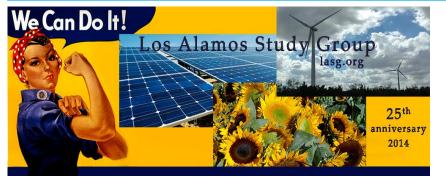
(TWILIGHT, MOON RISING, COYOTES SINGING, STARS WHEELING, PATH, COMPANIONS)

Brave New World: the LANL Site-Wide Environmental Impact Statement (SWEIS): Talking points, key issues

Albuquerque Center for Peace and Justice, February 6, 2025

"Only he who knows the empire of might and knows how not to respect it is capable of love and justice." (Simone Weil, "The Iliad, Poem of Force")

"The French people, in June and July 1940, were not a people waylaid by a band of ruffians, whose country was suddenly snatched from them. They are a people who opened their hands and allowed their country to fall to the ground. Later on...they spent themselves in ever more and more desperate efforts to pick it up again, but someone had placed his foot on it." (Simone Weil, The Need for Roots)



Los Alamos Study Group, 2901 Summit Place NE, Albuquerque, NM 87106 www.lasg.org, 505-265-1200

- To subscribe to the Study Group's main listserve send a blank email to <u>lasg-subscribe@lists.riseup.net</u>
- To subscribe to the Study Group's New Mexico listserve, send a blank email to <u>lasg activist leaders-subscribe@lists.riseup.net</u> Blog: <u>https://lasg.org/wordpress/</u>

Los Alamos Study Group

"Coming attraction?"

Greetings from

Richland USA Ozersk USSR

Some things don't change: nuclear "needs," greed, & the "helpful" efforts of NGOs to concentrate nuclear weapons & waste in NM

CONTINUED FROM PAGE A1

ments provide the most detailed publicly available information to help answer the question of how many bombs Los Alamos could produce.

The answer is this: It appears Los Alamos could build all of the bombs the United States would need to support a 21st century, post-Cold War arsenal, said Christopher Paine, an analyst at the Natural Resources Defense Council, a Washington, D.C., environmental group.

"The significance of it is in the ability of the lab to serve as either an interim or long-term replacement for Rocky Flats," said Brian Costner, head of the Energy Research Foundation, a South Carolina environmental group, and coauthor of a study on U.S. nuclear

weapons plutonium work.

To manufacture a plutonium "pit," the explosive core of a nuclear weapon, the metal is heated to more than 1,500 degrees Fahrenheit and melted down, then poured into a graphite mold.

Los Alamos Could Supply Plute

Pits must then be shaped to precise specifications. The work is done inside "glove boxes," which permit workers to handle the radioactive metal remotely, often using lead-lined gloves inserted through sealed portholes.

According to the documents, the metal fabrication area in TA-55 was designed to be able to process and shape 220 pounds of plutonium metal per month.

The amount of plutonium required for a nuclear weapon is a secret, but independent researchers put it at roughly 4 kilograms - 8.8 pounds.

Using that estimate, Paine said

the newly released documents suggest Los Alamos could make about 300 bombs a year. That closely matches an estimate he previously made based on other data about Los Alamos plutonium processing capabilities.

A more conservative estimate, based on the documents' statement that "up to" 12 kilograms - 26.5 pounds - may be used to manufacture a single bomb, yields a production rate of 100 bombs a year.

No one without a security clearance knows whether 100 or 200 or 300 new plutonium pits a year is enough to meet 21st century stockpile needs.

No new bombs are now being built. Questions about whether bombs in the existing stockpile will need to be replaced remain unanswered.

The Department of Energy is trying to plan its future weapons man-

By John Fleck, 12/8/93. Archived at http://lasg.org/Pit_Prod.htm

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NORTH

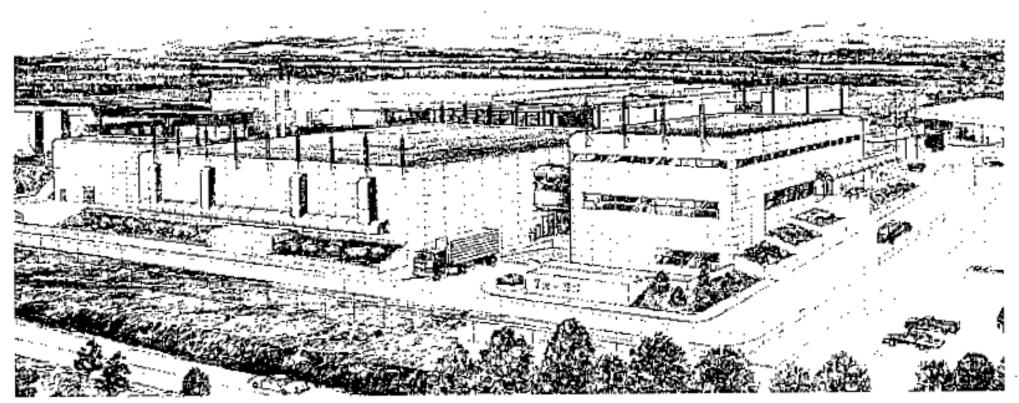
Can Supply All N-Bombs

Los Alamos

Lab's Annual Plutonium Capacity May Be Enough for 300 Weapons

Special Nuclear Materials Research and Development Laboratory Replacement Project at Los Alamos National Laboratory

LALP-89-48



Architectural rendering of the Special Nuclear Materials Research and Development Laboratory Replacement Project.

A glance back at LANL's first proposal for a post-**Rocky Flats** pit facility, stopped by citizen action.

January 1990

Trying to bring all the pit production to New Mexico is the residue of failed nuclear colonial plans running back decades.

Transforming the U.S. Strategic Posture and Weapons Complex for Transition to a Nuclear Weapons-Free World

PREPARED BY THE **Nuclear Weapons Complex Consolidation (NWCC) Policy Network** Natural Resources Defense Council, Washington, DC Nuclear Watch New Mexico, Santa Fe, NM Tri-Valley CAREs, Livermore, CA Just Peace of Texas, Amarillo, TX Physicians for Social Responsibility (Greater Kansas City Chapter) WITH CONTRIBUTIONS FROM Project On Government Oversight, Washington, DC

LEAD AUTHOR

Robert L. Civiak

CONTRIBUTING AUTHORS

Christopher Paine, Natural Resources Defense Council

Peter Stockton and Ingrid Drake, Project On Government Oversight

Jay Coghlan, Nuclear Watch New Mexico

Marylia Kelley, Tri-Valley CAREs



[[]Note: In "Environmental Testing" the Labs subject nuclear weapons to extremes of temperature, vibration, shock and radiation to mimic the conditions of delivery to the target and ensure their performance during a nuclear war.]

