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DOE Launches New Plutonium Production in Idaho

The Bush Administration and the Republican-controlled Congress are ramping-up their “Space Nuclear” programs to the point that they now intend to restart Department of Energy (DOE) plutonium production to meet projected needs.

This is a frightening prospect for anyone who has tracked DOE’s disastrous history of nuclear materials production, testing, and tragic (arguably illegal by the Resource Conservation Recovery Act, Clean Air Act, Clean Water Act and the Nuclear Waste Policy Act) mismanagement of nuclear facility radioactive emissions and waste deposition.

Violation of international treaties (signed by the US), including the Non-proliferation Treaty and the Outer Space Treaty of 1967, are documented.

The uncompensated human costs already carried by residents living in the shadow of DOE operations is horrific and thrusting this new hazard and formidable long-term risk on future generations is categorically unconscionable.

The DOE claims it has exhausted the previous Russian source for plutonium-238 and now has committed startup funding of \$230 million for a “domestic” Idaho plutonium production operation. However, the Environmental Defense Institute (EDI) has recently uncovered (not publicly available) documents that say only a fraction of contracted and delivered Russian plutonium is acknowledged. This new “domestic” Idaho plutonium production program funding could exceed \$700 million.

DOE claims it needs a “reliable” source of Pu-238 for use in NASA’s space program power generators and other undisclosed secret military programs.

DOE is now belatedly “scoping” for public comment a new Environmental Impact Statement (EIS) for plutonium production at the Idaho National Laboratory (INL).ⁱ The plan is to build a new neptunium-237 “target” fabrication and processing operation that provides the raw material that eventually leads to the Pu-238 product. This would include the use of the existing INL Advanced Test Reactor (ATR), and build a new reactor at INL to irradiate neptunium targets and then process the targets using a multi-stage solvent extraction process for Pu-238.ⁱⁱ The PEIS at E-1 also describes the “New Research Reactor Operations” that would supplement and/or replace the ATR built in the 1960s and cannot pass any current NRC structural/containment standards. This new reactor “...was developed to meet USDOE’s missions of (1) producing medical and industrial radioisotopes, (2) producing plutonium-238 (minimum net annual production fo 5 kilograms [11 pounds]), and supporting nuclear energy research and development.”

DOE’s “New Research Reactor” will replace the aging ATR built in the 1960s that cannot pass any current Nuclear Regulatory Commission structural, radiation containment, or seismic standards. This new reactor “was developed to meet DOE’s missions of (1) producing medical and industrial radioisotopes, (2) producing plutonium-238 (5 kilograms [11 pounds] per year), and (3) supporting nuclear energy research and development.”

This is DOE’s backdoor move to launch the next generation of nuclear power reactor design when the private commercial sector is refusing since the Three-Mile Island meltdown in the 1970’s.

Send Public Comments to:

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At issue, DOE's new plan to consolidate Pu-238 production for radioisotope power system (RPS) production at a single DOE nuclear site in Idaho. The INL is being sited by the U.S. Government to consolidate the production, purification and encapsulation of Pu-238.ⁱⁱⁱ The point being this multi-stage target solvent processing in the production of Pu-238 generates significant quantities of air emissions and liquid waste that then must be treated, resulting in additional toxic air emissions. Historically, the various phases of this cycle have been accomplished at several different DOE sites that documents show extensive contaminant releases occurred.^{iv}

These Pu-238 projects have been used primarily to power military surveillance satellites, and NASA missions into deep space utilizing the sustained heat source generated from Plutonium-238 produced in nuclear reactors. In addition to creating this power source or, "space batteries" as they have been called, the DOE is saying that the plutonium-238 will be used for other undisclosed "national security" initiatives.

Formous accident risks to public health and safety are being gambled by the government without full disclosure. About 26 individual US space launches to date have had plutonium on board. The 1997 Cassini Mission, for instance had 72.3 pounds (159 kilograms) of Pu-238 onboard.

