

THE BOMBPLEX

An Overview of the U.S. Department of Energy's "Complex Transformation" Plan (formerly "Complex 2030")

Background: On October 19, 2006, the Department of Energy (DOE) National Nuclear Security Administration published a notice in the Federal Register announcing the agency's intent to "transform" the U.S. nuclear weapons complex at 8 locations across the nation, including Livermore Lab. The DOE originally called this scheme "Complex 2030."

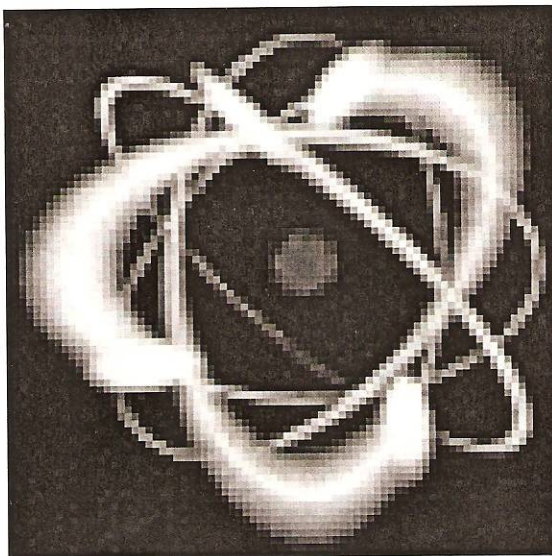
DOE's story: Here is what DOE says it wants to do in the name of "Complex Transformation" —

- Develop and produce new nuclear weapons through the "Reliable Replacement Warhead" (RRW) program, starting with a "replacement" design for the W76 submarine-launched nuclear warhead. The RRW program envisions a new weapon design coming out of the weapons labs every 5 years and the production (i.e., actual building) of 125 new RRW weapons each year. *(Note: Since publication of the notice in the Federal Register, Livermore Lab has been chosen to design the first of these new warheads, the RRW1 or, as DOE now calls it, the WR1.)*

- Build a new plutonium pit (bomb core) production facility, capable of churning out 125 certified bomb cores every year. Added shifts could increase the number of bomb cores produced. *(Note: It is not a coincidence that the bomb core factory will be sized to serve the RRW program).*

- Build new facilities at multiple sites to expand the U.S. nuclear weapons production infrastructure, including for uranium processing. *(Note: If the U.S. were to forego design and production of new nukes, many of these proposed facilities would not be "needed" at all.)*

- Consolidate plutonium and highly enriched uranium to fewer sites in the complex and to fewer locations within the sites to reduce the costs of security. *(Note: While consolidation of nuclear materials into more secure locations is generally a good idea, the DOE is proposing a particularly harebrained scheme in its "Complex Transformation" plan, which would move plutonium around the country more than once in order to serve the RRW program.)*



- Dismantle some of the old bomb types that have previously been taken out of the arsenal. *(Note: This part of "Complex Transformation" is a good idea.)*

In addition, the DOE proposes to build a whole new Kansas City Plant, where roughly 85% of the non-nuclear parts in nuclear bombs are produced.

The new Kansas City Plant would be across town from the current one.

The "consolidation" deception: The DOE calls the revitalization of the nuclear weapons complex "consolidation" because it would encompass (in some cases) smaller or fewer buildings than were used during the heyday of the Cold War.

We call it "Bombplex" because the DOE plans to build entirely new bomb production facilities and additional new nuclear weapon design capability — and to create new nuclear weapons into the far-flung future with no end in sight.

Moreover, it is notable that the "Complex Transformation" plan starts with 8 nuclear weapon sites across the country and ends with the same 8 sites

— with new facilities inside them, which is hardly a true consolidation.

The 8 sites are located at Livermore, CA; Los Alamos, NM; Sandia, CA and NM; the Nevada Test Site; Pantex, TX; Kansas City, MO; Y-12, TN; and, Savannah River, SC. (See maps on page 4.)

The nuclear policy implications: The DOE notice in the Federal Register and the agency's "Complex Transformation" planning documents all point to the Bush Administration's December 2001 Nuclear Posture Review (NPR) as the agency's mandate for designing new nuclear weapons and instituting the "Bombplex" in order to produce them.

In so doing, the DOE ignores U.S. and international law while it attempts to pursue a reckless and aggressive course of action that will escalate the nuclear danger at home and around the world for decades to come. When it comes to "Complex Transformation," policy matters.