Stockpile Stewardship: How do we sustain the nuclear deterrent

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"Now I am become Death, the destroyer of worlds."

J. Robert Oppenheimer (father of the atomic bomb) upon witnessing the first tests



"Going over to another order" (Plotinus)

Is this to be our fate? A good day at the Rocky Flats Plant, one of the few. Let's not drop the ball in New Mexico. Don't let future generations down.

SHUT DOWN PIT PRODUCTION BEFORE IT STARTS.

"Here I stand. I can do no other."

We are alive at a major hinge of history. Something completely unprecedented is happening. We must choose where and how to take our place – and our stand.

In the matter of renewed nuclear weapons production, with the direction of New Mexico and our world hanging in the balance, we need to act, *effectively*, or we'll be victims.

We are not *defined* by protest, but when all else fails, we must find ways to effectively protest, among our other tasks. We are citizens, scholars, teachers, carpenters, parents, and so on – *and* we are people willing to stand up and be counted. <u>*Protest and Survive*</u> was the title of E.P. Thompson's famous 1981 pamphlet. It's come back to that now.

"The dogmas of the quiet past, are inadequate to the stormy present. The occasion is piled high with difficulty, and we must rise -- with the occasion. As our case is new, so we must think anew, and act anew. We must disenthrall ourselves, and then we shall save our country." (A. Lincoln)

Protest alone is not enough, and we'll do more. We will become more aware. Our understanding will grow. We will make new, deep, lasting friendships. And we'll win.

The draft SWEIS for LANL. Some key background from us:

- <u>Comments on the Draft Supplement Analysis (DSA) of the 2008 Site-Wide Environmental Impact Statement (2008 SWEIS)</u>, 5/9/20. Contains links to many prior LASG analyses.
- <u>Testimony from citizens' hearing on LANL expansion and pit production</u>, 10/17/20. We started what NNSA didn't, but even this was too late, as it came after the Sept. 2, 2020 decisions.
- "Nuclear agency releases draft environmental impact statement for Los Alamos National Laboratory," 1/9/25.
- <u>Crunch time! Please come to the LANL Site-Wide Environmental Impact Statement Hearings Feb. 11-13. Help spread</u> the word! (Part I), 1/23/25.
- <u>Urgent planning and background sessions this WEDNESDAY EVENING IN SANTA FE and this THURSDAY EVENING IN</u> <u>ALBUQUERQUE pertaining to NNSA hearings Feb. 11-13 about LANL's future. Help spread the word!</u>, 2/2/25.
- LANL Site-Wide Environmental Impact Statement (SWEIS): Talking points, key issues, 2/5/25, extended in this talk.

LANL Draft SWEIS hearings:

- Tuesday, February 11, 2025, 1:00-4:00 pm (Virtual Meeting: 1:30-4:00 pm), Santa Fe Community Convention Center, Sweeney Ballroom, 201 W. Marcy St., Santa Fe, NM 87501 (<u>map</u>)
- Tuesday, February 11, 2025, 5:00-8:00 pm (Virtual Meeting: 5:30-8:00 pm), Santa Fe Community Convention Center
- Wednesday, February 12, 2025, 5:00-8:00 pm, Mision y Convento, 405 N. Paseo de Onate, Española, NM 87532 (map)
- Thursday, February 13, 2025, 5:00-8:00 pm, Fuller Lodge, 2312 Central Ave., Los Alamos, NM 87544 (map)

The three SWEIS "alternatives," which aren't alternatives. Quoting from NNSA, these are:

The **No-Action Alternative** includes 87 new projects, totaling almost 1.5 million square feet, that would be implemented between 2024 and 2038. Also, under No-Action, NNSA would implement 11 projects involving facility upgrades, utilities, and infrastructure affecting about 216 acres of the LANL site....The No-Action Alternative also includes changes in operations, examples of which include increased plutonium pit production and the remediation of a chromium plume in Mortandad Canyon...

The **Modernized Operations Alternative** includes the scope of the No-Action Alternative **plus** additional modernization activities, including (1) construction of replacement facilities; (2) upgrades to existing facilities, utilities, and infrastructure; and (3) D&D projects....The Modernized Operations Alternative includes 139 new projects, totaling over 3.4 million square feet, that would be implemented between 2025 and 2038. Under Modernized Operations, NNSA would implement 27 projects involving facility upgrades, utilities, and infrastructure affecting about 925 acres of the LANL site. Of these 925 acres, up to 795 acres are proposed for installation of up to 159 megawatts of solar photovoltaic arrays across the site.

The **Expanded Operations Alternative** [the "Preferred Alternative"] includes the actions proposed under the Modernized Operations Alternative, **plus** actions that would expand operations and missions to respond to future national security challenges and meet increasing requirements. This alternative includes construction and operation of new facilities that would expand capabilities at LANL beyond those that currently exist. The Expanded Operations Alternative includes 18 additional new projects, totaling about 947,000 square feet, that would be implemented between 2025 and 2038. Under Expanded Operations, NNSA would implement 4 additional projects involving utilities and infrastructure affecting about 46 acres of the LANL site....

Key issues and talking points:

1. The fundamental policy issue in these hearings is whether or not individuals and organizations will oppose the creation and operation of a plutonium warhead core ("pit") factory at Los Alamos National Laboratory (LANL). Policy-wise, everything else is more-or-less a distraction. Pit production dwarfs all other considerations.

These hearings are about the future of LANL. *This is the fundamental political question, and divide, at these hearings.*

The LANL growth (in the recent past, and planned) necessary to support pit production is the main source of increased environmental impact at LANL.

We oppose all pit production at LANL. It is important to clearly state pit production is not welcome in our state.

► We want to halt all construction projects supporting pit production at LANL which are not strictly needed for the safety of non-pit operations. The "Los Alamos Plutonium Pit Production Project (LAP4)" is the central project in this factory complex.

