

Citizen's Watch



Plutonium Plans at NIF

Weaponers at Livermore Lab are poised to conduct experiments, also called shots, with plutonium in the National Ignition Facility (NIF) despite serious questions about safety, cost and scientific relevance.

Documents obtained by Tri-Valley CAREs through litigation under the Freedom of Information Act disclose that the Lab has known since 2009 (but never made public) that it will be unable to contain the radioactive debris from plutonium shots in NIF. Nonetheless, the plan is moving forward.

A little background: According to the Lab's environmental impact statement (EIS), the use of plutonium and other fissile materials at NIF would increase its output of nuclear waste by 50% and worker exposure to radiation about three-fold. Those calculations were predicated on utilizing a small round containment vessel to surround the experiment and capture the debris. After each shot, that vessel would be removed and disposed of as radioactive waste.

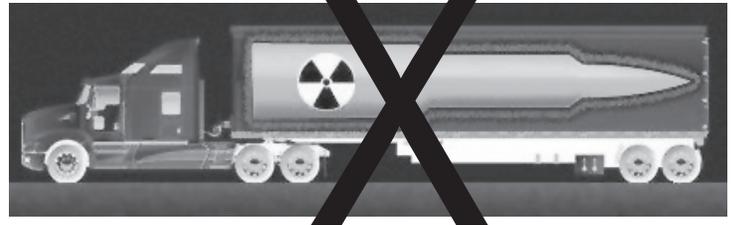
Now we know that the Lab could not figure out how to get the laser beams inside the small vessel. And, so, they decided to jettison the containment vessel but not the proposal to use the lasers to vaporize plutonium.

Instead, the Lab decided it could maneuver an "end run" around the EIS by substituting either plutonium-242 or 244 for plutonium-239, the isotope predominate in nuclear bomb cores. All three isotopes are plutonium and radioactive, but 242 and 244 have longer half-lives, meaning they are radioactive for a longer duration but are less "hot" than 239 due to their slower rates of decay.

One "assumption" listed in the documents is that the Lab will be allowed to splatter the two longer-lived plutonium isotopes inside the NIF without an effective means of containment. Another is that there will be at least 100 of these plutonium shots, conducted over a 10-year span.

A third assumption is that the Lab will be able to prevent the plutonium wastes splattered around the NIF from exceeding the transuranic threshold. A fourth is that the plutonium debris will ablate uniformly (meaning not clump up). A fifth assumption is that the airborne radioactivity escaping into the building will not exceed legal levels. However, the experiments might "generate airborne contamination that exceeds the derived air concentration" (i.e., the legal limit). In this manner assumptions are made and then contradicted within the same document.

Continued on Page 2...



Bomb Shipments a No-Go!

We are pleased to announce that plutonium bomb cores will not be shipped to Livermore Lab. This is a huge win for public health and environmental safety.

When we first heard of the National Nuclear Security Administration (NNSA) plan to ship plutonium bomb cores from Los Alamos Lab to Livermore Lab for "environmental testing" up to six times per year, we vowed to stop it. Trucking plutonium bomb cores thousands of miles is dangerous. Further, Livermore Lab has no authorization to handle full bomb cores, having failed a security test! The NNSA plan would have issued security variances while the bomb cores were on site.

Tri-Valley CAREs circulated a petition to show the opposition to this plan and quickly gathered over 3000 signatures (*thank you*). We brought the facts and these petitions to decision makers in Washington, DC. At our request, Senator Dianne Feinstein sponsored a bill that required a cost analysis before the NNSA could move forward with the shipments. Nearly a year passed with no analysis, and no shipments.

Recently, her staff informed us that we had won – at least for now. NNSA will not transport plutonium bomb cores to Livermore, requiring a surge in physical security. To satisfy near-term needs, said the appropriations subcommittee professional staff, NNSA is pursuing an alternate certification approach using a surrogate material that would enable environmental testing without a security surge. The earliest NNSA might try again to use the Livermore Lab equipment with plutonium would be 2017, but it is likely they may never do so. Plus, NNSA would still owe that cost study to Congress before the shipments could begin.

At Tri-Valley CAREs, we will keep the pressure on to ensure the plan does not rear its ugly head again.

Perhaps most shocking, one document suggests that a “mix” of plutonium-242 with some weapons grade plutonium-239 may be considered for use in NIF even absent a working containment vessel.