The Nuclear Posture Review versus The Non-Proliferation Treaty

The Bush Administration Nuclear Posture Review calls for a "new triad" that will consist of land, air and submarine-based nuclear weapons (which are the old triad) along with Ballistic Missile Defense and a new "responsive infrastructure."

The NPR further calls for DOE to be able "to design, develop, manufacture, and certify new warheads in response to new national requirements; and maintain readiness to resume underground nuclear testing if required." It states that a new, modern plutonium pit production facility will be needed and that capabilities at the Y-12 facility and the Pantex Plant will be greatly expanded. The NPR also calls for a nuclear earth-penetrating bomb and for lower-yield, more usable nuclear weapons.

Clearly the Bush NPR expands the role of nuclear weapons in U.S. policy (and consolidates nothing). However, it is important to realize that as a driver for DOE to build new nukes and new bomb facilities slated to come on line all the way up to the year 2030 — the NPR is not a sufficient legal, let alone moral, basis for planning.

Simply put, the Bush NPR is a policy paper. It is not a U.S. law. It is likely that the next President, whether Democrat or Republican, will be directed by Congress to produce a new nuclear posture review.

Is there a more enduring foundation on which to base planning the size and capability of the U.S. nuclear weapons complex of the future? In fact, there is.

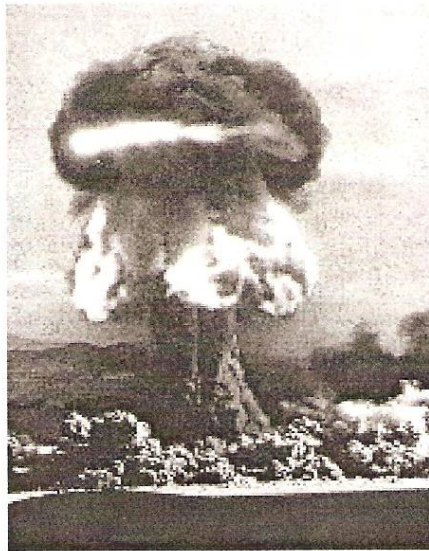
The nuclear Non-Proliferation Treaty (NPT), signed by the United States, entered into force in 1970. According to the U.S. Constitution, our international treaties along

with the Constitution itself comprise the "supreme law of the land."

The NPT's Article VI states that: "Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to the cessation of the nuclear arms race at an early date and to nuclear disarmament..."

In 1996, the International Court of Justice affirmed in essence that the use or threat of use of nuclear weapons was illegal and stated moreover that the NPT's Article VI obligation was to not merely pursue negotiations on nuclear disarmament but to achieve them.

The NPT provides a clear legal and moral basis for planning. Yet, strangely, the DOE nowhere mentioned the NPT in its Federal Register notice or its underlying "Complex Transformation" planning documents.



The public has a key role to play in insisting that the NPT, not the Bush NPR, be used as the foundation for planning the future of the U.S. arsenal and the nuclear weapons complex.

The public response so far: The DOE held "scoping" meetings in November/December 2006 at 11 locations around the nuclear weapons complex, including Livermore and Tracy, CA. The DOE received a record-breaking 36,000 comments against the "Bombplex." Overwhelmingly, Americans demanded that DOE include an NPT-compliant plan for the nuclear weapons complex.

We will know for certain whether the DOE listened to the public when the draft Programmatic Environmental Impact Statement (PEIS) for "Complex Transformation" is released to the public later this year.

The next steps: The DOE web site says that the draft PEIS on "Complex Transformation" will be released in November. Federal law requires that public hearings be held at that point in the National Environmental Policy Act process. We expect that DOE will conduct one public hearing in Livermore and one in Tracy.

The dates for these hearings are uncertain. We have asked DOE not to conduct public hearings during the holiday season. We believe that the hearings may begin soon after the New Year. However, be forewarned and prepared, as we cannot say for certain what the DOE's schedule will be.

The draft PEIS is likely to be multi-volume and about 3,000 pages or so. There will also be an Executive Summary. We will have multiple copies available at our office. As soon as the draft PEIS is released, Tri-Valley CAREs' staff will read it and produce short, reader-friendly analyses of key issues. We will also create "talking points" in advance of the public hearings.