2. The second fundamental policy issue in these hearings is whether LANL's nuclear weapons programs, and LANL itself, should expand, contract, or stay the same size. Questions of how to minimize LANL's environmental impact are secondary to how big LANL is overall. LANL environmental impacts are driven by scale.

All three SWEIS alternatives, including "No Action," involve massive program growth and billions of dollars in new construction over event the recent past. Pit production is LANL's largest growth engine but it is not the only one.

Only reduced operations alternatives should be considered for LANL. LANL could shrink in a number of ways. These paths to downsizing LANL should be defined and explored in the SWEIS.

Modernized" and "expanded" operations alternatives should be dropped, except for their dismantlement, cleanup, and purely safety components.

► The "No Action" Alternative should really be NO ACTION: wind down LANL missions except for environmental cleanup and the dismantlement and disposal of facilities and waste. There are few valuable missions at LANL and all of them would be better done elsewhere. LANL provides no value to the region, state, nation, or world.

3. Other talking points

▶ We assert that this SWEIS process is illegal. It is being staged to create a veneer of legitimacy for decisions already taken, some as long ago as 2020. It is not legal, not honest or being done in good faith, and not democratic. Passively going along with the process means concurring in nuclear colonialism and community self-harm.*

Pit production is not a "done deal." All LANL projects, including pit production, are funded year by year after White House, DOE, NNSA, and congressional review. The decision to make pits is not final. Many NNSA projects die.

No valid EIS process has been conducted supporting the choice to build pits at LANL. Studies done in 2008 assumed LANL would have a big new plutonium building. Citizens stopped that project. Those studies are invalid.

NNSA is building a new pit factory in South Carolina which will be able to make all required pits starting in 2035 at higher safety standards, with few if any negative local community impacts. That facility is 10 times farther from the public than LANL's.

*The SWEIS would be legitimate only if LAP4 were paused, along with all pit production activities, and the new staff hired were notified that their jobs were contingent upon favorable outcome not just of this SWEIS but of a new analysis of alternatives conducted under DOE Order 413.3B. The previous AOA did NOT support the present choices – either the two-site pit plan or reliable/industrial pit production in PF-4.

In 1996, DOE estimated of the cost of building a 50 pit per year (ppy) factory at LANL at \$110 million (M) (\$622 M in 2024 dollars). Our current estimated total cost of a 30 ppy factory at LANL, through completion of construction in 2032, is \$22 billion (B), <u>35 times as much</u>. In 2017, NNSA estimated the cost of a 30 ppy factory at \$3 B, <u>7</u> times less than today. By any measure, LANL pit production is grossly over budget – in the business world, a 5th failure.

Depending on what is counted, each LANL pit is going to cost between \$68 and \$156 M, i.e. in the neighborhood of \$100 M. That is as much as a large new high school, or a year's pay for 2,000 teachers. Neither the United States nor New Mexico can afford such idiotic priorities. New Mexico: last in education, first in plutonium pits? Sickening.

► The excuse for LANL pit production is a reckless and dangerous nuclear arms race, which the U.S. must not enter and cannot "win." Unless stopped, that race will lead either to nuclear war or national bankruptcy. It is basically a run on the Treasury by the military-industrial complex. We cannot afford to continue being so stupid.

► Federal efforts to acquire pit production facilities at LANL have failed 4 times in the past, for good engineering and management reasons. The present effort is not supported by any NNSA comparative study. Known problems include:

- LANL's plutonium facility ("PF-4") is small, already 50 years old, built for R&D and not production, and has several existing plutonium missions which must continue. It is crowded.
- PF-4 does not yet and may never meet modern safety standards. Other necessary buildings are also old and unsafe. PF-4 is only about 3,000 ft from residences.
- NNSA and LANL are attempting to overcome LANL's lack of proper facilities by running multiple shifts in this old building and others, while building new support buildings and moving hundreds of staff off-site.
- LANL pit production is expected to be temporary at best. NNSA expects to move production to South Carolina.
- LANL is geographically isolated. Road access, housing, labor supply, and regional educational facilities are limited. There is essentially no supportive high-tech industry.

- LANL's topography is highly dissected. Effectively, LANL is a small site. Residences, highways, national monuments, tribal lands, are near nuclear facilities needed for pit production and waste staging.
- LANL has three active earthquake faults on-site, and is underlain at shallow depths by unconsolidated sediments. LANL's mesas are extensively fractured and seismically unstable.
- LANL is vulnerable to wildfire and extreme weather hazards.
- LANL is located on sacred Native American lands, with roughly 2,000 ruins and shrines on-site.

► The decision to temporarily use LANL for a pit factory was entirely political, done for the sake of pork barrel spending and to facilitate new warheads by being able to making pits sooner.

► The new warheads are "needed" only to provide ADDITIONAL, "BONUS" warheads for the much-delayed, grotesquely over-budget Sentinel intercontinental nuclear attack missile, now expected to cost >\$172 B. Sentinel should be canceled, along with its unnecessary new warhead and the unnecessary new pits LANL would make for it. 4. The other big (set of) issue(s) on the table has to do with <u>us</u> – with the nature and direction of our collective engagement, including our resistance to nuclear-military colonization, U.S. wars, and the nuclear arms race.

- How can we discern, and disengage from, efforts to normalize pit production at LANL and our nuclear colonial status?
- How can we make resistance to nuclear weapons expansion in New Mexico effective?
- What shapes might it take?
- How can it be integrated into efforts to build a more humane, resilient society?
- How can it enhance our relationships, careers, and lives?
- How can we build community while successfully opposing nuclear weapons?

Thank you for your attention. We hope you will work with us. Every one of us can make a unique and important contribution.

From Hannah Arendt, *The Human Condition*:

With word and deed we insert ourselves into the human world, and this insertion is like a second birth, in which we confirm and take upon ourselves the naked fact of our original physical appearance. ...This beginning is not the same as the beginning of the world; it is not the beginning of something but of somebody, who is a beginner himself.

...It is in the nature of beginning that something new is started which cannot be expected from whatever may have happened before. This character of startling unexpectedness is inherent in all beginnings and in all origins....The new always happens against the overwhelming odds of statistical laws and their probability, which for all practical, everyday purposes amounts to certainty; the new therefore always appears in the guise of a miracle. The fact that man is capable of action means that the unexpected can be expected from him, that he is able to perform what is infinitely improbable. And this again is possible only because each man is unique, so that with each birth something uniquely new comes into the world. With respect to this somebody who is unique it can be truly said that nobody was there before.

