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**Senators Call for Hearing on
Radiation Exposure Compensation Act**

Press Release July 27, 2015: Senators Call for Hearing on RECA,¹ Washington, D.C. – A bipartisan coalition of five U.S. senators from Idaho, New Mexico and Colorado have asked the Senate Judiciary Committee to hold a hearing into legislative efforts to assist Americans who have suffered health issues as a result of nuclear arms testing in the western U.S. during the Cold War period of the 1950s and 1960s. S. 331, the Radiation Exposure and Compensation Act of 2015, introduced by Senator Mike Crapo (R-Idaho), Tom Udall (D-New Mexico), Jim Risch (R-Idaho), Michael Bennet (D-Colorado) and Martin Heinrich (D-New Mexico) would extend benefits under the existing Radiation Exposure Compensation Act (RECA) to victims who can demonstrate health issues related to the weapons testing.

“As the United States government built up its Cold War nuclear testing program during the mid-20th century, many Americans paid the price with their health,” the senators wrote in a letter to Committee Chairman Chuck Grassley (R-Iowa) and Ranking Member Patrick Leahy (D-Vermont). “Considering the importance of RECA to many of our constituents, we respectfully request that you move quickly to hold a hearing to bring to light existing deficiencies in the compensation program and to review our legislation.”

The RECA program was originally created to assist workers in the uranium mining industry who were exposed to harmful radiation levels in the course of assisting the national defense. But the legislation stopped short of helping citizens exposed to airborne radiation from bomb testing in Nevada, New Mexico, Guam and testing locations in the Pacific Ocean.

¹ <http://www.risch.senate.gov/public/index.cfm/2015/7/senators-call-for-hearing-on-reca> and 114th Congress S.331 Radiation Exposure Compensation Act at <https://www.congress.gov/bill/114th-congress/senate-bill/331>

Fairness: Still a Work in Progress, Decades Late

We should all support our U.S. Senators efforts including Mike Crapo and Jim Risch to once again attempt to amend the 1990 Radiation Exposure Compensation Act (RECA).² Many counties most affected by weapons test fallout have been unfairly excluded from compensation.

A study mandated by Congress in 1983 but delayed for years, the National Cancer Institute found that Idaho contained four of the five counties in the nation with the highest levels of Iodine-131 from fallout: Custer, Gen, Blaine and Lemhi. Idaho is currently ineligible for compensation.³

The senators' bipartisan bill would expand RECA eligibility to include affected individuals in several western states in addition to Idaho: New Mexico, Arizona, Colorado, Montana, Nevada, and Utah.

The Department of Energy told people they were safe from Nevada fallout. Many of the releases were in the 1950s. However, even after the ban on US above ground weapons tests in 1963, below ground tests still blew in to Idaho and other states.⁴

In the 50s and 60s, while Utah, Idaho and other states were inundated with weapons test fallout, southeast Idaho was also being smoked with nuclear fuel melt testing, accidents, calcining and pyroprocessing, and other radioactive air emissions from the Idaho National Laboratory. This additional source of iodine-131 and other radioactive fallout is not addressed in the RECA amendments. See the DOE's Human Radiation Experiment collection for more information about deliberate airborne radioactive emissions prior to 1991.^{5 6}

When an epidemiology study conducted at a university in Utah found increased childhood leukemia, it was only then that the existence of a previous unpublished study by the DOE came

² <http://www.risch.senate.gov/public/index.cfm/2015/7/senators-call-for-hearing-on-reca>

³ National Cancer Institute, webpage for Radioactive I-131 from Fallout. See <http://www.cancer.gov/cancertopics/causes/i131> and <https://ntsi131.nci.nih.gov/>

⁴ Records of weapons test fallout that reached a particular county can be found by using the Center for Disease Control's interactive iodine-131 fallout map. By entering a birth date prior to 1971, state and county and milk drinking habits, you can obtain potential I-131 dose and the results will present the estimated dose by individual weapons test name and date. <https://ntsi131.nci.nih.gov/>