What we are asking of our members and the community is for folks to read as much as they are able — whether that's the entire document, the Executive Summary or just the "talking points" — and

to attend and speak at either the public hearing in Livermore or Tracy. This is your opportunity to influence nuclear policy and the future of the nuclear weapons complex. Moreover, it is your chance to speak for the health, security and safety of your community.

Your voice, your thoughts, and your act of rising to the podium to "speak truth to power" are immeasurably important to the outcome of this process. Each of us has an individual, unique voice. And, together, we are a powerful crescendo and a force to be reckoned with.

"Complex Transformation" and the future of Livermore Lab:

Many of the decisions that are embedded in the DOE's "Complex Transformation" plan will have a major effect on the future of Livermore Lab. In essence, Livermore Lab is the "brain" of the nuclear weapons complex; the location from which new RRW design(s) will spring forth. Thus, the fundamental question of whether Livermore Lab will be "nuclear weapons forever" or may transition into a "green lab" with an increasing civilian science mission is at the core of "Complex Transformation."

Here are a few of the key ways in which Livermore Lab is tied into DOE's nefarious plans —

- **The RRW program and "Complex Transformation."** The DOE calls the Reliable Replacement Warhead the "enabler" for "Complex Transformation." The DOE plans to re-design and rebuild every nuclear weapon type in the arsenal. Livermore Lab has been chosen to design the first in this series of new nukes. If the "Complex Transformation" plan goes forward as envisioned by DOE, Livermore Lab will be locked into an increasingly narrow nuclear weapons future — with all of the attendant local pollution and international proliferation impacts.

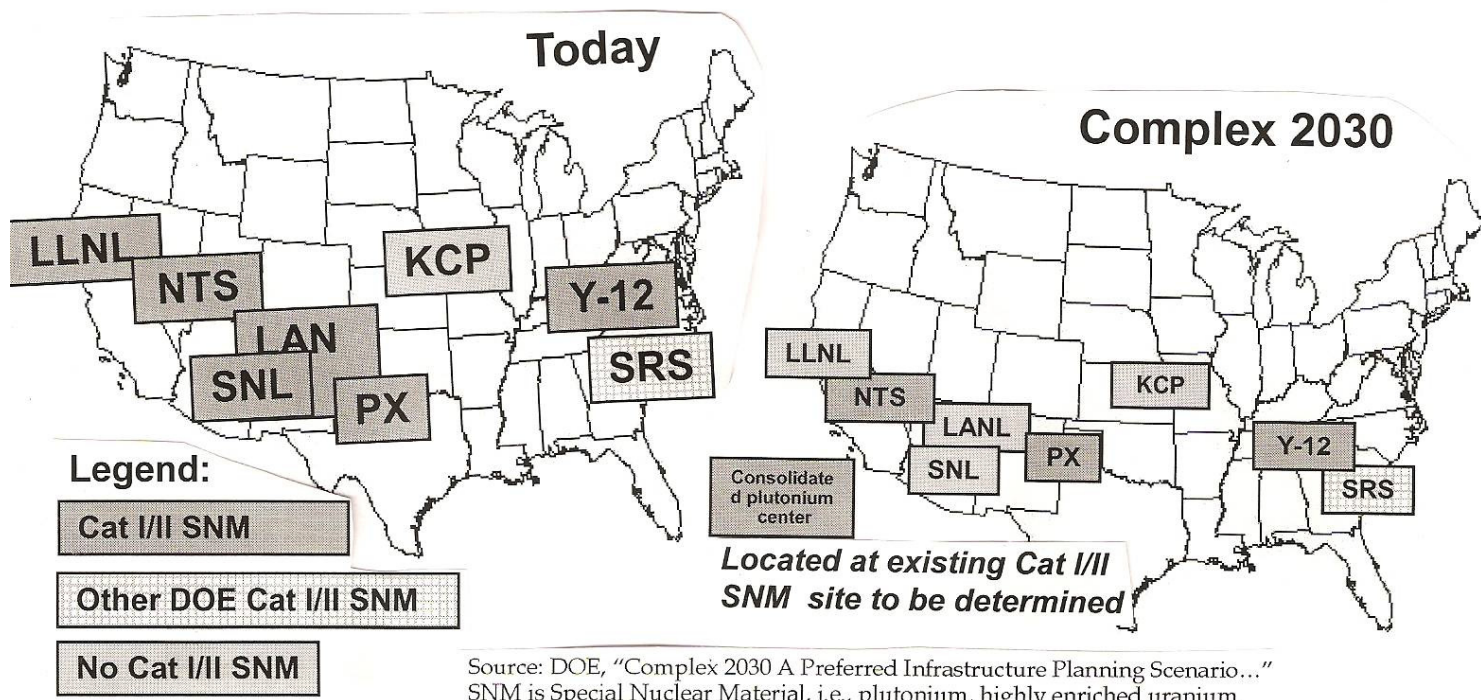
- **Plutonium pits and "Complex Transformation."** The DOE plans to use Livermore Lab to "work the bugs out" of the new production techniques it wants to perfect for the new plutonium bomb core factory it envisions for "Complex Transformation."