...The life span of man running toward death would inevitably carry everything human to ruin and destruction if it were not for the faculty of interrupting it and beginning something new, a faculty which is inherent in action like an ever-present reminder that men, though they must die, are not born in order to die but in order to begin.

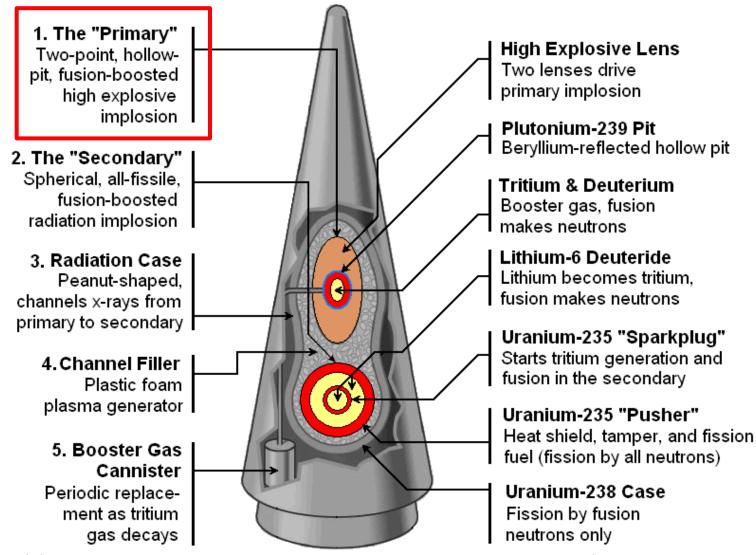
A few background slides that might be helpful.

Ground Based Strategic Deterrent (GBSD) "Sentinel" system. Deployment 2030-2037. A \$85-140+ billion program plus warheads, according to DoD's Cost Analysis and Program Evaluation (CAPE). 400 deployed, MIRV-capable (3 per missile for some fraction of 400, perhaps 200 as at present). To be armed with new W87-1 warheads (W87-0s initially). Some 250-1,500 new-pit W87-1s are desired, starting in 2030.

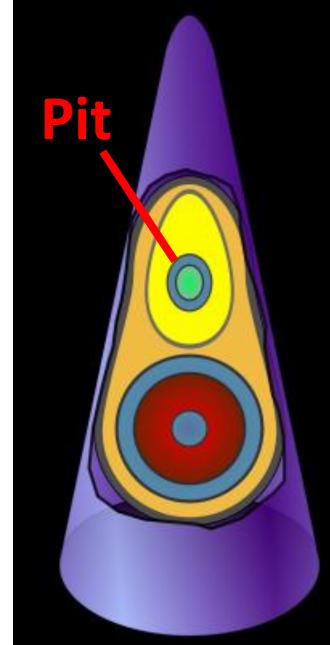
> This is the origin of the 80+ pit per year by 2030 requirement.