⁵ February 1995, the Department of Energy's (DOE) Office of Human Radiation Experiments published *Human Radiation Experiments: The Department of Energy Roadmap to the Story and Records* ("The DOE Roadmap"). See also the INL site profile on Occupational Environmental Dose: <http://www.cdc.gov/niosh/ocas/pdfs/tbd/inl-anlw4-r2.pdf>)

⁶ Department of Energy, INEL Historical Dose Evaluation, DOE/ID-12119, 1991 available at <https://inis.iaea.org/search/search.aspx?q=INEL+Historical+Dose+Evaluation&src=inws>

to light.⁷ Another Utah study of thyroid issues was defunded when a link to weapons fallout was established.⁸

So, fast forward to 2012. INL fulfilled its commitment to provide medical consultation to workers exposed in the 2011 plutonium inhalation accident⁹ by hiring a DOE expert Antone Brooks to give them a lecture. Brooks publically and emphatically denies that DOE's weapons testing ever caused any increase in cancers.¹⁰

The energy worker compensation act passed in 2000 for former Department of Energy contractors has paid out billions because of ineffective protection of workers.¹¹ The National Institute for Occupational Safety and Health performs radiation dose reconstruction for determining eligibility. Dose reconstruction can be difficult for the highly diverse work conducted at INL since the 1950s. Roughly two thirds of radiation claims for INL are denied. New investigations of weaknesses in radiation protection programs historically at INL are ongoing at NIOSH. Problems in radiation monitoring and protection have been found at INTEC between 1963 and 1974. Problems are also being investigated at other facilities including the early decades of the radioactive waste burial grounds, now the Radioactive Waste Management Complex.¹²

As more than one former INL worker put it at the July NIOSH meeting in Idaho Falls: 'We needed the work, we were glad to do the work, and we trusted when they told us we would not be harmed by the radiation exposures. It didn't work out that way.'

⁷ Fradkin, P. L., *Fallout – An American Nuclear Tragedy*, Johnson Books, Boulder, Colorado, 2004. p. 203, 219, 220.

⁸ Desert News, Joe Bauman, June 14, 2005, "Hundreds in Study to Get News of Thyroid Ills," <http://www.deseretnews.com/article/600141354/Hundreds-in-study-to-get-news-of-thyroid-ills.html?pg=all>

⁹ Department of Energy, Office of Health, Safety and Security (HSS), Accident Investigation Report, "Plutonium Contamination in Zero Power Physics Reactor Facility (ZPPR) at the Idaho National Laboratory" accident 11/8/11 at the Materials and Fuels Complex (MFC). <http://energy.gov/hss/downloads/investigation-november-8-2011-plutonium-contamination-zero-power-physics-reactor>. And DOE Occurrence Report NE-ID-BEA-ZPPR-2011-0001 <https://orpspublic.hss.doe.gov/orps/reports/displayReport2.asp?crypt=%87%C3%95%9Ba%8Etjz%5D%91>

¹⁰ Brooks, Antone, "From the Field to the Laboratory and Back: The What ifs, Wows, and Who Cares of Radiation Biology," <http://www.falloutradiation.com/files/CaresOfRadiationBiology.pdf>

¹¹ 42 USC 7384, [The Act--Energy Employees Occupational Illness Compensation Program Act of 2000 \(EEOICPA\), as Amended](#) and see the website for the Center for Disease Control, National Institute of Occupational Safety and Health, Division of Compensation Analysis and Support at <http://www.cdc.gov/niosh/ocas/> and U.S. Department of Labor, EEOICPA Program Statistics, <http://www.dol.gov/owcp/energy/regs/compliance/weeklstats.htm>

¹² National Institute for Occupational Safety and Health, Public meeting of the Advisory Board for Radiation and Worker Health held July 23, 2015 in Idaho Falls, see Board meetings and presentations at <http://www.cdc.gov/niosh/ocas/pdfs/abrwh/pres/2015/sca-inlgapanlys-072315.pdf>

The compensation claims are not just from early decades at INL, the 1950s-1970s. Compensation claims appear to be continuing from recent decades, including INL cleanup work. Naval Reactor Facility workers are excluded from the EEOICPA compensation, even those who were non-military.