So, while the full-scale production facility will be built elsewhere, the Livermore Lab will ramp up (instead of decrease) its plutonium activities in order to prototype new pits and serve the new bomb plant. Livermore Lab has already designated space in Building 332 to do this work and has begun assembling the components of a new plutonium bomb core foundry (called L-cast). If the "Complex Transformation" goes forward as planned, the "needs" of new bomb cores will dominate the decision-making over the future of Livermore Lab's plutonium.

• **Site 300 bomb blasts and "Complex Transformation."** The DOE presently has 4 hydrodynamic test sites — Livermore Lab's Site 300, Los Alamos Lab, the Nevada Test Site and the Pantex Plant. The agency has stated that it will consider whether or not to close one or more of these high explosives testing ranges as part of "Complex Transformation." This presents a unique opportunity to advocate that Site 300 be completely converted from bomb testing to beneficial, environmentally friendly uses. Because of the enormous duplication that exists in the nuclear weapons complex, this change can be accomplished without increasing the number of tests at any of the other DOE facilities. Public pressure is needed to assure that DOE will choose to close Site 300 to all further bomb tests,

without ramping up explosive test activities elsewhere.

• **Looking at alternatives to "Complex Transformation."** As noted above, if DOE's vision of "Complex Transformation" is allowed to occur, our community, our country and, indeed, the world will be subjected to "nuclear weapons forever." On the other hand, however, the National Environmental Policy Act mandates that an agency (the DOE in this case) consider "reasonable alternatives" to its proposed plan during the PEIS process. This opens the door for the public to insist that DOE analyze options for the Livermore Lab and the nuclear weapons complex that are far different from what DOE envisions. If the DOE fails to do so, litigation may be filed. Reasonable alternatives can include a "green lab" in Livermore, no RRWs, no plutonium at Livermore Lab, no bomb tests at Site 300 and an overall change throughout the nuclear weapons complex to "curatorship" of the nuclear arsenal wherein scientists and engineers ensure the safety and reliability of U.S. nuclear weapons (but do not seek to "improve" or "redesign" them) until such time as they are dismantled. Instead of a "transformed" and "revitalized" nuclear weapons complex, the DOE should analyze "curatorship" for the short-term and nuclear disarmament as its 2030 plan.



THE BOMBPLEX: The National Environmental Policy Act

Overview

The National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 *et. seq.*, is our basic national charter for protection of the environment. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment. NEPA establishes policy, sets goals, and provides means for carrying out the policy.

The purposes of NEPA are:

- to declare a national policy which will encourage productive and enjoyable harmony between humans and their environment,
- to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humanity,
- to enrich the understanding of the ecological systems and natural resources important to the United States, and
- to establish a Council on Environmental Quality (CEQ) to ensure that federal agencies meet their obligations under the Act.

However, NEPA imposes only procedural requirements on federal agencies, with a particular focus on requiring agencies to undertake analyses of the environmental impacts of their proposals and actions.

The NEPA process

NEPA requires federal agencies to prepare an Environmental Impact Statement (EIS) as part of any proposals for legislation and other *major Federal actions significantly affecting the quality of the human environment*. Each EIS must include a detailed statement by the responsible agency on:

- the environmental impact of the proposed action,
- any adverse environmental effects which cannot be avoided should the proposal be implemented,
- alternatives to the proposed action,
- the relationship between local short-term uses of our environment and the maintenance and enhancement of long-term productivity, and
- any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

In this case, the Department of Energy is required to prepare a Programmatic Environmental Impact Statement (PEIS) because the Bombplex (the "Complex Transformation" plan) involves a group of concerted actions to implement a specific policy or plan.