Modern U.S. ballistic missile warhead, late 1980s

W88 Warhead for Trident D-5 Ballistic Missile



Wikipedia illustrations: for Sources

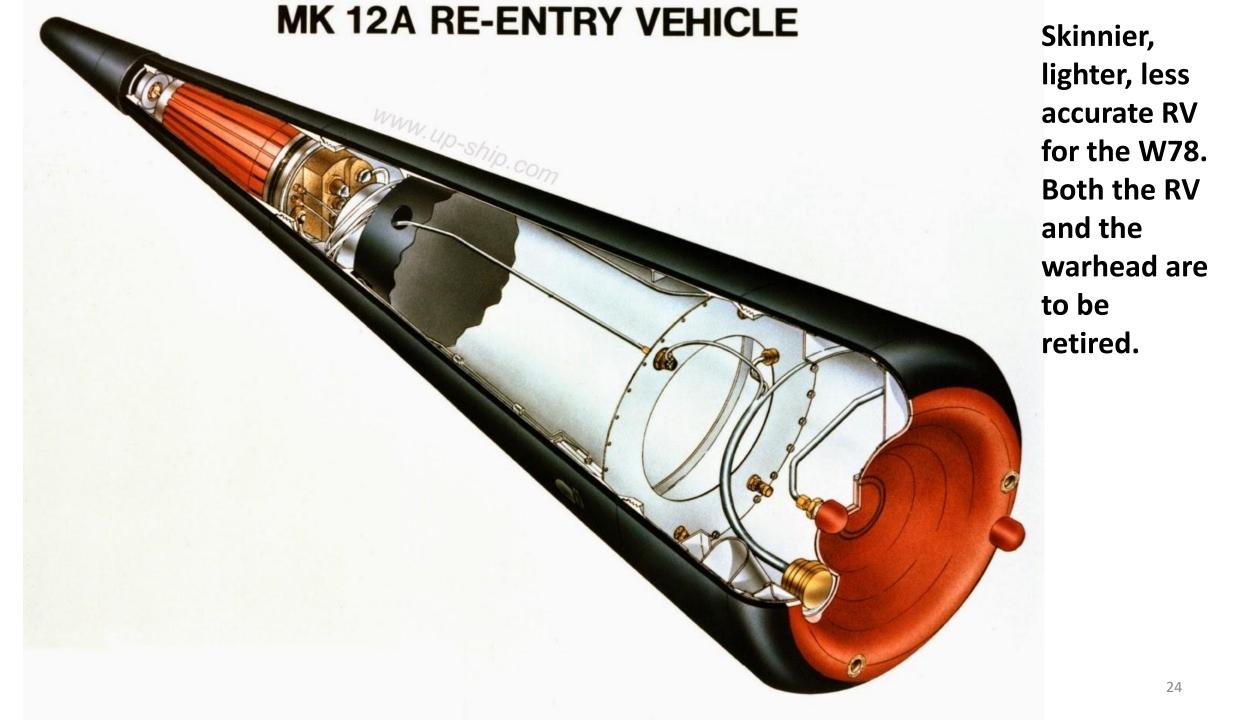


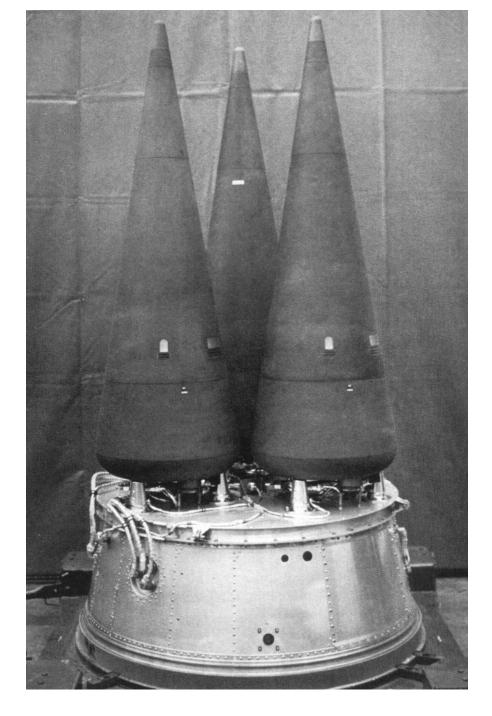
New silobased missiles are to be the destination for new plutonium pits.



W87-0 in Mark 21 reentry vehicles (RVs), shown here in (retired) MX missile configuration. Circular error probable (CEP) is classified but say ~100 m, with "smart" fuzing. Yield is 300 kilotons (kt), with a 475 kt variant optional. It is pits of this type which LANL is tasked to make.

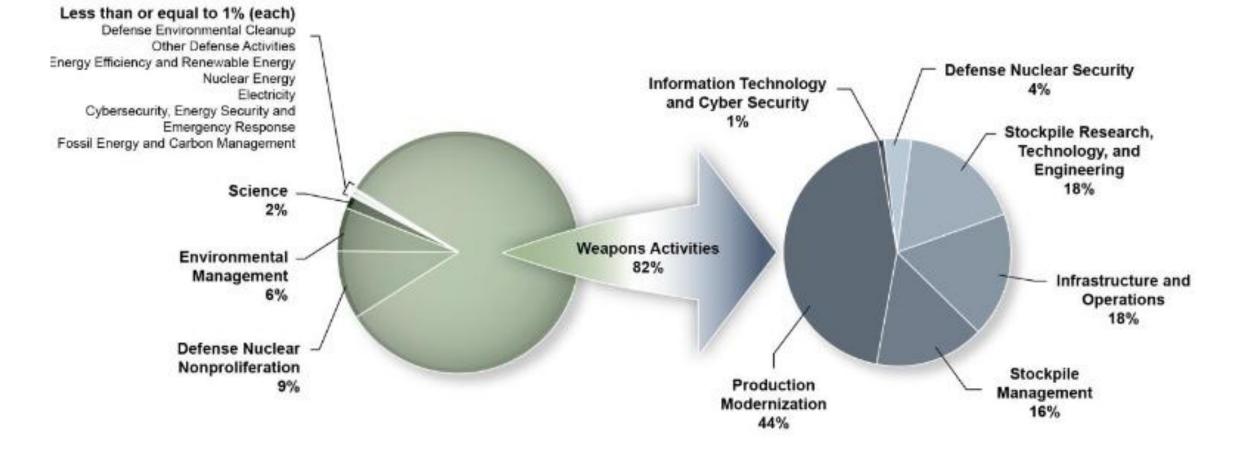
The US possesses ~ 540 (490?) W87s, in addition to ~780 W78s in Mark 12A RVs (CEP ~720 ft) for the same 450 Minuteman III missiles (400 deployed). At present, ~200 MM IIIs could be returned to multiple independent RV (MIRV) status with 3 W78 warheads each.





Minuteman III Mk-12 MIRV Warheads (W78s), tested in this configuration in the last administration. FY 2024 DOE request - site funding by source (total LANL FY 2024 request = \$4,922 million)

LANL split for the FY 2024 Weapons Activities President's Budget Request (\$4,053 million)



Los Alamos National Laboratory (LANL) spending, current and proposed, \$ billions					
LANL M&O contractor: Triad, LLC	FY 2020 enacted	% total	FY 2021 request	% total	
Weapons programs	1.93	59%	2.91	71%	
Nonproliferation programs	0.29	9%	0.31	8%	
Safeguards & security	0.15	5%	0.03	1%	
Environmental Mgmt	0.03	1%	0.03	1%	
DOE office of science	0.09	3%	0.06	1%	
Energy & other programs	0.09	3%	0.02	0%	
Work for others (WFO) (assumed unchanged)	0.35	11%	0.35	9%	
Total Triad	2.93	89%	3.71	91%	
LANL cleanup (N3B)	0.19	6%	0.19	5%	
Los Alamos Site Office (LASO) (federal)	0.17	5%	0.18	4%	
Total LANL	3.29	100%	4.08	100%	

What does LANL do?

As of 8/20/20, LANL says it has 13,137 employees:

- Triad: 9,397 (67% university degreed, 21% PhD)
- Guard force (Centerra-LA): 281
- Subcontractors: 478 (part- or full-time?)
- Students: 1,323 (presumably few are full-time)
- Unionized craft workers: 1,160
- Postdocs: 498

This does not include N3B, its subcontractors, or LASO

Sources:

- https://www.lanl.gov/about/facts-figures/index.php (retrieved 8/20/20)
- https://www.lasg.org/budget/FY2021/doe-fy2021laboratory-table.pdf