Dr. Ernest Sternglass, professor emeritus of radiological physics at the University of Pittsburgh, warns that if Cassini disintegrated, it would present a great danger and "that the death toll from plutonium exposure of a Cassini inadvertent reentry may be as high as 30-40 million people. The international Committee on Radiological Protection states "that inhalation of 1/10,000 of a gram of Pu causes lung cancer."^v

Dr. Arjun Makhijani, a nuclear engineer from the Institute for Energy and Environmental Research stated "the total radiation fallout from all the open air nuclear explosions from 1945 to the present is 440,000 curies. Now, if Cassini had an inadvertent reentry with the 3 RPS's and the 130 RHU's vaporized in our atmosphere, approximately 406,000 curies of radiation would be released." There have been more than 900 open air nuclear explosions caused the premature death since 1950 of some 20 million. A single accident of Cassini could possibly emit nearly as much radiation than all of these 900 put together.^{vi}

Admittedly, the Cassini Mission had no apparent accidents, but both the DOE and NASA have an aggressive program within the next decade for dozens of new launches that will pose comparable or larger risks to the public especially when as planned they have plutonium propelled nuclear rockets. With a NASA mission (with plutonium component) failure rate of 12%, this is a major issue.^{vii}

This monumental public hazard is especially egregious and unnecessary when solar power for space vehicles has been used for decades. Credible and previously NASA utilized solar power for space programs is available and documented by the European Space Agency's recent development of super-efficient solar panels as a power source.

The Energy Department's representative Timothy Frazier came to numerous towns in Idaho and in Jackson, WY as part of a public tour to conduct "scoping meetings" for this project. Private citizens, as well as the local environmental group, Keep Yellowstone Nuclear Free, submitted questions and made comments concerning the potential for INEEL to become the national production site for the next generation of plutonium production, and DOE's answers radically conflicted with internal DOE documents EDI has gained under the Freedom of Information Act and other alternative sources.

DOE must fully discuss the following points in a new comprehensive Programmatic Environmental Impact Statement that covers ALL related programs to include but NOT limited to the above identified issues. Broadly, DOE must conduct environmental studies in a Programmatic Environmental Impact Statement to analyze the types of nuclear development contemplated for the INEEL, including, but not limited to:

- The types and numbers of facilities,
- Where the facilities will be placed,
- The use of the facilities,
- The environmental impacts of each of the facilities,
- Possible alternative locations instead of at INEEL for the facilities,
- The alternative non-nuclear solar power advanced by the European Space Agency;
- The advanced fuels under consideration including non-nuclear alternatives,

- The storage of nuclear wastes,
- The disposal of nuclear wastes,
- The transport of the nuclear wastes to a repository;
- Processing the nuclear wastes,
- Security issues,
- Militarization of space;
- Accidents;
- Complete emissions and waste characterization related to all stages of the Pu-238 production process;
- Statutory and regulatory permits required under RCRA, Clean Air Act, and Clean Water Act;
- Funding requirements for all programs that fully account for transfers from the DOE's Environmental Management Account over to the Nuclear Energy Account.^{viii} ☈

Nuclear Rockets Undergoing Testing

The Bush administration and the neo-conservative controlled Congress continue to push for the restart of the next generation on nuclear weapons testing in Nevada, and the ongoing development of nuclear rocket testing under the auspicious of NASA's Glenn Research Center (Cleveland, OH), and the Jet Propulsion Laboratory at Pasadena, CA).

The older nuclear rocket reactor based designs "Timberwind" type, or high flying nuke plane - would use either Uranium-235 or Plutonium-239 in the same way and in similar amounts to those used in Naval reactors. They simply are basically un-shielded reactors, where the reactor is made critical and the propellant (usually hydrogen) is then pumped through the very hot reactor, the reactor heats the hydrogen to very high levels turning it into hydrogen plasma which then provides the thrust.

The new ion drive type units, or nuclear electric, currently being tested in Ohio and California uses the same source of power generation to create the electric power to generate a steady stream of ions, or to make very small continual amounts of high temperature plasma of some kind to use as thrust. They are not meant to be extremely powerful short bursts of thrust like conventional rocket engines, but to be able to produce a steady low level of thrust that over time steadily speeds up the payload over months or years of running a low out put, with the end being that the payload - space craft - eventually reaches speeds far higher than we can do with conventional rocket engines and thus gets a probe to the outer reaches of the solar system in shorter times.