The importance of public participation

Public involvement is one of NEPA's fundamental principles. CEQ regulations under NEPA require federal agencies to insure that environmental information is available to government officials and the public before decisions are made and before actions are taken. After preparing a draft EIS and before preparing a final EIS, federal agencies are required to request comments from the public, affirmatively soliciting comments from those persons or organizations who may be interested or affected. Comments on an EIS should be as specific as possible and may address either the adequacy of the EIS or the merits of the alternatives discussed, or both. Comments may also highlight reasonable alternatives that the agency neglected to consider. An agency preparing a final EIS is required to assess and consider comments both individually and collectively. Comments become a part of the administrative record, which forms the basis for judicial review of agency compliance with NEPA. Accordingly, comments are extremely important in laying the groundwork for future judicial challenges.

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THE BOMBPLEX: Tips for Commenting on a NEPA Document

Overview

Because there is no formal enforcement process to ensure federal agency compliance with the National Environmental Policy Act (NEPA), the enforcement of NEPA has come primarily from concerned members of the public and public interest groups. The first, and most important, step in that process involves the submission of comments by the public. There are a number of reasons to comment on NEPA documents:

- to influence federal agencies to minimize environmental impacts,
- to convince the lead agency to deny the proposed action,
- to improve the documents by adding different perspectives or additional information, and
- to lay the groundwork for future judicial challenges.

Individuals reviewing NEPA documents should actively and diligently participate in all steps of the NEPA process.

Commenting at a public hearing

Your oral comments should be a summary of your major concerns, emphasizing and explaining the most important points. It is a good idea to write down what you plan to say. You should also submit comments in written form. At the public hearing, you may hear others' comments and want to incorporate them into your written comments.

Introduce yourself: State your name and what special relationship or expertise you bring to the subject (local resident, worked in a similar field, grew up in the area, read news reports on the issue, etc.).

Introduce your group: If you're affiliated with a group, state your group's name and purpose.

State the problem: In this case, talk about the Department of Energy (DOE), the Bombplex (the "Complex Transformation" plan), nuclear weapons proliferation, economic waste, environmental harm, etc.

State the solution: Discuss what you envision as a better outcome, including alternatives to the proposed action or possible mitigation measures.

Submitting written comments

There are no special forms or formats for submitting written comments under NEPA. However, the most effective comments usually follow the broad principles outlined below.

Preparation and organization: Begin your work well before the comment deadline by reading the NEPA document or the Executive Summary. Feel free to contact Tri-Valley CAREs if you have any questions or need additional information.

Format: Comments may be typed or handwritten, but handwritten comments must be legible. Mailed comments should be sent to the appropriate address, e-mail, or fax number before the comment deadline. Submissions should include the comment submitter's name, address, and telephone number; anonymous submissions will not be considered.

Content and style: Identify the document reviewed and clearly define the issues upon which you would like to comment. Indicate if you are for or against the proposed action or some part of it and why. If you disagree with the proposed action, suggest an alternative and how that alternative might meet the same objective. To the extent possible, personalize your comments and underline or highlight any important points. You may also include any copies of articles or provide a list of references that supports your comments.

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The Bombplex: What you need to know about RRW

- RRW stands for Reliable Replacement Warhead.
- RRW is a series of new nuclear weapons.
- “Complex Transformation” will create the infrastructure to produce RRWs.
- The first RRW is being designed by Livermore Lab.

The Importance of RRW

Here are three basic options for the future of our nuclear weapons:

Curatorship	Stockpile Stewardship & the Life Extension Program	Complex Transformation & RRW
<i>What Tri-Valley CAREs proposes.</i> DOE would rely on surveillance and nonnuclear testing to determine when repairs are necessary. Only if there is compelling evidence that parts have degraded or will soon degrade, and could cause a significant loss of safety, reliability, or performance, would DOE replace the affected parts with new ones matching as closely as possible to the original.	<i>Current Policy.</i> Every year the nuclear weapons labs are involved in certifying the reliability of the arsenal. Stockpile Stewardship does more than just certify the weapons, it also actively tinkers with them, replacing and upgrading parts on a continuous basis. Many of these changes are to “improve” military capabilities.	<i>What the DOE wants to move to.</i> In this scenario the weapons labs would design new nukes every 5 years and build 125 new bombs each year. Essentially, DOE wants to redesign and replace every nuclear weapon type in the arsenal. This would lock us into having nuclear weapons for untold decades.