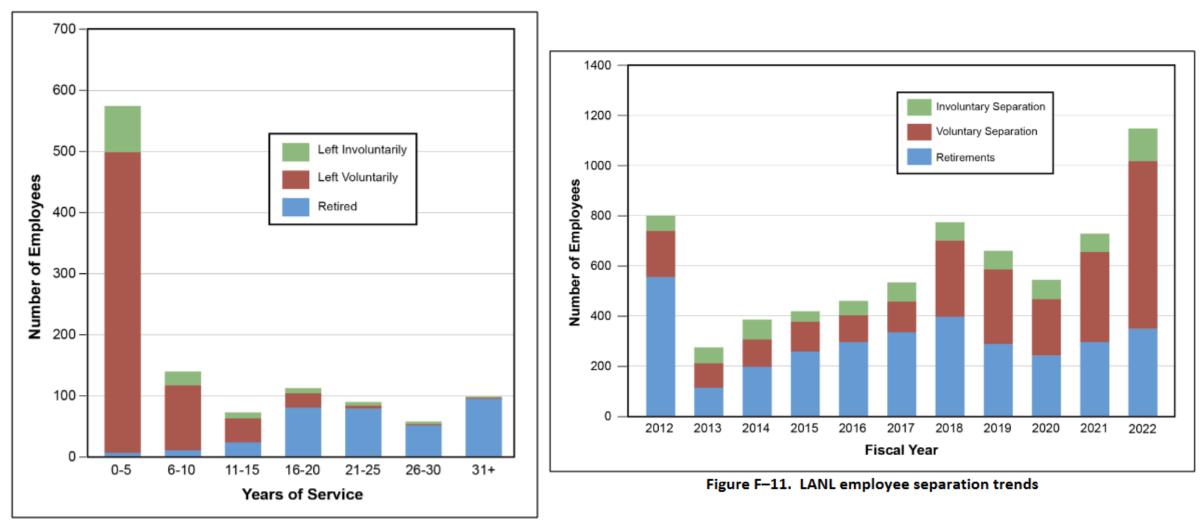


Figure F-9. LANL separations by years of service



New Mexico

Total Awarded Amount \$34.8 Billion

from 45,215 prime awards

View awards to this state

Details 🕕

Population	2,088,070 (2017 est.)
Awarded Amount Per Capita	\$16,686
Median Household Income	\$46,748 (2016 est.)

From USAspending.gov Does not include military bases.

Awarding Agencies

Name	Awarded Amount	% of Total	
1. Department of Energy (DOE)	\$10.46B	30.03%	
2. Social Security Administration (SSA)	\$8.72B	25.01%	
3. Department of Health and Human Services (HHS)	\$6.95B	19.94%	
4. Department of Agriculture (USDA)	\$1.85B	5.3%	
5. Department of Veterans Affairs (VA)	\$1.30B	3.74%	

Recipients

Name	Awarded Amount	% of Total
1. MULTIPLE RECIPIENTS	\$10.71B	30.75%
2. DEPARTMENT OF HUMAN SERVICES NEW MEXICO	\$6.07B	17.41%
3. TRIAD NATIONAL SECURITY LLC	\$5.21B	14.95%
4. NATIONAL TECHNOLOGY & ENGINEERING SOLUTIONS OF SA	\$5.10B	14.65%
5. NEW MEXICO DEPARTMENT OF TRANSPORTATION	\$558.86M	1.6%

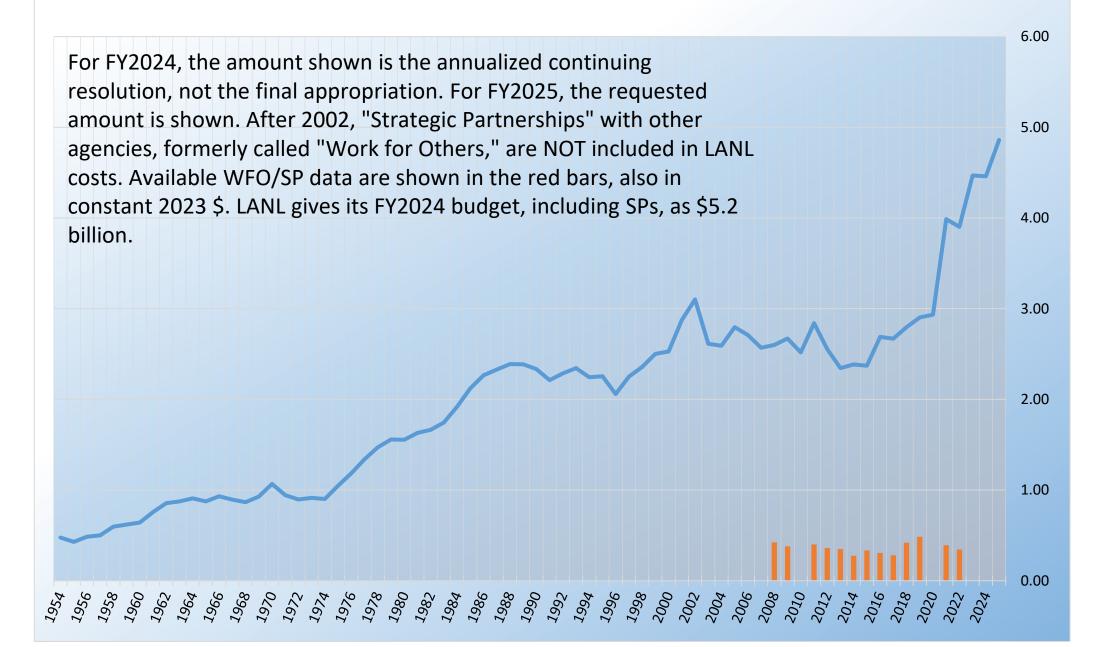
Site	Estimates	
once	Lociniaceo	

	FY 2022	(\$K) FY 2023	FY 2024 Request				
Site	Enacted	Enacted	FSE	WA	DNN	NR	Total
Los Alamos National Laboratory	3,445,510	3,999,598	-	4,053,066	450,997	-	4,504,063
Los Alamos Site Office	19,550	22,947	23,545	27	-	-	23,572
LANL cleanup funding requested for FY24, 287,479 (\$K). @82% WA, 19,307 Other DOE at LANL, 130,223 (\$K); FY22 work for others, 340,00 (\$K), defense							
NNSA Albuquerque Complex	1,154,992	1,569,300	660	1,108,508	186,184	-	1,295,352
Total DOE at Albuquerque, 1,305,384 (\$K).							
Sandia National Laboratories - New Mexico	2,660,172	2,774,322	-	2,681,391	265,181	-	2,946,572
Sandia Site Office	85,250	86,269	27,283	-	61,607	-	88,890
SNL work for others (FY22): 1,396,900 (\$K),	all defense mo	re or less	@84% W	A, 22,918			
Waste Isolation Pilot Plant	10,558	9,160	-	-	15,064	-	15,064
(This is NNSA funding only. Total WIPP spending requested for FY24 is 464,326 (\$K)							
Grand Total	20,656,000	22,162,564	538,994	18,832,947	2,508,959	1,964,100	23,845,000
So NM hosts 7,885,217 (\$K) (42%)	of NNSA nu	uclear warh	ead spend	ing in 2024	(if/when fi	nally fund	ed).