Waste from NRF was buried at INL along with Rocky Flats weapons waste.^{13 14} This waste includes high amounts of long-lived and mobile radioactive contamination that are predicted to contaminate the aquifer. There is no attempt to cleanup this waste. In fact, NRF is planning to bury more over our aquifer when it could ship the waste out of state.¹⁵

Kept from public view is the predicted extent of aquifer contamination from the buried waste. The fact is that only a fraction of the Rocky Flats waste and none of the other waste buried at INL is being removed. The assumed geologic stability for yields a steady trickle out of contamination to the aquifer that escalates after 10,000 years to DOE's 100 mrem/yr limit — unless perfect soil cap performance is assumed, lowering the dose to 30 mrem/yr for hundreds of thousands of years.

Bringing some small measure of fairness to downwinders and DOE radiation workers has required diligent work by people outside the industry and DOE. Fairness — it is still a work in progress, only decades late.

NIOSH Radiation Board Meeting in Idaho Falls July 23

A public meeting was held in Idaho Falls of the Advisory Board for Radiation and Worker Health regarding dose reconstruction for compensation under the Energy Employee Occupations Illness Compensation Act. Dose reconstruction is conducted by the Center for Disease Control (CDC) National Institute of Occupational Safety and Health (NIOSH).¹⁶

¹³ Department of Energy, "Record of Decision for Radioactive Waste Management Complex Operable Unit 7-13/14," DOE/ID-11359, September 2008.

[http://yosemite.epa.gov/r10/CLEANUP.NSF/sites/INEEL/\\$FILE/INL-ROD-9252008-Radioactive-Waste-mgmt-complex.pdf](http://yosemite.epa.gov/r10/CLEANUP.NSF/sites/INEEL/$FILE/INL-ROD-9252008-Radioactive-Waste-mgmt-complex.pdf)

¹⁴ U.S. Department of Energy, 2008. Composite Analysis for the RWMC Active Low-Level Waste Disposal Facility at the Idaho National Laboratory Site. DOE/NE-ID-11244. Idaho National Laboratory, Idaho Falls, ID and U.S. Department of Energy, 2007. Performance Assessment for the RWMC Active Low-Level Waste Disposal Facility at the Idaho National Laboratory Site. DOE/NE-ID-11243. Idaho National Laboratory, Idaho Falls, ID. Available at INL's DOE-ID Public Reading room electronic collection (newly released because of EDI's Freedom of Information Act request.) See <https://www.inl.gov/about-inl/general-information/doe-public-reading-room/>

¹⁵ US Department of Energy, "Environmental Assessment for the Replacement Capability for Disposal of Remote-Handled Low-Level Radioactive Waste Generated at the Department of Energy's Idaho Site," Final, DOE/EA-1793, December 2011. <http://energy.gov/sites/prod/files/EA-1793-FEA-2011.pdf>

¹⁶ NIOSH Radiation dose reconstruction at <http://www.cdc.gov/niosh/ocas/> and <http://www.cdc.gov/niosh/ocas/ineel.html>

A Special Exposure Cohort Petition, Petition 219 was submitted last year and is currently being evaluated by NIOSH. Petition 219 is the petition for a very broad exposure cohort between 1949 and 1970 due to inadequate internal monitoring of plutonium and other radionuclides. Inadequate plutonium monitoring at INTEC, formerly the Idaho Chemical Processing Plant or CPP has been found for the years 1963 to 1974. Additional evaluations are ongoing.