RRW moves us in the wrong direction. The DOE repeatedly talks about RRW as the enabler for “Complex Transformation”. So, RRW isn’t just about a few new bombs, it’s about being locked into a whole new future where creating new nukes is the status quo. We could be moving the other direction: towards disarmament.

New Nukes are a Bad Idea

1. They increase the risk of global nuclear proliferation and makes us all less, not more, secure.
2. They violate international law, specifically Article VI of the nuclear Non-Proliferation Treaty.
3. They endanger the environment by continuing to contaminate sites and nearby communities, including here in Livermore.
4. They divert hundreds of billions of dollars and the focus of scientists from solving truly pressing problems such as global climate change and the need for alternative energy.

Reliability is Not the Issue

DOE claims that we need these new nukes because we can’t be certain the old ones will remain reliable. By reliable they don’t mean that they will go off unexpectedly. They mean the explosion won’t be as big or go off exactly as the designers certified. The part of the bomb that DOE claims it’s afraid won’t live up to expectations is the “pit” – that’s the core of plutonium that sits in the bomb. However, a study of DOE’s own data by the group of scientists called JASON came out and said that the pits are good to go for at least 100 years and maybe even longer. Furthermore, DOE plans on producing these new weapons without full scale tests. It is not clear that we can be certain of the reliability of these new weapons without such testing. Furthermore, a recent JASON study has found that the first RRW, currently being designed, may not be certifiable as it stands but may require full scale underground nuclear test.

The Bombplex: It's the [Plutonium] Pits

The U.S. Department of Energy (DOE) National Nuclear Security Administration published a Notice of Intent (NOI) in 2006 to prepare a Programmatic Environmental Impact Statement (PEIS) on what it then called "Complex 2030" (now called "Complex Transformation").

This fact sheet distills information on the DOE's plan, which we and colleague organizations have dubbed the "Bombplex." The details are derived from the NOI and other DOE planning documents including but not limited to, "Complex 2030, A Preferred Infrastructure Planning Scenario for the Nuclear Weapons Complex."



The DOE wants "Complex Transformation" to:

- Result in building a new plutonium pit (bomb core) production facility. This is the activity that so contaminated the DOE's Rocky Flats plant that it was shut down following a raid by the FBI environmental crimes unit in 1989. The 5 candidate locations are: Los Alamos, NM; Nevada Test Site; Pantex Plant, TX; Y-12, TN; and, Savannah River Site, SC.
- Produce a "baseline" (i.e., minimum) of 125 certified plutonium bomb cores per year. Additional shifts could increase that number.
- Have the new plutonium pit production facility on-line by 2022, with "distributed modernization in place for remaining capabilities" [read as upgrades to bomb facilities at other locations, too].
- Leave plutonium at Livermore Lab until the end of 2014, including the possibility of doubling the storage limit to more than 3,000 pounds between now and 2014. The "Complex Transformation" would take the Livermore plutonium first to Los Alamos Lab in New Mexico to be put in a facility that has yet to be built and may never be completed (called the CMRR), then potentially put it on the road a second time in 2022 -- depending on which site is selected for the new plutonium pit production plant. Basically, Livermore Lab's plutonium would be moved around (possibly twice) to meet the "needs" of the DOE nuclear weapons program, not safety and security.
- Use Livermore Lab as the location to develop the new plutonium production techniques that will be installed at the full-scale pit facility, including novel, untested robotic production lines. In essence, here in Livermore, in a populated area and on an earthquake fault line, Livermore

Lab employees will heat and pour, and do machining on, prototype plutonium bomb cores in order to "work the bugs out" of unproven techniques. This is neither safe nor sane. However, to carry it out, Livermore Lab has already designated space in Building 332 and is currently assembling components for the new pit production line, called L-cast. (Note: It is this activity that is behind the DOE's decision to double the plutonium limit at Livermore Lab.)

Tri-Valley CAREs' Recommendations:

Tri-Valley CAREs will speak at the public hearings that DOE will hold following the release of the draft "Complex Transformation" PEIS in November 2007. We will recommend that a far different option be analyzed.

First, there is no need for a new plutonium bomb core production plant anywhere. Therefore, serving its "needs" should not be the basis for decision-making regarding Livermore Lab's plutonium stockpile. (While the exact amount of plutonium at Livermore Lab is classified, it is believed there are about 1,500 pounds of it at the Lab now -- enough for roughly 150 nuclear bombs -- and the outer limit for storage is more than 3,000 pounds.)