Here the power source can be a range of nuclear sources from Pu-238 at lower power requirements end where a lot of electric generation is not required, to new generation of fission reactors using U235 and/or Pu239 where major amounts of power would be required -- large craft.

The Russians still have enough Pu-238 for sale to handle NASA's needs, BUT, DOE is fixated on "national security needs" and hence want to produce our own. Read carefully the small print on this not being dependent on the Russians as it is another clue to the extent of military requirements planned for Pu 238 usage. ☈

Downwinder letter to Idaho Attorney General Lawrence Wasden

November 22, 2004

Dear Attorney General Wasden,

The atomic fallout that repeatedly was aimed at Idaho by the federal government had profound health impacts it created in many Idaho families. We are asking for your help.

Fifty-four years after the first atomic weapons fallout hit Idaho we are finally "hearing" about RECA compensation of \$50,000 for victims from the government. We would like your legal opinion because even the \$50,000 seems like a grossly inappropriate settlement for the total intentional damage done.

In a car "accident" the victim receives settlement for all his medical bills and time missed at work. The atomic fallout was no accident, it was intentionally aimed at Idaho by waiting for wind patterns to blow our way. The tobacco industry paid a high price for intentionally hiding their knowledge of their poison. While a smoker still has to realize some obvious danger from smoking, Idaho never knew what hit us.

Please consider that many of these survivors have ongoing medical problems and bills that \$50,000 doesn't cover. We need first class medical treatment and we need it now. There are people going without treatment for lack of money.

The health effects appear way beyond the tiny list of compensatable cancers under RECA. Many suffer from hypothyroidism instead of thyroid cancer from the high I-131 exposure. Our state Medicaid paid over \$900,000 last year for thyroid supplement.

Radiation affects the immune system. Our autoimmune rate for Multiple Sclerosis has a statewide rate higher than what the CDC says is America's highest rate of MS, for 19 people in a county in Ohio. Smack in the center of the footprint of Nevada Test Site sits Shoshone with world record rates of MS. With these high rates of an immune disorder in Idaho, why is the burden of proof not on the government to prove they did not cause this problem by aiming weapons fallout at us repeatedly? Many more show symptoms but cannot afford to see a doctor.

In order to preserve choice in our medical care, and given the present wide spread geography of those who lived in the fallout zone, we would consider it fair to receive vouchers that our doctors can receive payment for from the government for all the medical bills of victims.

We suggest that the government and corporations must pay for the medications like thyroid supplement and drugs we need for treatment and pain.

Now we can talk about the settlement for pain and suffering. While individuals often receive millions, we realize that the large numbers of us would prohibit that. The present RECA payment to miners is \$150,000. While workers assume some obvious risk with that job, we were innocent bystanders hundreds of miles away. So \$250,000 appears appropriate.

While the medical vouchers are needed without a doubt, we would consider negotiating on the payment for pain and suffering if the medical care is resolved and an apology is finally given.

We realize that other states have tried to stop the onslaught of nuclear fallout and seek compensation before. They succeeded all the way to the Supreme Court, but got overturned by the "sovereign immunity" of the federal government. Does this mean that the federal government can intentionally inflict diseases, cancer, and death on its citizens? Can they do it again?

The underground atomic testing had some horrible accidents that added to Idahoans body burden of radiation we have gotten from Nevada Test Site explosions since 1950. That atomic testing was only stopped in 1992. With the issue of a renewed nuclear arms race and more deadly testing there must be a legal way to protect our state's right to life. Let us not forget that the fetus is the most vulnerable to the deadly effects of radioactive fallout coating Idaho again.

Since previous cases have made it to the Supreme Court, let us not forget that we have appointed more constitutionally based judges and often the constitution is interpreted differently.

If this "sovereign immunity" truly means that more nuclear fallout can be aimed at Idaho, what law or constitutional amendment can you write for our delegation to present to Congress that can protect a state from being aimed at with deadly nuclear fallout by our federal government? Please share your thoughts and consider action for Idaho.