The most recent documents suggest that the plutonium experiments in NIF may also contaminate the laser optics. One report states that the “efficacy” of any potential methods for cleaning plutonium debris off the NIF optics is uncertain.

Additionally, machining techniques to create plutonium targets for NIF have not been perfected and new equipment must be designed and built. Estimates for machining one plutonium target for use in a single NIF experiment reach tens of millions of dollars. No cost estimates are given for the whole 100-shot campaign, or for waste management and cleanup.

And, as one weapons expert now retired from Livermore told us, contaminating NIF with plutonium may make the facility unfit for unclassified experiments in the future. NIF has a ceiling of 20% of its shots for any purpose that does not serve the nuclear weapons program; it could be lowered to none.

The nation has no need to do plutonium shots at NIF. Moreover, it is unclear how much scientists will discover about plutonium-239 by conducting experiments at NIF with non-239 isotopes.

We have been raising questions with members of Congress, NNSA Headquarters, and other agencies. The Senate’s Fiscal Year 2015 appropriations language would prohibit money from being spent on plutonium in NIF. It is unclear though what a final bill might say, or if a final bill will be passed. There are senior management officials at NNSA with concerns about the program, but it is not clear any will oppose it.

We will continue our efforts until the program is terminated. Broad public opposition to plutonium in NIF is of particular importance in stopping it. Come to our January meeting (see *Alerts* on page 3) or call us to find out more.

🔗 **Print Bites: All the News that Fits to Print**

🔗 **Community Meeting.** On Sept. 18th, Tri-Valley CAREs organized a meeting on the state of Livermore Lab’s Superfund cleanup from the community perspective. Participants gathered at the Livermore Library to hear from Environmental Scientist Peter Strauss, Executive Director Marylia Kelley, and Staff Attorney Scott Yundt (*pictured above*). Tri-Valley CAREs distributed its new report, *The State of the Superfund*. Topics discussed included the Superfund law, hazardous waste management, current cleanup technologies, and why Livermore Lab’s broken public participation program imperils critical progress on cleanup. The group decided on a plan of action. It includes: hosting annual State of the Superfund meetings in Livermore and Tracy; holding meetings with elected officials; requesting tours of the cleanup areas at Site 300 and the Main Site; requesting a hazardous waste facilities tour; Circulating a petition to establish a Community Work Group in Tracy and to re-establish the Group in Livermore; and more. We invite you to get involved in 2015. (Report, presentations, Action Plan & more are on our website at www.trivalleycares.org.)



🔗 **Quotable.** On Nov. 6, the LA Times published an important article, *Aging Nuclear Arsenal Grows Ever More Costly*, containing a great quote from Dr. Roger Logan, the former head of Directed Stockpile Work at Livermore Lab and a longstanding friend of Tri-Valley CAREs. Here is an excerpt from the article: “The source of some of those costs [is] skyrocketing profits for contractors, increased security costs for vulnerable facilities and massive investments in projects that were later canceled or postponed. ‘We are not getting enough for what we are spending, and we are spending more than what we need,’ said Roger Logan, a senior nuclear scientist who retired in 2007 from Lawrence Livermore National Laboratory. ‘The whole system has failed us’.”

🔗 **New Nukes.** The W80-1 thermonuclear warhead has been selected to top a new Long-Range Stand Off (LRSO) weapon for the Air Force. As we reported in your Summer *Citizen’s Watch*, two warhead types were being considered, the W84 from the ground-launched cruise missile, a system now outlawed by treaty, and the W80-1 from the current air-launched cruise missile. The W80-1 will be “modified” in a “life extension” process to become the new W80-4. The current air-launched cruise missile will get a significant upgrade as well. Together, they will become the new LRSO. Cost estimates run about \$20 billion. It remains to be seen what new military capabilities the weaponeers will add to the LRSO. We will continue to monitor this new weapon. **Stay tuned.**

🔗 **Unreviewed Costs.** The Government Accountability Office recently released its analysis of how NNSA does cost estimates for nuclear weapons programs. According to GAO, “the extent of program cost estimate weakness is largely unknown because neither DOE nor NNSA requires reviews of program cost estimates.” GAO also noted that of the 50 program cost estimates it analyzed, about 80% of them had weaknesses, with many having multiple weaknesses piled one on top of the other. In fact, GAO identified 39 NNSA programs with a total of 113 cost estimating problems. In particular, GAO noted two deficient cost reviews of the B61 nuclear bomb Life Extension Programs (including a weakness that GAO diplomatically called not obtaining data). The systemic lack of cost estimate reviews and other “best practices” results in NNSA programs being understated to the tune of billions of dollars.

