RADIATION DOSE

"PERMISSIBLE" DOES NOT MEAN SAFE

NRC and Exelon Make The Unsubstantiated Claim That Limerick's Routine Radiation Releases Are Safe. That Is Not Only Illogical, It Can't Be Proven With Science. There Is No Valid Research or Science Showing Limerick's Continuous Radioactive Releases Are Safe.

NRC and Exelon Claims Are Disputed By Unbiased Independent Research. Exposure To Additive, Cumulative, and Synergistic Radiation Releases From Limerick Nuclear Plant Are Clearly NOT Safe.

According To Physicians For Social Responsibility And
The National Academy of Sciences 2005 BEIR VII Report:

THERE IS "NO SAFE DOSE"

Every Effort Must Be Taken For Prevention, Including Closing Limerick Nuclear Plant As Soon As Possible For Precaution.

- Limerick Nuclear Plant Routinely Releases Radiation Into Our Air And Water. Limerick's Radiation Gets Into The Soil, Sediment, Food, Wildlife, Fish, and People.

- Harmful Health Impacts Are Additive, Cumulative, and Synergistic. Residents Of Our Region Are Continuously Exposed To All Radionuclides Released From Limerick Nuclear Plant (Possibly Over 100), Through All Routes Of Exposure.

- All Monitoring, Testing, and Reporting Is Done By Exelon, The Company With A Vested Interest In The Outcome, That Has Shown It Can't Be Trusted To Provide Full and Accurate, Timely Disclosure.

- There Is NO Independent Continuous Monitoring And Reporting For All Radionulides Released From Limerick Nuclear Plant Operations. While The Threats Are Clear, It Would Be Too Costly To Do The Year-Long Comprehensive, Independent Monitoring For All Radionuclides Released Into Our Air and Water, Routinely and Accidentally.

- Cancer and Other Serious Illnesses Can Be Triggered By Continuous Exposure To Limerick's Routine Radiation Releases. There Have Already Been Skyrocketing Cancer Rates Around Limerick After Limerick Started Operating.

The Nuclear Regulatory Commission (NRC) Is Charged With The Grave Responsibility Under The Energy Reorganization Act of 1974, To Protect Public Health and Safety Related To the Operation of Commercial Nuclear Reactors. NRC Fails Miserably In That Mission.

- **Instead, NRC Is Involved In A Dangerous Cover-Up; Dismissing and/or Distorting The Harmful Effects of Radioactivity From Limerick and Other Nuclear Plants.**

"BACKGOUND" RADIATION - DANGEROUS DECEPTION

NRC Deceptively Asserts That Radiation Levels Detected Below "Background" Are Safe.

Gross NRC Misrepresentation

SHAMEFUL NRC DECEPTION: NRC's 3-16-11 Press Release Below, Deceptively and Illogically Suggests Announcing DRASTIC INCREASES In "Background" Radiation Levels Is Protective Action.

REALITY: NRC's Announcement Of Higher Radiation "Background" Levels Does NOT Protect Anyone. Quite The Opposite.

- **In Fact, Higher "Background" Radiation Levels Will Allow Exelon To Deceptively Hide Harms From Limerick Nuclear Plant's Routine Radioactive Releases Even More.**
- **Exelon's Yearly Radiological Monitoring Report To NRC For Limerick Nuclear Plant Will Now Be Even More Deceptive. Exelon Only Reports On Radiation Levels Detected "ABOVE BACKGROUND" For Water, Soil, Sediment, Vegetation, Milk, and Fish. Drastically Raising "Background" Radiation Will Give The Public A False Perception About Impacts From Actual Radiation Released From Limerick Nuclear Plant.**

NRC NEWS U.S. NUCLEAR REGULATORY COMMISSION

Office of Public Affairs Telephone: 301/415-8200
Washington, D.C. 20555-0001
E-mail: opa.resource@nrc.gov Site: www.nrc.gov
Blog: http://public-blog.nrc-gateway.gov

No. 11-050 March 16, 2011

NRC PROVIDES PROTECTIVE ACTION RECOMMENDATIONS - BASED ON U.S. GUIDELINES

Under the guidelines for public safety that would be used in the United States under similar circumstances, the NRC believes it is appropriate for U.S. residents within 50 miles of the Fukushima reactors to evacuate.

Among other things, in the United States protective actions recommendations are implemented when projected doses could exceed 1 rem to the body or 5 rem to the thyroid. A rem is a measure of radiation dose. The average American is exposed to approximately 620 millirems, or 0.62 rem, of radiation each year from natural and manmade sources. In making protective action recommendations, the NRC takes into account a variety of factors that include weather, wind direction and speed, and the status of the problem at the reactors.

In response to nuclear emergencies, the NRC works with other U.S. agencies to monitor radioactive releases and predict their path. All the available information continues to indicate Hawaii, Alaska, the U.S. Territories and the U.S. West Coast are not expected to experience any harmful levels of radioactivity.