A Special Exposure Cohort (SEC) is a unique category of employees that recognizes that radiation doses may have been significant but that individual employee radiation dose records may not reflect the dose received. Claims compensated under the SEC do not require the dose reconstruction process. To qualify for compensation the covered employee must have at least one of the 22 “specified cancers” and have worked for a specified time period at the SEC site.

The presentation concerning ongoing petition evaluations of Central Facilities, “burial grounds” (now the Radioactive Waste Management Complex and Test Area North (TAN) would have been of great interest to people from Idaho Falls at the meeting, but the presentation was cancelled.¹⁷

NIOSH is reviewing their assumptions about unmonitored radionuclides that are based on those radionuclides that were monitoring such as cesium-137. NIOSH is reviewing the adequacy of their assumed isotopic ratios for unique fuel compositions, decay and fuel burnups.

NIOSH is reviewing burial grounds (RWMC) concerns including:

- Evidence exists that a “strict” contamination control program was not in place
- Site apparently lacked adequate smear counting capability for some length of time before early 1970s
- Radioactive waste was not specifically identified for most drums, boxes, and other containers in early years
- Offsite waste received from commercial, university, ERDA, and military sources in 1960–1963 inadequately identified
- AEC concerned over conflicted role of health physicists at the Burial Grounds, who were responsible for much of its operation, as well as radiation protection
- Internal investigations and appraisals bring into question “robustness” of HP program and “defense-in-depth” approach for radiological controls, as cited in the ER

¹⁷ The NIOSH omitted presentation is online at NIOSH Advisory Board and Public meetings for July 2015 at <http://www.cdc.gov/niosh/ocas/pubmtgs.html> and the omitted presentation is at <http://www.cdc.gov/niosh/ocas/pdfs/abrwh/pres/2015/sca-inlgapanlys-072315.pdf>.

- Conduct additional interviews with former Burial Grounds workers with experience during the time period in question (1952–1970); emphasis on radiological control program

NIOSH plans to conduct additional data capture with focus on the following:

- Additional evidence of potential intakes to radwaste handlers
- How contamination control was administered
- Available routine and special air-sampling data
- Robustness of health physics program: independence, resources, monitoring practices
- Evaluate dose assessment feasibility
- Review external and internal dose electronic database when completed by NIOSH.
- Review historic bioassay procedures and practices.
- Can all Burial Grounds workers be identified?
- Can all significant radioactive waste source terms be identified and addressed?

The NIOSH Burial Grounds investigations are in a preliminary stage and depend to a large extent on future worker interviews and data capture efforts. A report delivery date has not yet been specified.

Comments on DOE’s Two Proposed Shipments to INL

Advocates for the West Executive Director Laird Lucas submitted comments on behalf of former Governors Cecil Andrus and Philip Batt, heavily criticizing the Department of Energy for not disclosing information to the public about two proposed shipments of commercial spent nuclear fuel rods to Idaho National Laboratory.

The two proposed shipments would require Idaho to “waive” a provision in the historic 1995 Batt Agreement with DOE specifically forbidding imports of commercial spent nuclear fuel into Idaho. Governors Andrus and Batt are opposed to a waiver so long as DOE has not met its obligations under the Agreement to clean up nuclear wastes at INL – including 900,000 gallons of liquid wastes still in aging tanks above the Snake River Plain Aquifer.

DOE now also acknowledges that earlier statements by Governor Andrus contending that much more than 200 pounds of spent fuel rods are being considered for shipment to INL was in fact

correct. The followup plan calls for 20 metric tons – that's more than 44,000 pounds! Read the Andrus-Batt comments to DOE at the Advocates for the West website. ¹⁸

EDI also submitted comments to the Department of Energy concerning the flawed analysis, misleading statements, and fictions provided in DOE's Supplement Analysis. ¹⁹

Nuclear Regulatory Commission Proposed Rule Changes for Low-Level Waste Disposal

The US Nuclear Regulatory Commission (NRC) is proposing to amend regulations that govern low-level radioactive waste disposal facilities.²⁰ These are shallow land burial facilities that bury radioactive materials. These facilities will be allowed to bury large amounts of long-lived radionuclides — radionuclides that do not substantially decay away within 500 years. Long half life or the increase of radioactivity due to ingrowth of decay progeny will cause these disposal sites to eventually leach radioactive contaminants into our groundwater for hundreds of thousands of years.