Tri-Valley CAREs

Communities **A**gainst a **R**adioactive **E**nvironment

2582 Old First Street, Livermore, CA 94550 • (925) 443-7148 • www.trivalleycares.org



November 2014

Dear Tri-Valley CAREs' supporter,

Winning our Freedom of Information Act lawsuit is... **A - W - E - S - O - M - E !**
As a result, we have obtained vital new information on five (*yes, five*) nuclear programs. I thank you for your indispensable partnership and invite you to **savor this victory** with us.

We bring you the facts you can't get anywhere else. Activists, community leaders, elected officials, diplomats and others depend on us to pierce the veil of secrecy at the Livermore Lab and obtain accurate, concise and timely information about dangerous nuclear weapons activities there.

As you likely recognize, **the government did not want us (or you) to know what's going on.** So, it withheld documents and forced us to either keep you in the dark or sue. We pursued litigation although that route is costly and difficult. We filed information requests in 2011 and 2012, filed a lawsuit in 2013, and, now, we have favorable results!

Your generous donation today will keep us strong. It ensures that Tri-Valley CAREs is able to keep you and thousands like you informed about nuclear weapons, one of the great social, economic and ecological challenges of our time. ***May I count on you?***

Let me share a bit of what we won... The newly released documents, withheld illegally until our lawsuit victory, disclose important details about high-risk nuclear weapons programs, thus enabling us to more effectively challenge them.

For example, one program involves plans to use plutonium in the National Ignition Facility (NIF) mega-laser. After making the initial proposal, Livermore Lab officials threw a cone of silence around it, **and now we can tell you why.**

The documents reveal that the Lab's planned **method for trapping the plutonium debris would not work.** You might reasonably conclude that any plutonium plans for NIF would end there, but they do not.

Remarkably, documents show that the Lab simply changed the proposed isotope, from plutonium-239 to plutonium-244 or plutonium-242. The new plan is to conduct many experiments that would vaporize one or both of the latter two isotopes and let the radioactive debris splatter all over, **with no inner containment vessel at all.**

What we now know will help us stop it. **This is Tri-Valley CAREs in action!**

(turn over)

I can also tell you that the other four information requests likewise revealed new information that we will use to **oppose further nuclear weapons development and safeguard public health and the environment.**

We obtained key details about the removal of bomb-usable quantities of nuclear material at Livermore Lab because of its security risks, the status of the Lab's High Explosives Application Facility, the shockingly high rate of beryllium exposure suffered by Lab workers, and the facilities being considered at Livermore Lab and elsewhere as part of a "revised" plutonium strategy.

And, we have submitted *new* Freedom of Information Act requests. Our amazing staff attorney, Scott Yundt, is prepared, **with your generous help**, to file fresh litigation if the government drags its heels again instead of responding in a timely way.

Your tax-deductible gift truly makes a difference to us. Please give generously.

Tri-Valley CAREs is the proverbial "David" taking on the "Goliath" of U.S. nuclear weapons programs. **Only if we remain vigilant and active will we be able to continue to achieve victories for a more just and peaceful world.**

As I write this, we are assisting in the formation of the *California Environmental Justice Coalition*. Our board president, Pam Richard, and high school interns, Erin Vistnes and Hayden King, will ably represent us at its founding conference. Meanwhile, I will be in Washington this month shrinking the budget for deadly nuclear weapons programs.

Every dollar you donate now enables our crucial work. For example, **\$2,000** will ensure that our *Citizen's Watch* gets to 6,000 individuals, journalists, UN officials, Congress and allied groups. **\$1,000** will send us to speak in support of the Marshall Islands' "Nuclear Zero" lawsuits at a major conference on the humanitarian impacts of nuclear weapons and the necessity for their abolition. **\$500** will help keep our door open at the office. **\$50** will support our website. And, **\$20** will print 1,000 fliers.

