage to interim storage. In 1996, we have a report from the Nuclear Waste Technical Review Board that said there is no urgent technical need for centralized storage of commercial spent fuel. There is no safety factor to consider. And the same technical review board, constituted with new members in 1997, has offered testimony to the effect that it would be a very unwise decision because it would interfere with the permanent siting process.

That was testimony that was given on February 5. So, if we are asking about science and the scientific community, they have expressed themselves. They said this is not a good idea. If you are asking about the environmental community, where they are coming from, they are saying it is not a good idea.

Yesterday, I spent a few moments talking about the specifics of the bill.

Let me just very briefly retrace some of those issues for us. In effect, what this legislation does is to gut a process that was a bipartisan piece of legislation, the National Environmental Policy Act of 1969. If you look at page 47, and you go through a number of the specific provisions there—and we will debate this, I suspect, at greater length during the course of the week—but the act virtually emasculates the provisions of the National Environmental Policy Act. It says, yes, there will be an environmental impact statement, but the statement may not consider the need for interim storage, the time of initial availability, any alternatives to spent fuel storage, any alternatives to the site of the facility, any alternatives to the design, the environmental impact of the storage beyond the initial term of the license, which is 20 years. This makes an absolute mockery of any kind of profession that this follows NEPA, the National Environmental Policy Act, of 1969.

There are other provisions as well that refer to the preemption of all Federal environmental laws. That is section 501. We have talked about that extensively during the course of the debate. There are standards which are compromised in this provision. For example, there is a statutory provision that occurs on page 56 that indicates, rather than the Environmental Protection Agency having the ability, independent and unfettered, to make a judgment as to what the correct standard would be in terms of radioactive emission exposure, it sets a 100 millirem standard by statute and requires the EPA to affirmatively prove that the overall system performance standard would constitute an unreasonable risk to health and safety.

We did not do that anywhere else in terms of the WIPP facility which was debated last year. The two able Senators from New Mexico made forceful statements that they believed, because the WIPP facility was going to be operational in their State, they had the expectation that EPA would establish the highest possible standards to protect the health and safety of New Mexicans. Who among us could disagree with that? But that is not the standard for us here in Nevada. The EPA is constrained and limited, in terms of what it can do, and here is an example of 100 millirems of radiation, S. 104. There is safe drinking water, other low-level waste facilities—the WIPP facility, which I just mentioned, has a standard of 15 millirems during the course of a year. So this thing is absolutely so phony in terms of any kind of protection for health and safety, it ought to be something of concern to any legislator, irrespective of where the final destination may be.

Let me say, the National Academy of Sciences—these are scientists, not people selected by the Governor of Nevada or the Nevada congressional delegation—go through a whole list of things they recommend. They recommend a

risk-based standard rather than a 100 millirem standard. They have recommended the protective standard be defined by a critical group: a small, relatively homogeneous group be representative of those expected to receive the highest doses. That is not included.

They maintain that, in terms of the length of time, because nuclear waste is lethal for thousands and thousands of years, there should be no cutoff period of time, that there must be an ability to protect for thousands of years. What does S. 104 provide? That you can only consider the first 1,000 years. I suppose, whether you are an advocate for term limits or not, we would all agree that 1,000 years is not going to affect anybody in this Chamber. But, I mean for something that is deadly for 10,000 years and beyond, that is simply irresponsible to put those kinds of handcuffs on.

Human intrusion—all of the scientific community acknowledges there is no scientific basis for assuming there would be no human intrusion during these thousands and thousands of years. The statute we are dealing with, S. 104, directs just the contrary, to make an assumption that there is to be no human intrusion.

The National Academy of Sciences said that these raise complicated policy issues. There ought to be opportunity for wide-ranging input from all interested parties. These are set by statute, under S. 104—no public comment.

So, I must say that in terms of science, in terms of fairness, in terms of health and public safety, this piece of legislation is a disaster not only for my State but for America.

I want to speak for just a moment about the transportation issue and some of the film footage that has appeared. First, I think it is important for us to understand that, although Nevada, under this legislation, is the ultimate repository on an interim basis, there are some 43 States, 51 million Americans who live within a mile of each of these major corridors. The red depicts the highways, the blue depicts the rail.