Sincerely,

Citizens of Idaho: Eltona (Tona) Henderson, Fred Trenkle (Representing over 150 Magic Valley victims of MS within 15 miles of Shoshone), State Representative Wendy Jaquet, Jeannie Burkhart , David Vahlberg, Gary Riggs, Janet Tomita, Barbara Moyle, Cindy Kawano, Earl and Susie Nelson, Howard E. Wright, Darlene Cheney, Deana (Barzee) Collamer, Preston J Truman, Dr. Peter Rickards D.P.M. ☺

Hanford Downwinder Case Slated for Trial

The Associated Press reports (11/7/04) "A federal judge has ruled that plutonium-making at Hanford in the mid-1940s was an 'abnormally dangerous' activity that put thousands of people in eastern Washington State and northern Idaho at risk.

"That means people who live downwind of Hanford and allege harm from Hanford's radiation emissions won't have to prove government contractors DuPont de Nemours Inc. and General Electric Co. acted recklessly when they chemically separated uranium to make plutonium for nuclear bombs.

"The only issue will be whether the releases of radioactive iodine-131 actually harmed people, said Louise Roselle of Cincinnati, lead attorney for the downwinders.

"U.S. District Judge William F. Nielsen wrote in his order November 3rd 2004 that emissions of I-131 could result in 'serious illness with serious consequences' - thyroid problems, in particular.

"State law imposes strict liability for abnormally dangerous or ultra-hazardous activities, the judge wrote. 'If the activity is abnormally dangerous, then the defendants may be held strictly liable for plaintiffs' damages, regardless of whether defendants exercised the utmost care in the conduct of their activities at Hanford,' the order says.

"The contractors disagree. 'We believe this decision is fundamentally wrong and merits appeal,' said Kevin Van Wart of Chicago, lead attorney for the Hanford contractors. 'We still have years of litigation ahead of us.'

"Nielsen is preparing for a March 2005 trial involving eleven 'bellwether' cases to determine an out-come for thousands of others who sued.

"The lawsuits were filed beginning in 1991, after a government study said the Hanford releases were large enough to increase health risks for people living downwind of the plant in south-central Washington. 'The innocent people who can prove they suffered harm should be compensated by the entire nation who benefitted from the activity,' Nielsen's order says.

"Scientists working for the World War II Manhattan Project, the top-secret U.S. mission to develop an atomic bomb, knew by 1943 that iodine-131 could damage or destroy the human thyroid gland, Nielsen wrote. They also knew the gland could be protected with potassium iodine pills, which block the uptake of the radioactive iodine.

"Scientists also knew as early as 1925 that iodine in cows' diets was transferred to their milk - the main exposure pathway for people living near Hanford, Nielsen wrote. No pills were ever offered to people living near Hanford.

"In the 1970s, Herbert Cahn, the former Benton-Franklin County health officer, suggested distributing the pills to protect people against a Hanford accident. His supervisors told him to drop the idea or be fired, Chan said in an interview with the Spokesman Review newspaper.

"Last year, the American Academy of Pediatrics recommended the pills be kept at day-care centers, schools and homes to protect the thyroid glands of children living near nuclear power plants. Tri-City, Washington officials declined to act, saying decisions to stockpile the pills should be left to families." [Lewiston Morning Tribune (11/7/04)] ☈

Congress Uncertain on Bush Requests for Funding for Nuclear Weapons

Michael Kllian reports in the Chicago Tribune (11/23/04) "The defeat of President Bush's attempts to fund research and possibly development of a new family of nuclear weapons was hailed by arms control advocates as their biggest success in more than a decade. They were reacting to the approval by the Senate and House of a spending bill that eliminates funding for the nuclear 'bunker buster' as well as other 'advanced concept' tactical nuclear weapons.

" 'This is the biggest victory that arms control advocates in Congress have had since 1992, when we were able to place limits on nuclear testing,' said Rep. Ed Markey (D-Mass.), one of the leading opponents of the Bush administration's nuclear arms program. 'If we are to convince other countries to forgo nuclear weapons, we cannot be preparing to build an entire new generation of nuclear weapons here in the U.S.'