Total DOE spending requested in NM for FY24 is 10,043,171 (\$K). Of this, at least 8,637,022 (\$K), or 86%, is nuclear warheads, cleanup, and nuclear waste disposal. This is an understatement because a considerable part of DNN (Defense Nuclear Nonproliferation) deals with the disposal of surplus warhead materials and other nuclear weapons issues.



Los Alamos National Laboratory Costs Incurred by Fiscal Year, billions 2023 dollars Los Alamos Study Group, March 19, 2024











Los Alamos Study Group © 2021

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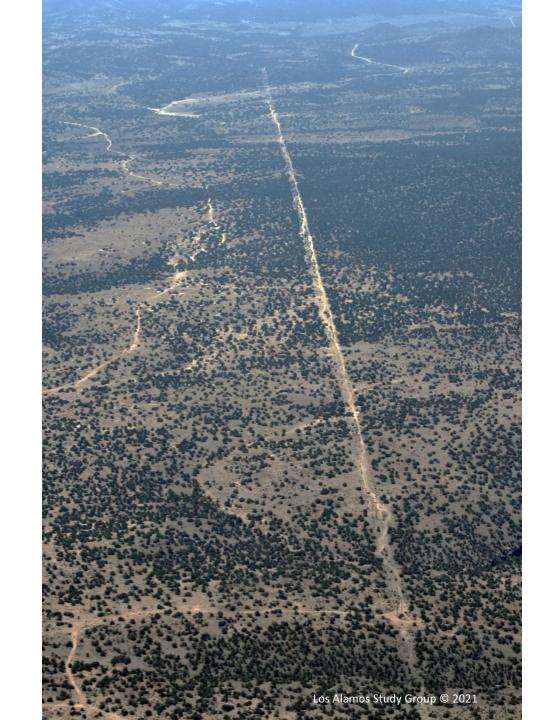
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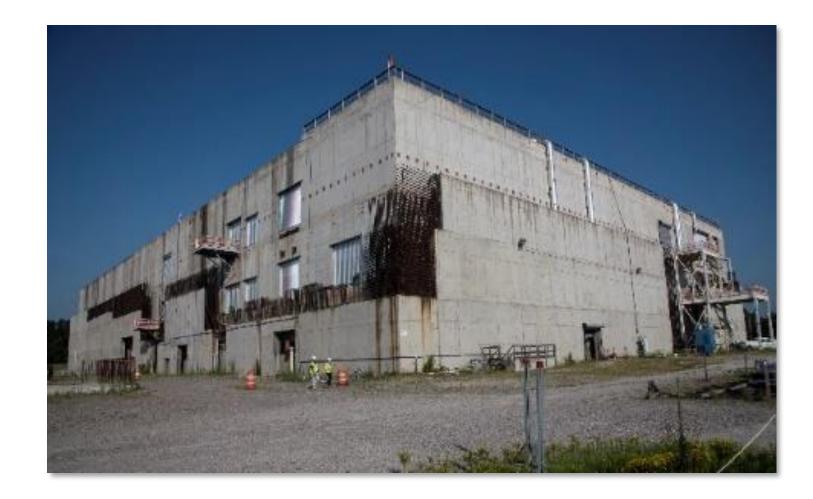






Plutonium Pit Processing at the Savannah River Site

- Repurpose the unfinished Mixed Oxide Fuel Fabrication Facility as the Savannah River Plutonium Processing Facility
- Achieve NNSA two-site solution to deliver 80 pits per year
 - 50 from Savannah River Site
 - 30 from Los Alamos National Laboratory
- Received CD-1 approval June 28 for Design/Build Project
- Conceptual design completed
- Life Cycle Cost Estimate completed
- EIS completed and ROD issued