You are going to have, wherever you may be looking on this map here, you are going to have roughly 16,000 shipments that would pass along these corridors—16,000. It has been suggested that the Department of Energy is experienced, but I think to put this in some context, Mr. Dreyfus, who was the head of the Radioactive Waste Management Office, an individual well known to my colleagues, having testified before the Energy Committee on a number of times, says this: "Material like this," referring to nuclear waste, "has been moving around for a long time. So that is not a technical challenge," he says. "But compared to the kind of campaign what we are talking about, what the industry has been doing up to now is trivial. We are talking about a magnitude of many times greater. We are talking about 16,000 shipments."

Since 1975, the Nuclear Regulatory Commission reported shipments that are sent by rail or by truck averaged approximately 900 miles or less. We are talking about thousands of miles. As the occupant of the Chair knows, our States are in the West and far removed from most of these reactor sites. So, I think it is important to make that point.

Let me add a couple of other things, if I may here. First of all, the casks that have been shown have no relevance to this debate—none. The casks that would be used for shipping have not been designed. They are not in existence. The casks that are used in the film prepared by the Nuclear Energy Institute refer to a previous generation of smaller casks. Those are not what is contemplated. Those are not what is contemplated. We are talking about a new generation of casks, casks that do not meet standards which we believe every such cask should meet.

For example, it requires a 30-minute exposure to a fire at 1,475 degrees. However, diesel fuel burns at an average of 1,800 degrees and can reach 3,200 degrees. So the 30-minute proposed standard for these yet-to-be-designed and produced casks does not address real world accidents, where train wrecks can burn for hours, if not for days. None of the tests would require that kind of protection.

The NRC has estimated that 6 out of every 1,000 rail accidents could cause fundamental damage that will cause the cask to fail. Given the 16,000 shipments that are contemplated, that comes to 96 accidents where the NRC-approved standard would fail. I submit that is not great comfort to those millions of Americans who are going to be along the route.

The NRC claims the cask design will prevent radioactive leakage in severe accidents. But the cask design has never—repeat, never—been tested in lifelike situations. In one computer simulation, the NRC chose four real-life severe transportation accidents and applied these conditions to a cask meeting NRC specs.

In one of those real-life accidents, which involved a 1982 train derailment and fire in Livingston, LA—this was an accident that occurred and a fire that resulted—the NRC publicly acknowledged that the high temperatures would cause an NRC-approved cask to fail. In their words, “the radiological hazard would exceed compliance values by up to a factor of four.”

This is not some theoretical accident, a hypothetical. This is an accident that occurred in Livingston, LA, in 1982, and the NRC said the standards they propose would not have protected a cask under their proposed design from releasing radioactivity. That is not much comfort, that is not much assurance for those who are going to be along the highways and railways.

Let me address an issue that I think has not received the kind of attention that it should, and that is, this bill is

a bailout for the nuclear power industry. Dating back to the time of the inception of the Nuclear Waste Policy Act, it was always agreed that the utilities themselves should pay for the storage and ultimate disposition of high-level nuclear waste, and the mechanism established was to establish a nuclear waste trust fund in which ratepayers would pay at the rate of 1 mill for each kilowatt hour generated into this trust fund. That is the current way.

Here is what this bill does. Rather than have the ratepayers pay for the ultimate cost, this bill very cleverly transfers the liability and responsibility to the American taxpayer. The year 2033 is the last year, under currently licensed nuclear reactors, that there will be reactors in operation. Currently, under General Accounting Office actuarial projections, the fund is from \$4 billion to \$8 billion underfunded in terms of what will be required, because as each reactor goes off line, it no longer contributes to the fund. The last reactor goes off line in the year 2033, and it is required that the expenditures, in terms of dealing with that waste, continue until the year 2071. So years after the last mill is deposited into the nuclear waste trust fund, expenses will continue. As I have indicated, right now the General Accounting Office says this fund is \$4 billion to \$8 billion underfunded.

It is contended that the ratepayers have not gotten what they bargained for. That is certainly not true now, and the surplus that is in the account is designed to take care of those years from 2033 to 2071, where nothing will come into the fund by way of a mill-tax levy because there will be no power generated from those reactors.

Here is a very, very clever way of shifting the liability to the American taxpayer. This bill, in its present form, caps the amount of contribution, even though the current fund is underfunded by \$4 billion to \$8 billion at 1 mill per kilowatt hour, and after the year 2003, it says that the only mill tax that can be collected would be the amount necessary to pay for the appropriation from the fund that year, providing no revenue for the outyears.

So this is corporate welfare, this is corporate pork, this is a new entitlement program which will cost the American taxpayers literally billions and billions of dollars in the outyears.