We appreciate that the NRC has acknowledged shortcomings in its current regulation of low level radioactive waste burial regulations due to waste blending. We appreciate that the NRC recognizes that its current focus on the first 100 or 500 years of operation of these facilities is inadequate to protect the public from the large amounts of long-lived radionuclides being disposed of. But the proposed rule changes are not protective of human health or the environment.

The NRC is recognizing how inadequate the capability of limiting the migration of these radionuclides into the environment is over the long term. But despite nice-sounding phrases like defense-in-depth disguise the fact that significant amounts of radioactive contaminants will leach into our groundwater over time.

The NRC is recognizing the inadequacy of attempts to model the performance of these waste sites for anything past a few hundred years. They know that these performance assessments depicting unrealistically slow and constant trickle out of contaminants are indefensible and unsupported. The NRC is requiring that a performance analysis be conducted — yet accepting unlimited contamination and radiation dose levels as long as there was the pretense to minimize the contamination.

¹⁸ <http://www.advocateswest.org/wp-content/uploads/2015/03/7-13-15-Andrus-Batt-comments-on-SA.pdf>

¹⁹ Environmental-Defense-Institute.org <http://www.environmental-defense-institute.org/publications/NEPAComentSA.pdf>

²⁰ 10 CFR Part 61; Docket NRC-2011-0012. See <http://www.regulations.gov#!docketDetail;D=NRC-2011-0012>

This is a regulation that pretends to be concerned with protecting human life. But this is a regulation concerned only with protecting the nuclear industry's ability to dispose of radioactive materials in the most unfettered way possible.

The Compliance period (within 1000 years following closure of the disposal facility), the Protective Assurance Period (between 1000 and 10,000 years following closure of the disposal facility) and the Performance Period (after 10,000 years) have varying performance objectives. It is an immoral act to pretend to regulate the disposal of radioactive material with concern for human health but to actually not provide any assurance of this protection.

After the initial compliance period, the proposed rule requires only that an effort be made to minimize releases to the extent reasonable achievable at any time — “Do only what is reasonably achievable based on technological and economic considerations.” Doses greater than 25 mrem/yr? No problem. Doses greater than 500 mrem/yr? No problem, says the NRC. Yet, we know that these levels will damage children and shorten lives. A limit of 25 mrem/yr is barely protective. Anything above 4 mrem/yr is going to damage health. The proposed rule could accurately be called the “anything goes” rule and it is not protective of human health. In fact, the proposed rule practically guarantees extensive contamination of our country.

The public has not been provided an adequate description of the devastating ramifications of this inadequate proposed rule. NRC presentations and descriptions of this rule have been inadequate to explain the extensive contamination that will be allowed and actually encouraged by this proposed regulation. Anyone concerned with human health and the environment cannot be satisfied with the proposed low-level waste disposal “anything goes” rule.

This regulation will permit unlimited contamination of our groundwater for millennia despite the charade of lengthy discussions that would make it appear otherwise.

The NRC must not be allowed for make the proposed rule into law. In this regulation the NRC claims to be addressing public health and safety and the requirements for meeting health and safety standards. But instead the NRC throws existing and future health standards out the window after the initial compliance period. The NRC wants to allow any level of contamination by the disposal of long-lived waste as long as the dumper “tried” to minimize the inevitable migration of contamination. Throwing all health standards out the window is not responsible and is not protective of human health or the environment.

Articles by Tami Thatcher, August 2015.