Second, the plutonium from Livermore Lab should be moved only once, and only for safe and secure storage at a more remote location, not new bomb experiments and plutonium pits.

Third, the DOE should immediately cease construction of L-cast at Livermore Lab. Similarly, the DOE should rescind its Record of Decision doubling the plutonium limit at the Lab. Instead, all plutonium activities at Livermore Lab should be terminated except for the activities needed to safely prepare and package the plutonium for shipment.

We suggest the following process --

1. DOE should immediately undertake a study of potential storage sites. This study should not be limited to the 8 sites that are part of "Complex Transformation." For, if the plutonium from Livermore Lab were to be simply stored safely at a secure location, that plutonium would not have a role in "Complex Transformation."
2. Make the study as transparent as possible. The DOE should bring in independent experts, community members, local tribes where applicable, and other stakeholders.
3. Lay out a plan to safely package the plutonium at Livermore Lab. This can and should begin today. It is scandalous that, according to DOE, the agency requested zero money in its fiscal year 2008 budget request to Congress to safely package the program plutonium in Building 332 (the Lab's plutonium facility). The Defense Nuclear Facilities Safety Board has cited Livermore Lab for storing plutonium in paint cans and food tins. Good procedures and an allocation of funding (and time) will be required to package the plutonium for shipment.
4. Send the plutonium to the selected location in a safe and timely manner. Allocate sufficient funds to ensure that is stored properly at its new location. Continue to involve independent analysts, community members, affected tribes and other stakeholders.

THE BOMBPLEX: HIGH EXPLOSIVES TESTING AT SITE 300



The Department of Energy will be accepting comments on where and how much hydrodynamic testing should be done in the United States. Livermore Lab's Site 300 is one of the sites under consideration. We argue that all high explosives testing at Site 300 should be phased out and no additional testing should go forward anywhere in the complex. This fact sheet should help you understand what hydrodynamic testing is and get prepared to comment during the public comment period. Now is the time to get involved and shape the future of Site 300. Together we can phase out explosives testing at Site 300 forever.

What is Hydrodynamic Testing?

Since the late 1940s, weapons engineers have used hydrodynamic tests and dynamic experiments in conjunction with nuclear tests to study nuclear weapon bomb cores or "primaries". In hydrodynamic tests, assemblies that mock the conditions of an actual nuclear weapon are detonated using high explosives. Non-fissile isotopes, such as uranium-238 (also known as depleted uranium) and plutonium-242, are subjected to enough pressure and shock that they start to behave like liquids (hence the 'hydro' in hydrodynamic). Radiographs (x-ray photographs) can be used to obtain information on the resulting implosion; computer calculations based on these test results are used to predict how a nuclear weapon would perform. Hydrodynamic tests at Site 300 routinely use uranium-238.

What is Site 300?

Lawrence Livermore National Laboratory's (LLNL) Site 300 is a test site owned by the Department of Energy. It is situated on 7,000 acres 15 miles southeast of Livermore. 5,500 homes are planned for within a mile of the site and approximately 7 million people live within a 50 mile radius.

Site 300 was established in 1955 as a non-nuclear explosives test facility to support LLNL's national security mission. The site gets its name from the early days of LLNL, when the main laboratory was called Site 200 and the test facility was Site 300 (Lawrence Berkeley National Laboratory was Site 100). Today, many of the tests are done in the service of the US nuclear weapons arsenal and some may be done at the behest of the Department of Homeland Security.

The land at Site 300 is already so badly contaminated by similar past tests that the US Environmental Protection Agency designated it as a federal "Superfund" site in 1990, one of the most contaminated sites in the nation. The soil and groundwater at Site 300 is polluted with a

dangerous mixture of chemical and radioactive wastes including solvents, radioactive tritium, uranium-238 high explosives and heavy metals.

What are the potential releases of Hydrodynamic Testing at Site 300?