Everybody acknowledges that the 1998 deadline that was put into the act in 1982 cannot be met. I would say parenthetically, that was not a scientific date that was put in. Indeed, there was resistance in 1982 because it was felt that that time line was too short. This was a deadline that was pushed by our friends, once again, from the nuclear utilities. So it is unfair to blame the Department of Energy and the scientific community for 1998. This was a deadline pushed by the utilities.

I believe that there is equity and fairness to be provided to the rate-

payors, because after 1998, they will not have permanent storage available. In each of the Congresses in which I have served, we have offered legislation that would entitle the utilities to an offset; that is, to the extent that the storage would not be available in 1998 and they would incur additional expense, as they will, that should be an offset or a reduction in the contribution that they pay into the nuclear waste fund so that the utility ratepayers do not pay twice. I think that is fair. I think there is a reasonable argument to be made there, and the administration believes that.

As recently as this past month, there were discussions to provide compensation to the utilities because permanent storage will not be available after 1998, and it was rejected by the utilities. They do not care a wit about that. That is not what they are interested in. They are interested in getting the taxpayer to bail them out for the money that will take beyond the year 2033, to the year 2071, to, in effect, take care of the expenses of the nuclear waste that they generated—that they generated—that they have made profits on over all these many years. So there is not an argument of equity we are addressing here, because not a single provision in S. 104 addresses the question of equity.

We have a piece of legislation which we have introduced, again, this Congress which we have previously introduced, which says, “Look, after 1998, yes, you don’t get the permanent storage that was contemplated, we understand that.” There is no conceivable way that could occur. If this bill was passed tomorrow and signed into law, the 1998 deadline could not be met for at least probably to the year 2001.

The administration has offered to provide compensation to reimburse utilities for the additional costs incurred, and our legislation would specifically do so. So this has not one thing to do with ratepayers being charged twice. They are given an opportunity for relief, if they want it, in the legislation that my senior colleague from Nevada and I have introduced. So let’s put that to rest.

The lawsuit. The lawsuit changes nothing. The lawsuit was finalized last year before we concluded our date on 1936, the predecessor to S. 104, and the lawsuit simply provides that there is a legal obligation on the part of the Department to take the waste at some point down the line. There is a legal obligation. It in no way suggests that the waste would be physically removed by 1998, and it could not.

So when you look at the contract, each of the utilities under the 1982 act entered into a contract with the Department of Energy, and that contract simply says that in case there is an avoidable delay, the utility is entitled to an offset in terms of what is being paid into the nuclear waste fund by the amount of additional expense they incur. That is the remedy, that is fair, that is the law.

The distinguished Presiding Officer is suggesting that my time has about run

out. I reserve the remainder of the time and yield the floor.

The PRESIDING OFFICER. Who yields time?

#### VISIT TO THE SENATE BY FRENCH PARLIAMENTARY DELEGATION

Mr. MURKOWSKI. Mr. President, I ask unanimous consent that the Senate stand in recess for 2 minutes in order to allow the Senate to greet a French parliamentary delegation that is visiting us.

#### RECESS

There being no objection, the Senate, at 3:54 p.m., recessed until 4:01 p.m.; whereupon, the Senate reassembled when called to order by the Presiding Officer (Mr. KEMPTHORNE).

#### NUCLEAR WASTE POLICY ACT AMENDMENTS—MOTION TO PROCEED

The Senate continued with the consideration of the motion to proceed.

The PRESIDING OFFICER. Who yields time?

Mr. REID. Mr. President, I yield myself 25 minutes.

The PRESIDING OFFICER. The Senator may proceed.

Mr. REID. Mr. President, first of all, let me respond to a number of things brought up by my friend, the manager of this bill.

First of all, he is right about nuclear power. It produces a lot of electricity in the United States. But everyone recognizes those days are numbered. The average life expectancy of nuclear power in the United States is 15 years. After that it is going to be gone.

As I indicated yesterday, it might be 25 years with one of the reactors and it may 5 years with another. But nuclear power is all through in this country. It simply is too dangerous, and everyone knows that.

I will also speak to the question of what to do with spent fuel. That question has been raised. Senator BRYAN and I continually answer the question. It is very easy. We should leave it where it is—capsulated in the spent fuel rods kept in dry cask containers.

As Senator BRYAN mentioned today and I mentioned yesterday, there would be no fire that would damage the dry cask storage containers as would happen in a diesel truck or train. There would be no accident that would occur driving at speeds that would rupture the casks. It is safe and it is cheap. That is what should be done with nuclear waste for the foreseeable future.