The administration had argued that it was important at least to study such weapons at a time of great threat against the United States. But congressional sources said Republicans joined with Democrats in opposing the program because of the example it would set while the U.S. is trying to compel North Korea and Iran to abandon their nuclear arms efforts.

"The White House had outlined plans to spend more than \$500 million on the penetrator project over the next several years, which some analysts said was enough to move the weapon into production. Bush also had asked for \$9 million for further research into the possible development of "advanced concept" low-yield tactical nuclear weapons that could be used on a battlefield.

"In addition to eliminating the funding requests, Congress slashed to \$7 million from \$29.8 million a White House request to build new nuclear warhead facilities, or "pits," and cut \$30 million that the administration had planned to use to speed resumption of nuclear testing, if that proved necessary.

"Sen. Dianne Feinstein (D-Calif.) called the decision 'a consequential victory for those of us who believe the United States sends a wrong signal to the rest of the world by reopening the nuclear door and beginning testing and development of a new generation of nuclear weapons'."

Funding for nuclear weapons is currently included in the Defense Appropriations bill that is expected to be passed by the Republican controlled Congress. Soft Democrats not wanting to deny funding to the troops, are likely to approve the bill despite the nuclear rider. ☈

A Review of What Health Studies are Needed and Which are Not

According to Preston Truman, not only a downwinder, but long-term analyst of health studies related to radiation fallout and the health impacts on innocent victims of this government sanctioned tragedy offers the following analysis.

There is a need for studies on what happened and how it happened - the actual biological process that lead FROM exposure, to cancer or other illnesses, directed toward early detection and treatment possibilities, BUT not studies to see if there was an exposure, and if that exposure - which the levels of and risks from and all that can, and will be debated by each scientific camp for decades more. We know there was exposure, deliberate willful exposure and then just as deliberate lies and cover up over it. We also know from what data is there from places like the cancer registry and the graveyards, that people got hurt. Rehashing that isn't necessary.

BUT learning how the health effects occurred once it is accepted they did, studies aimed at saving lives and providing better treatment is quite another issue. I think that separation of studies into the already answered

- was there exposure, and did people get harmed -- from 'Ok why did it make some sick and cause cancers' and so on, and what can we learn to better detect earlier those at risk and treat them better -- is important to understand where a lot of us downwinders are coming from. We have NO INTEREST in the former and really rather flatly oppose any more 'did anything happen.'

BUT will there be support for early detection and better treatment related studies, and health care related clinics and such. Cancers are NOT the sum total of what resulted, and the other illnesses need to be brought in, many of which would benefit from study and treatment research.

Other independent analysts note that they are concerned about the fact that the problem goes far beyond the State of Idaho, but certainly ID has among the most impacted counties. It's going to be a hard battle, however, to show causation for diseases other than the thyroid, especially since almost all government sponsored review committees refuse to highlight the possible importance of radionuclides other than Iodine-131. Nevertheless, if the rules for compensating workers were to be extended to the public, who were exposed without informed consent, those with a diagnosed thyroid cancer (and perhaps other forms of thyroid disease) would qualify for claims. The problem is that the rules for worker compensation for potentially radiogenic cancers do not apply to members of the public.^{ix} ☀

Calculating Radiation Dose

To review online calculators developed by federal public health agencies go to the following sites:

National Institute of Health (NIH)

NIH IREP (This is the official NIH version of the Interactive Radio-Epidemiological Program (IREP) that estimates the Excess Relative Risk and Assigned Share/Probability of Causation for individuals exposed in the past to radiation who have been diagnosed with cancer. This code includes estimates for those exposed as children.) http://198.144.166.5/irep_nih

National Institute for Occupational Safety and Health (NIOSH)

NIOSH IREP (calculates the Excess Relative Risk and Probability of Causation for radiation workers exposed in the past to radiation who have been diagnosed with cancer) <http://www.cdc.gov/niosh/ocas/ocasirep.html>

IRAD (This is a prototype online calculator. It calculates the dose, excess life-time risk, excess relative risk, and probability of causation for those exposed to I-131 in the vicinity of Oak Ridge, TN. This is the first program of its kind to include both local facility releases and weapons fallout.) <http://198.144.165.152/irad>