You are a valued supporter. I invite you to continue the journey with us toward a truly sustainable, nuclear-free future. There is joy in the odyssey and boldness in the destination!

For peace, justice and a healthy environment,



Marylia Kelley
Executive Director

P.S. Please don't set this letter aside and risk losing it. Mail your tax-deductible gift today, or go to www.trivalleycares.org and use our secure credit card donation site. Also, check the reply card for your **Tri-Valley CAREs Keychain Flashlight** (*because, together, we are shining the light on government wrongdoing!*). **THANK YOU.**

Tri-Valley CAREs

Respected, Effective & In the News!

NPT NEWS IN REVIEW

Report: Nuclear Modernization

May 2, 2014 by Arianna Framvik Malik

On May 1, 2014 a panel discussion took place at the **United Nations** during the **Non-Proliferation Treaty** meeting to prepare for the treaty's 5-year review. The panelists explored the treaty implications of the modernization of US nuclear weapons. Here is an excerpt from the *NPT News in Review*, covering the panel and widely circulated to diplomats and others at the UN.

...**Marylia Kelley of Tri-Valley CAREs** argued that countries' budgets are, in fact, policies in action. Pointing to the reason behind the accelerating nuclear weapons-maintaining budgets in the US, Kelley points to the nuclear weapon-labs, calling them, and especially the directors of the labs, the tail that wags the dog. The labs have a lot of clout with politicians who put their faith in nuclear weapons, enabling the lab-directors to keep their facilities going by compelling increased spending on new and modified weapons designs.

Following disagreement from a **State Department** audience member, it was made clear that there is an ongoing debate of what constitutes building a new weapon or endowing an existing weapon with new capabilities... However, modifications are being made to US nuclear weapons. The US is actively building major facilities for all three components of the nuclear bomb: the plutonium component, the highly enriched uranium component, and the non-nuclear components.

CONTRA COSTA TIMES

Citations Issued at Annual Livermore Lab Protest

August 7, 2014 by Lou Fancher

LIVERMORE -- Sixty-nine years after the massive devastation of the atomic bombings of Hiroshima and Nagasaki in 1945, there were 60 seconds of silence at 8:15 a.m. Wednesday to commemorate the moment when the first bomb was dropped. This year's anniversary protest outside the Lawrence Livermore National Laboratory bore the theme "Failure to Disarm."

...100 peace activists gathered outside the lab to hear keynote speeches... 30 people were arrested and cited by Alameda County Sheriff officers for trespassing and released. **Marylia Kelley**, executive director of Tri-Valley Communities Against a Radioactive Environment,... said the issue isn't whether or not society should have scientists, it is what they should be creating.

Tri-Valley CAREs staff attorney Scott Yundt... facilitates a support group for the 1,900 former lab employees who have filed for compensation because of job-related illnesses. "Half of them have been refused, and it's been a powerful learning process for me... every worker has stories of spilling radioactive materials and many of them get ill."



Tri-Valley CAREs' Holiday Party

*You're Invited
Drop in!*

When: Tuesday, December 9th
5 PM to 8 PM

Where: Livermore Library,
1188 So. Livermore Ave.
Community Rooms A & B

**There will be fabulous
food, drinks & music.**

*We will show the winning
entries from our Youth Video
Contest. Join Us!*

RSVP: (925) 443-7148 or
scott@trivalleycares.org



A Note From Our Staff Attorney

This September I celebrated my 5-year anniversary as the Staff Attorney for Tri-Valley CAREs. It is truly a privilege to be able to devote my career to the mission of this venerable organization. On this occasion, I am pleased to report to you the details of our recent Freedom of Information Act (FOIA) litigation success.

Our stellar reputation as a reliable source stems from our useful synthesis of detailed and accurate information, which we often obtain via FOIA requests. Tri-Valley CAREs makes judicious requests for information from the US Department of Energy (DOE) and the National Nuclear Security Administration (NNSA). We go to great lengths to ensure that our requests are clear, specific and avoid, as much as possible, topics that are reasonably classified.

Despite our efforts, many of our requests go unanswered for 1-2 years. FOIA requires federal agencies to produce the responsive documents in 20 days! These gross violations of FOIA's time requirements foil our efforts to timely analyze activities at Livermore Lab and elsewhere, thus preventing the type of transparency and open public discourse necessary for an effective democracy. Also, when we finally receive documents, many are censored improperly, thereby requiring additional litigation.