I will also state, Mr. President, that the question still has never been answered: What about the environmental groups? Hundreds of them oppose this legislation—not two or three, not 20 or a couple score, but hundreds that are now a part of the record.

No question has ever been answered as to why these environmental groups

oppose the legislation. They oppose the legislation because it is dangerous for the environment. It would be different if there was an equal balance, half of them supported it and half of them did not. Every one of them—it is exclusive—all environmental groups oppose this legislation.

Let me also say, Mr. President, one of the things being lost in this debate is the fact that as we speak hundreds of millions of dollars are being spent in characterizing the repository at Yucca Mountain to determine if in fact that site is going to be scientifically safe for storage of nuclear waste. I repeat, this past year hundreds of millions of dollars have been spent. Next year the same—hundreds of millions of dollars will be spent characterizing that site.

Let us not lose sight of the fact that this legislation is a way to avoid the permanent repository. The very powerful, greedy nuclear industry that is promulgated by the utilities, basically what they want to do is short-circuit the present system. They do not want to take their chances at Yucca Mountain in having a safe, scientifically characterized site. They want to circumvent the system. They want to do away with environmental laws. They want to void the present law that says you cannot have temporary storage in the same State where a permanent site is being considered.

Why have we not heard anything about Yucca Mountain? That used to be the big debate. Because the nuclear industry wants to avoid Yucca Mountain. They want to do it the cheap way.

We have heard raised continually the fact that Nevada used to be a place where they set off bombs, atmospheric tests and underground tests, and more than 900, almost 1,000 of those tests have been detonated.

As I stated, the State of Nevada has sacrificed significantly for that. We did it because there were hundreds, thousands, tens of thousands of nuclear warheads pointed at the State of Nevada and the United States. Conversely, the United States of America pointed their weapons at the Soviet Union. The cold war has terminated. I repeat, this ended a dangerous era. It was a time of national crisis. We were all called upon to do what was necessary to protect this country. The State of Nevada did its share. We did what was right at a time of crisis.

The time has come now, though, to understand that that was then and this is now. There is presently no danger that would drive us to endanger our environment or public by reckless and ill-conceived actions. That is what this legislation is.

There is no nuclear waste crisis that any objective and competent study has been able to uncover. The Nuclear Waste Technical Review Board has testified to the lack of urgency and crisis with respect to moving spent nuclear fuel from its generation sites. The chairman of the board, under the direction of this Congress, testified last

year, and now the new chairman this year, that "There is no urgent, technical or safety reason to move spent fuel to a centralized storage facility." So there is no emergency.

Moreover, existing contamination from early nuclear tests is not at all comparable to the potential contamination from premature and reckless storage of spent nuclear fuel in Nevada.

Mr. President, one transportation container of spent nuclear fuel contains about the same amount of radioactive waste as 200 nuclear tests. One transportation container that will travel through the State of Colorado and many other States in this country contains the same amount of radioactive waste as from 200 nuclear tests.

We are contemplating more than 15,000 shipments of spent nuclear fuel. Some of these shipments will have two containers. So more than 3,000 times the amount of contamination from the nuclear testing program—3,000 times as much would be stored in the repository.

Measured another way, each nuclear explosion generates 125 pounds of radioactive material per megaton of yield. The average yield of tests conducted in Nevada is much less than the maximum yield permitted under the limited test ban treaty. Assuming the average yield to be about 85 kilotons, the total testing program in Nevada would have generated only about 5 tons of radioactive waste.

They are trying to move, with this cheap legislation, 70,000 tons of nuclear waste to Nevada. So anyone who compares the nuclear tests in Nevada, which build up 5 tons of radioactive waste, are either exaggerating, deceiving the American public, or do not know what they are talking about.

And anyone who wants can make their choice of the three. The fact is, scientifically, we have 5 tons of radioactive waste compared to 70,000 tons that they are going to try to haul along the railways and highways of this Nation.

Is it any wonder, Mr. President, that entities—cities, municipalities, counties—throughout this country have passed resolutions saying: Do not bring it through our cities.

Complete and enduring isolation of this highly radioactive material is necessary if we are to avoid many times the danger and damage caused by the nuclear testing program.

Mr. President, there has also been a lot of debate on this floor about onsite storage of spent nuclear fuel: It is going to break the country. It is going to break the power generating companies.

Well, let me just say this. This is, for lack of a better description, a scare tactic. It has no foundation in fact. Those who are propounding this have dismissed any thought of risk to the environment or to public health and safety, and any mention of such risk is waved away as scare tactics.

The Nuclear Waste Technical Review Board—remember we keep referring to