Raising "Background" Radiation

To 620 Millirems Per Year - From 360 Millirems Per Year

March 16, 2011 - Shortly After Japan's Nuclear Plants Started Releasing Massive Radiation Into The Air, Water, Soil, and Vegetation

Instead of taking protective action to inform people of actual radiation risks after the Japan nuclear catastrophe and informing people about how they might reduce their risks,

- NRC legally sanctioned drastic increases in so-called "Background" radiation levels, as if to assert that higher levels of radiation were now safe.

"BACKGROUND" RADIATION LEVELS.

Chernobyl and Japan Nuclear Disasters Led To DRASTIC INCREASES:

Pre-Chernobyl:	**80 to 100**	**Millirems Per Year**
After Chernobyl:	**360**	**Millirems Per Year**
After Japan:	**620**	**Millirems Per Year**

History of Radiation Dose Limits:

- ✓ Natural Radiation Was Originally 60-80 Millirems Per Year
- ✓ 1964 It Was Raised to 80-100 Millirems Per Year (Secret Fallout by Ernest Sternglass - Pg. 213)
- ✓ After Chernobyl It Was Raised to 360 Millirems Per Year
- ✓ By 2009, Americans Were Receiving Radiation Doses Each Year That Doubled Yearly Radiation Dose Levels From The 1980s (Reported May 5th, 2009) http://nukefree.org/news/USradiationdosehasdoubled
- ✓ Americans (on average) receive more than twice as much radiation each year as in the 1980s, (according to National Council on Radiation Protection and Measurements).

Raising Radiation "Background" Avoids Full and Accurate Disclosure On Radiation Threats and Harms From Limerick Nuclear Power Plant.

- **Exelon Is Only Required To Report On Radiation Levels Detected Above An Arbitrary "Background" Level, Now Drastically Increased.**

Drastically Inflated Arbitrary "Background" Levels Allow Limerick's Radiation Releases And Harmful Health Impacts To Be Further Disguised By Exelon and NRC.

Limerick Nuclear Plant's Yearly Radiological Monitoring Report From Exelon to NRC:

- ✓ NRC Allows Exelon To Report Only On Radionuclides Detected Or Estimated By Exelon for Limerick, That Are "ABOVE BACKGROUND" Levels, Now Drastically Increased After The Fukushima Meltdowns.

- ✓ Logically, we could be further deceived about actual threats to public health from Limerick's regular releases of radiation into our air, water, soil, sediment, food, fish and to us and our children each year.

- ✓ For Exelon or NRC to conclude there is NO harm or little harm to the population around Limerick, is a false and irresponsible assertion, **not** based on facts or accurately measured radiation exposure. That illogical self-serving assertion also ignores the fact that residents are continuously exposed over time to multiple radionuclides from Limerick and multiple routes of exposure .

Exelon should be required to actually measure (NOT CALCULATE OR ESTIMATE) actual Limerick releases into our air and water, for every radionuclide associated with Limerick's operations (OVER 100) and report on actual releases into our air and water for each ABOVE ZERO, NOT Above Background.

- ✓ The level of each radionuclide permitted by NRC totally ignores independent scientists who admit there is NO SAFE DOSE.

NEWS

THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine

NATIONAL ACADEMY OF SCIENCES • NATIONAL ACADEMY OF ENGINEERING • INSTITUTE OF MEDICINE • NATIONAL RESEARCH COUNCIL

RADIATION-NO SAFE DOSE

WASHINGTON – June 29, 2005

The 2005 National Academy of Sciences BEIR VII STUDY, funded by the EPA, found that the smallest radiation dose has the potential to cause increased risk to humans.

A Report From The National Academies' National Research Council says:
"A preponderance of scientific evidence shows that even low doses of ionizing radiation are likely to pose some risk of adverse health effects."

Specifically, the committee's thorough review of available biological and biophysical data supports a "linear, no-threshold" (LNT) risk model, which says that the smallest dose of low-level ionizing radiation has the potential to cause an increase in health risks to humans.

In the past, some researchers have argued that the LNT model exaggerates adverse health effects, while others have said that it underestimates the harm. The preponderance of evidence supports the LNT model, this new report says.

"The scientific research base shows that there is no threshold of exposure below which low levels of ionizing radiation can be demonstrated to be harmless or beneficial," said committee chair Richard R. Monson, associate dean for professional education and professor of epidemiology, Harvard School of Public Health, Boston. The study committee defined low doses as those ranging from nearly zero to about 100 millisievert (mSv)

"The health risks – particularly the development of solid cancers in organs – rise proportionally with exposure. At low doses of radiation, the risk of inducing solid cancers is very small. As the overall lifetime exposure increases, so does the risk."

The report is the seventh in a series on the biological effects of ionizing radiation.

The report was sponsored by the U.S. departments of Defense, Energy, and Homeland Security, the U.S. Nuclear Regulatory Commission, and the U.S. Environmental Protection Agency. The National Research Council is the principal operating arm of the National Academy of Sciences and the National Academy of Engineering. It is a private, nonprofit institution that provides science and technology advice under a congressional charter.