National Cancer Institute (NCI)

NCI Dose/Risk Calculator for fallout I-131 (This is the official NCI dose and risk calculator that estimates the thyroid dose and future excess risk of developing thyroid cancer for those who were exposed and who are presently free of disease). <http://ntsi131.nci.nih.gov/>

A timeless advisory from

Thomas Jefferson

"A little patience, and we shall see the reign of witches pass over, their spells dissolve, and the people, recovering their true sight, restore their government to its true principles. It is true that in the meantime we are suffering deeply in spirit, and incurring the horrors of a war and long oppressions of enormous public debt ... If the game runs sometimes against us at home we must have patience 'till luck turns, and then we shall have an opportunity of winning back the principles we have lost, for this is a game where principles are at stake."

Thomas Jefferson, 1798 ...in opposition to the Sedition Act

**See Environmental Defense Institute
(EDI) website publications page for detailed
comments on this new DOE Environmental
Impact Statement and related INL programs on
non-compliant radioactive emissions and waste
disposal and related litigation efforts.**

<http://www.environmental-defense-institute.org>

Endnotes:

ⁱ EIS for the Proposed Consolidation of Nuclear Operations Related to Production of Radioisotope Power Systems, USDOE, Office of Nuclear Energy, Science and Technology, amended Record of Decision 8/13/04. See; Consolidation EIS @ nuclear energy.gov

ⁱⁱ The Final Programmatic Environmental Impact Statement for Accomplishing Expanded Civilian Nuclear Energy Research &Development and Isotope Production Missions in the US

[DOE/EIS-0310, 12/00] hereinafter referred to as PEIS says at (B-3) “For the production of Pu-238 [at INL’s ATR] , neptunium 237 targets would be placed in the beryllium reflector position. The proposed target design consists of neptunium dioxide blended with aluminum powder, pressed into a target core, and clad with aluminum.” This is a technical way of saying there is no apparent use of spent nuclear fuel in the Pu-238 production.

ⁱⁱⁱ Consolidation of the Pu-238 production program at INL would apparently include neptunium (produced at SRS) purification, target fabrication, and post irradiation target processing currently done at Oak Ridge (ORNL).

“The fabrication of neptunium-237 targets for plutonium-238 production would require dissolving the neptunium oxide, purification of neptunium to remove radioactive decay products, conversion of the neptunium to an oxide, and fabrication of neptunium oxide into targets for irradiation.” [PEIS @ A.1.3]

“Post irradiation processing of neptunium-237 targets at ORNL would involve dissolution; separation of the actinides from the fission products; separation of neptunium from plutonium; a third solvent extraction process to purify the remaining neptunium; purification of plutonium; precipitation of plutonium oxalate; calcinations of plutonium oxalate to plutonium oxide; and exchange of oxygen-17 and –18 by oxygen 16 in the plutonium oxide.” PEIS (A.1.4)

^{iv} Defense Nuclear Facilities Safety Board report “Active Confinement for Radioactive Materials, 15 December 2004, Federal Register 12/15/04 Vol. 69, No. 240. Also see Los Alamos National Laboratory executive summary of a preliminary CDC dose reconstruction study by a German scientist. [pages 3 and 4] to see that local non workers have higher than background plutonium levels on autopsy, AND there is "4-20 times" more Pu-238 laying on ground than expected.

http://www.cdc.gov/nceh/radiation/brochure/pdf/lahdra_draft_rpt.pdf

^v Gambling with the Devil, The Cassini Mission is the #1 Censored Story on Earth, 3/20/99, Dear Citizens of the Earth Letter. In addition to the launch risks, the Cassini Mission included a 8/99 “Swingby” Earth at an altitude of only 310 miles that utilizes the “sling-shot” use of Earth’s gravity to propel it to Mars in 2004. See:

<http://www.space4peace.org>

^{vi} Ibid

^{vii} Grossman, Karl, The Wrong Stuff, page 17.

^{viii} David McCoy comments on DOE scoping EIS , 12/26/04

^{ix} For more information see <http://www.downwinders.org>