So, while I am pleased to report our success in obtaining documents on five separate subjects, I would much prefer that we did not have to resort to litigation to shed light on these topics. Moreover, while our litigation was pending, several additional FOIA requests have gone unanswered. I will keep up this important work, and I urge your contribution to our ongoing efforts.

4 Ways to Donate to Tri-Valley CAREs

- 1. Send your check today** - Why put off until tomorrow the great activism you can support today?
- 2. Donate on-line** - We have a secure on-line system set up with *Network for Good*. Visit our website www.trivalleycares.org to make a one-time contribution or to set up a regular giving program.
- 3. Make a gift of stock** - Donating stock can bring you significant tax benefits. We have an *E-trade* account and can process your donation simply and easily.
- 4. Make a bequest** - Include Tri-Valley CAREs in your will. The Dept. of Energy is going to leave a lasting toxic legacy. Will you leave a positive legacy so that we can continue the struggle?

Tri-Valley CAREs
2582 Old First St.
Livermore, CA 94550

COUNT ME IN! Here is my tax-deductible donation of

___ \$30 ___ \$50 ___ \$100 ___ \$300 ___ \$ 1000 ___ Other

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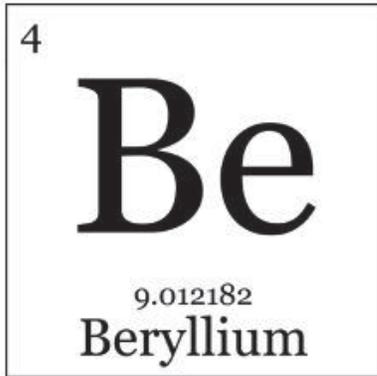
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Victory!
With your kind gift,
we move forward...

I am contributing \$30 or more.
Please send me a Tri-Valley
CAREs Flashlight Keychain



EXPOSED: Lab Worker Dangers Worsen



Beryllium is a highly toxic metal that has relatively few industrial applications. Due to its properties (including its low density and atomic mass) beryllium is relatively transparent to X-rays and other forms of ionizing radiation, making it very useful in nuclear weapons. For decades, Livermore Lab has used large amounts of beryllium in the development of nuclear weapons. Unfortunately, inhaled beryllium-containing dust can cause a chronic life-threatening disease in some people called berylliosis or Chronic Beryllium Disease (CBD).

Tri-Valley CAREs has reported on numerous beryllium violations by Livermore Lab management including a 2010 fine and Order for Compliance issued by the Department of Energy (DOE) Office of Health, Safety and Security. More recently we learned that the DOE's Inspector General (IG) investigated a specific case of beryllium exposures that occurred in the 2005-2008 time-frame.

We requested documents pursuant to the Freedom of Information Act relating to the IG's investigation. After waiting nearly two years, we filed litigation to obtain the documents, and finally the IG produced volumes of responsive documents regarding its investigation.

The contents of these documents are alarming. We learned that the exposures to beryllium at the Lab are far more frequent than have been publicly reported.

One document reports that the number of employees on the beryllium roster, meaning that they were likely exposed to beryllium, increased by 50% after 2004 to 620 employees. We also learned that at least 125 former and current employees were subsequently identified as potentially Beryllium Sensitized, definitely Beryllium Sensitive (BeS) or had developed Chronic Beryllium Disease (with at least 15 definitely positive for CBD).

According to the documents, the rate of Beryllium Sensitivity or Chronic Beryllium Disease was about 4.5% of tested personnel tested. (2800 former and current Livermore Lab employees had been tested at the time). This is **more than two times higher** than the rate typically experienced within DOE, which was less than 2% as of June 2008.

The documents make important recommendations on how the Lab should improve its Chronic Beryllium Disease Prevention Program. We will follow up with the DOE's Inspector General Office to ensure that progress on these recommendations is being made.

Video Contest Winners Announced



Tri-Valley CAREs recently announced the recipients of the top three awards in its 2014 Youth Video Contest. The contest sought 2-minute videos that touched on environmental cleanup at Livermore Lab and what a clean environment means. The winning video was submitted by Erin Vistnes and Hayden King. The 2nd place entry was from Lauren Tabor, and Owen Carlson won the 3rd place award. The winners will be present for the screening and award ceremony at the December 9th party (*see insert*).