Short Answer: uranium-238 / tritium (radioactive hydrogen) / other dangerous substances

The exact content of the explosions are not known. We do know that LLNL applied in April of 2007 to increase explosives testing annually eight-fold! In its application to the Air District, the Lab was forced to disclose the releases associated with the proposed explosions. Based upon the Lab's statements in the application, it seeks to detonate up to 5,000 pounds of uranium-238 each year in open-air bomb tests with no control technology to reduce offsite airborne emissions. The explosions could also contain up to 200 curies of tritium (radioactive hydrogen) and 60 other toxic and hazardous materials, some of which would drift in the wind offsite into the Bay Area and Central Valley.

Where are Other Hydrodynamic Testing Centers in the United States?

The majority of stockpile stewardship hydrotesting is conducted at LLNL's Site 300 and at Los Alamos National Laboratory's Dual Axis Radiographic Hydrodynamic Test Facility, where the diagnostic capabilities have been developed to meet specific weapons design agency needs. Large scale tests are conducted at the Nevada Test Site's Big Explosives Experimental Facility. Small scale dynamic tests are also conducted at Pantex, Sandia National Lab – New Mexico, and the Nevada Test Site.

What is the Department of Energy proposing to do with Site 300?

The Department of Energy is looking at either keeping Site 300 operational with increased testing OR phasing out hydrodynamic testing at Site 300 altogether. The DOE has publicly stated in documents that open-air large-scale high explosive testing is not appropriate for Site 300 due to the increases of residential populations in the area. There is also a possibility that Site 300 could be shifted to the Department of Homeland Security for high explosives testing.

What does Tri-Valley CAREs recommend for the future for Site 300?

- End all high explosive testing at Site 300
- Clean up the extensive existing contamination at Site 300
- Ensure that no other government agencies will be allowed to acquire the land in order to use it for toxic and hazardous pursuits, such as continued high explosives testing.
- Don't build new hydrotesting facilities anywhere else. Existing capabilities should be downsized and maintained for the exclusive function of ensuring the safety and reliability of nuclear weapons as they await disarmament.



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THE BOMBPLEX: Alternatives to DOE's plan

Overview

The National Environmental Policy Act (NEPA) requires federal agencies to prepare an Environmental Impact Statement (EIS) for major federal actions significantly affecting the quality of the human environment. According to the Council on Environmental Quality, consideration of alternatives is "the heart" of the EIS. 40 C.F.R. § 1502.14 (1978). This section of an EIS should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public. Federal agencies are required to rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated. In addition, agencies are required to devote substantial treatment to each alternative considered in detail, including the proposed action, so that reviewers may evaluate their comparative merits. Agencies are also required to include the alternative of no action and identify the agency's preferred alternative or alternatives, if one or more exists.

NEPA documents are challenged in court on the basis of their adequacy. To be adequate, an EIS must consider every reasonable alternative. An EIS is rendered inadequate by the existence of a viable but unexamined alternative. Furthermore, even if an alternative requires legislative action, this fact does not automatically justify excluding it from an EIS. The bottom line is that the range of alternatives considered must be sufficient to permit a reasoned choice.

Preferred alternatives

Reasonable alternatives to the Bombplex (the "Complex Transformation" plan) include the following:

Curatorship: This alternative is based upon reliance on the surveillance and non-nuclear testing program to determine when repairs are necessary to nuclear weapons. Only if there is compelling evidence that components have degraded, or will soon degrade, and could cause a significant loss of safety or reliability, would the Department of Energy (DOE) replace the affected parts with new ones that would be remanufactured as closely to their original design as possible. This approach is like that of a museum curator, where DOE would preserve the stockpile of nuclear warheads and only restore them if they suffer unacceptable degradation.

Compliance with the NPT: This alternative requires compliance with the Treaty on the Non-Proliferation of Nuclear Weapons (NPT). Under Article VI of the NPT, parties to the treaty are committed to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control. Any consideration of alternatives should include a fundamental change in policy and incorporate diplomacy. Furthermore, there are technical advances that could strengthen the nonproliferation regime, such as better ways to secure nuclear weapons and detect nuclear proliferation.

"Green Lab": This alternative would move Lawrence Livermore National Laboratory in a new direction to better meet present day national security priorities for energy independence and nuclear nonproliferation. Livermore Lab would transition from nuclear weapons development to become a "World Class Center for Civilian Science." All plutonium and highly enriched uranium would be removed, and all Reliable Replacement Warhead (RRW) design work would end. Numerous management reforms would also be implemented, emphasizing worker health and safety and whistleblower protections.

Others: Get creative and come up with your own alternative to the Bombplex.

Tri-Valley CAREs

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