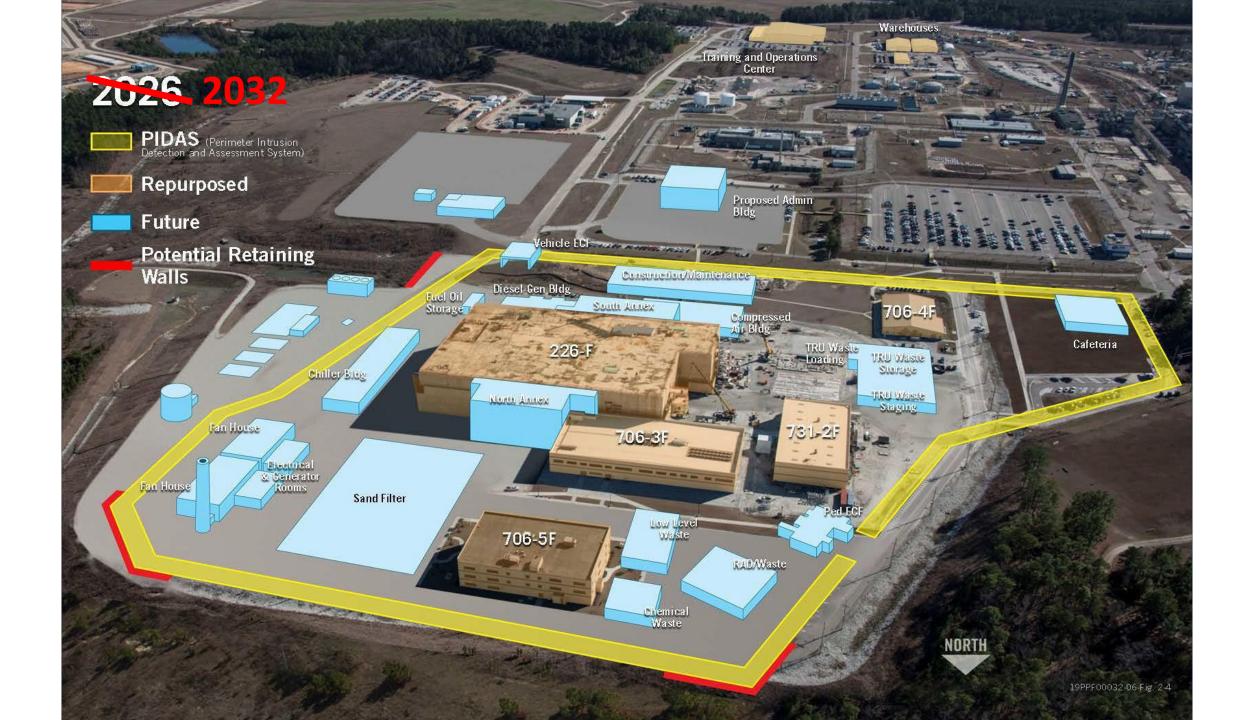


Table E–1. The nuclear security industrial base risk factors

Human Capital Gaps	Industry is unable to hire or retain U.S. workers with the necessary skill sets
Sole Source Vendors	Only one supplier is qualified to provide the required capability and/ or product
Constrained Market	Capacity is unavailable in required quantities or time due to competing market demands
Product Security	Lack of cyber and physical protection results in eroding integrity and confidence
Sunset Technologies	Product or material obsolescence resulting from decline in relevant suppliers
Foreign Dependency	Domestic industry does not produce the product, or does not produce in sufficient quantities
Eroding Infrastructure	Loss of specialized capital equipment needed to integrate, manufacture, or maintain capability
Regulatory Changes	Labor, environmental, transportation, etc., laws outpace industry's ability to develop alternative processes
Inflation	Changes to the global market causing uncertainty in suppliers pricing models thereby increase costs in material, labor, and freight over a short period of time
Global Events	Both manmade and natural events such as the war in Ukraine and the COVID-19 pandemic that negatively impact the supplies of critical goods and services

COVID-19 = Coronavirus Disease 2019

Some of the context (two slides) (early 2024)

- Multidimensional, multinational debt crisis; debt service now >\$1 trillion on an annualized basis, no end of debt service growth in sight. Growing economic crisis of nearly unlimited downward potential. Widespread unemployment coming, possibly with hyperinflation. We are past the point when this could have been avoided. In U.S., high and growing inequality, lack of economic security, homelessness. All across the first world, prosperity is falling. Financial systems need "growth" to settle debts. Real growth is past.
- Multipolar breakdown in Congress, loss of oversight ability
- <u>Overt</u> intel agency involvement in lawfare now
- An "aged out" president mentally incapable of fulfilling presidential duties and who ALSO is guilty of bribery, AND an incompetent VP AND a major political party that will do and is doing virtually anything to win
- Leading R candidate hated by half the country, made subject to "lawfare" attacks in numerous venues
- Electoral corruption on a vast scale, of multiple kinds. Policy reforms are likely impossible except on margins.
- Recent US destruction of major European energy source in terrorist attack; almost certain U.S./Ukrainian involvement in mass murder in Moscow; U.S. assistance in targeting key infrastructure and military in Russia
- Widespread censorship, media consolidation and control
- Academic, medical, and nonprofit cooptation, control, cancellation of dissenters

- Huge investments in failed neo-Nazi Ukraine war, now intensifying, with no way for Ukraine to win, U.S. and NATO facing the bitterness of a massive strategic defeat. Wider war likely; nuclear war possible.
- Lock-step support for on-going Israeli genocide, delegitimizing U.S. government in most eyes; related new war on Yemen. Pattern: U.S. loses control over proxies.
- Sharp rise of multipolar world, BRICS+, loss of US prestige ("the face of power") and influence, complete denial of this by U.S. leadership
- Loss of military dominance to *both* Russia and China
- U.S. critical resource and supply chain crises, fragility and contagion of financial linkages
- U.S. critical de-skilling, worst in civilian sector
- Past the <u>global</u> peak of oil production (2018), EROEI falling. Master variable in loss of prosperity. No renewable energy substitutes.
- At, and soon past, the ragged US peak of oil production. Dependence on fracked shale reservoirs in very few locations with high depletion rates.
- Climate crisis of growing severity (so-called "drought" in NM), potential runaway irreversibility; severe weather events and disasters increasing
- Famine rising; migrations rising; habitats and species declining; "development" goals receding
- Collapse of arms control (nuclear, biological) due primarily to U.S. actions

Approaches to NM's increasing colonial status

First, everybody must stabilize their lives to some degree. This can be a big job and it will be harder and harder to do. This challenge conditions what follows here.

- 1. Trying to understand it. This is not so easy. Our minds are the primary locus of colonization. We have to work there. We are not free. We think thoughts invented by others to stick to the primitive parts of our brains, i.e. our emotions, fears, and need for belonging. We are brainwashed into believing things which aren't true and fighting against each other and our natural allies, with results that include paralysis, despair, impoverishment, division, addictions, and death.
- 2. Leaving NM, or: mental distancing, denial, distraction, escapisms and addictions
- 3. Whining and careerism; cashing in on colonialism; remaining immature; playing on liberal guilt for personal and career advancement
- 4. Joining the colonizers; becoming a comprador, direct employee, or a servant
- 5. Resisting, while helping construct and preserve a just, sustainable society at some appropriate scale; embracing others
 - Holding to nonviolence and respect is the definition and basis of success.
 - The "constructive program" is the centerpiece; resistance one of its activities
 - Service is essential for maturity and the acquisition of moral standing and is part of the road and the destination.
 - We should only do things which win in the doing as well as the result, and leave everything else aside.
 - We don't have time for fake resistance, which abounds.
 - We need to acquire skills and do useful work in our communities. "Get your living by loving," said Thoreau.
 - Be aware of efforts to distract, delay, divide, dissipate, and destroy resistance.
 - We need to organize ourselves to face dramatically falling economic prospects nationwide. This could happen fast.
 - We need to lead, including by getting elected to offices.

Some hallmarks of solutions which are <u>not</u> false

- Local ownership and control, with all the challenges, responsibilities and uncertainties attendant on that
- Small scale
- Inclusive respect for all beings, especially the young and the old, including the non-human, including communities.
- Independence and personal freedom, non-cooptation and non-subservience, in balance with responsibility.
- Simplicity, frugality, efficiency, conservation ("Simple living")
- Continual search for truth of all kinds and reliable, liberating knowledge ("High thinking")
- Foster a wide range of skills, undercutting the control of monopolies and bureaucracies ("High skilling")
- Build community resilience to social, natural, and economic hazards
- Be reality-based
- Involve thorough nonviolence
- Are conservative of traditions, building on them, including spiritual traditions. Deepen, don't dispose.
- Stability and solidity as to place, land, people, and memory. Don't "melt into air."
- Creative, artistic, expressing and fostering the *elan vital* that consumerism has smothered. Accept grief, embrace joy.