◆ Alerts 4 U ◆

Tuesday, December 9

Tri-Valley CAREs Holiday Party
5 PM – 8 PM, Livermore Library
Community Rooms A & B
1188 South Livermore Ave.
(925) 443-7148 for details

Join us for this very special evening. We will enjoy amazing food, some conversation, and the winning videos from the 2014 Youth Video Contest. **Don't miss it!**



Thursday, January 15

Tri-Valley CAREs meeting
7:30 PM – 9 PM, Livermore Library
Community Room A
1188 South Livermore Ave.
(925) 443-7148 for details

Make your New Year's resolution to get more involved in Tri-Valley CAREs! You can start by attending the first meeting of the year. Our Executive Director will report back on her trips to Washington, DC, and Vienna. We will also discuss plans for the group in 2015. **See you there.**

Thursday, February 5

Letter to the Editor writing party
5:30 PM – 7 PM, Tri-Valley CAREs
2582 Old First St., Livermore
(925) 443-7148 for details

Our monthly Letter to the Editor Writing Parties will resume on Feb. 5th. Come and write a letter to the editor of your favorite newspaper in a friendly and supportive environment. Our suggested topic will be the nuclear weapons budget. We will offer a short briefing and handouts to get you started. Or, you may choose to write on a different topic. Snacks and refreshments served.

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Edited by
Marylia Kelley,
Scott Yundt &
Marylia Kelley,
contributors



Progress on Disarmament

Humanity's shared aspiration for a world free of nuclear weapons is finding new global outlets, and Tri-Valley CAREs is there.

Two exceptional developments this year have been the #NuclearZero lawsuits filed against the nations possessing nuclear weapons by the Marshall Islands and a growing international focus on the humanitarian consequences of the bomb, leading hundreds of countries to a stronger sense of urgency for their abolition. In December, we will go to Vienna to advance both of these initiatives.

On December 5, Tri-Valley CAREs' Executive Director, **Marylia Kelley**, will speak on the #NuclearZero lawsuits at a public forum hosted by the International Association of Lawyers Against Nuclear Arms and the Nuclear Age Peace Foundation (NAPF) at the Vienna University of Technology.

The event will also feature **Tony de Brum**, Foreign Minister of the Marshall Islands, **Christopher Weeramantry**, former Vice-President of the International Court of Justice (ICJ), **Phon van den Biesen**, an attorney representing the Marshall Islands before the ICJ, and **David Krieger**, NAPF President and a member of the international legal team. Kelley will focus on the case filed by the Marshall Islands in U.S. Federal Court in the Northern District of California and U.S. noncompliance with the Non-Proliferation Treaty, which is central to the litigation.

On December 6 and 7 Kelley will represent Tri-Valley CAREs at the Civil Society Forum sponsored by the International Campaign to Abolish Nuclear Weapons. The non-governmental event precedes the Vienna Conference on the Humanitarian Impact of Nuclear Weapons, hosted by the government of Austria, which has also invited our participation on December 8 and 9.

Vienna will mark the third such conference. The first was held in Oslo, Norway last year with **128 countries** participating. The U.S. publicly called its focus on the human consequences of the bomb a "distraction" and chose to boycott, along with the other nuclear weapons states. But the idea did not die. Mexico stepped forward to host a second conference in February 2014 in Nayarit and **146 countries** participated.

A movement was growing of the world's governments frustrated with the nuclear weapons states' lack of real disarmament. Austria volunteered to host this third



conference. In a related development, a Joint Statement on the Humanitarian Consequences of Nuclear Weapons was delivered in October 2014 at the UN by New Zealand on behalf of **155 countries**. Then, on November 7, the U.S. announced it would attend the Vienna Conference to "present the U.S. perspective."

Tri-Valley CAREs is honored to be invited to all three forums. We will go to Vienna to talk with governments and NGOs alike. Our aim is nuclear disarmament now. As Austria stated in its invitation, "As long as nuclear weapons exist, the risk of their use by design, miscalculation or madness, technical or human error, remains real. Nuclear weapons, therefore, continue to bear an unacceptable risk to humanity and to all life on earth."

On the Inside...



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