- ✓ NRC conveniently ignores harmful impacts from additive, cumulative, and synergistic radiation doses from Limerick's releases day after day, year after year, from many routes of exposure, such as air, water, soil, vegetation, fish, and milk.
- ✓ In addition, risk is different for each person. Fetuses, infants, children, and those already with cancer and other serious diseases and disabilities are far more at risk from Limerick's radiation releases.
- ➢ **Until there is independent and continuous monitoring for at least a year, directly on all radionuclides released from Limerick Nuclear Plant, to identify levels of all routine releases and spikes, until those monitoring results are analyzed for long-term health harms including for additive, cumulative, and synergistic doses, then NO ONE can accurately determine the true extent of health harms from Limerick Nuclear Plant.**

Radiation Monitoring Tactics By The Nuclear Industry Avoid Full and Accurate Disclosure. NRC Puts On Blinders!

- ✓ Radiation samples are only taken periodically. Limited samples avoid spikes from accidents.
- ✓ Radiation releases are too often estimated or calculated and can be easily manipulated.
- ✓ Data is averaged to dilute results.

NRC's Absurd Assertion

- **5-18-11 - At a meeting in Limerick, NRC's Paul Krohn asserted that nuclear disasters did not cause increases announced in background levels after those disasters. How can we believe anything NRC says?**
  - ✓ **Instead, Krohn said, *"a lot of that is ...cosmic rays. Background increased by living changes – add to what people receive each went to about 620 from about 300."***
    (Experts say - Terrestrial and cosmic Natural Radiation Is only about 60-80 mr/year - with variations)

NRC's Negligent Responses

- **Only after being sharply challenged by residents, NRC's Richard Barkley responded,**
  - ✓ ***"NRC didn't assert it was safer. That's just reality."***

Just as deceptive and inaccurate were Lisa Regner's unsubstantiated claims 9-22-11 at the public hearing in Pottstown, for Limerick's Updated Environment Impact Statement.

NRC's Lisa Regner Inaccurately Claimed:

1. Radiation released at Limerick was at such low levels there were no harmful consequences.
   ACE Response:
   - ✓ **First, there is no continuous comprehensive independent monitoring on all routes of exposure to know how high the levels are for each radionuclide released from Limerick.**
   - ✓ **Second, any level released can harm health, especially vulnerable populations, like fetuses, infants, children, and those already with cancer and other diseases and disabilities.**

2. Only low levels of tritium were in Limerick's continuous radioactive discharges into the Schuylkill River.
   ACE Response:
   - ✓ **Exelon's own monitoring for Limerick Nuclear Plant disproves her claim that it's only tritium. Other radionuclides discharged are in water, fish, and sediment.**
   - ✓ **There is no proof of the levels of tritium since there is no continuous independent monitoring for tritium from the discharge pipe into the river.**

3. Regner inaccurately claimed NRC tests for radiation.
   ACE Response:
   - ✓ **5-18-11, an NRC employee admitted NRC NEVER did testing at Limerick. After hearing that, Regner tried to substantiate her unverified conclusions based on DEP testing.**
   - ✓ **ACE has caught DEP in dangerous deception about radiation since 1997. ACE has absolutely no respect for DEP or confidence in any testing.**
   - ✓ **Examples of DEP statements proven to be inaccurate: DEP claimed radiation would not travel with landfill gas, that no radiation was emitted into the air, that stronitum-90 could not be emitted into air. All DEP's statements were proven wrong.**

DEP's Absurd Denial - 5-18-11 DEP's representative illogically claimed there were no changes in radiation levels of our environment since Limerick started operating in 1985 and continuously released radiation.

- ✓ **DEP's Claim Is NOT CREDIBLE. For one thing, it ignores accumulation of radionuclides with long half-lives in all routes of exposure.**
- ✓ **Limerick continuously released radiation, including long-lived radionuclides, into our environment since 1985. Some radionuclides have long half-lives. Additive and cumulative releases had to raise background levels after decades of releases.**

NRC HAS CONSISTENTLY IGNORED OR DENIED HEALTH RISKS POSED BY NUCLEAR REACTORS

1. **NRC has a conflict of interests in its decisions on nuclear plant threats and harms.**

   - Many NRC staff formerly worked at reactors they regulate, or will next work at a nuclear plant.
   - Many NRC officials after leaving NRC hope to land much higher-paying jobs working for the nuclear industry they regulate. Most won't do anything to jeopardize that.
   - 90% of its funds come from fees from the very companies NRC is supposed to regulate. "NRC is like a prep school for many of NRC officials, because they know they've got a good shot at landing much higher-paying work with the people they're supposed to be keeping in line," Mr. Mulley said. "They're not going to do anything to jeopardize that."

2. **"NRC Lost All Credibility on Radiation, Cancer, and Nuclear Plants."** See ACE Document

   - Many cancer studies in the U.S. and Europe confirm increased cancers around nuclear plants, especially in children.
   - While still in complete denial of obvious links, in 2009 NRC called for a study of cancer near U.S. nuclear plants, obviously intended to dispute the body of studies already showing a link.
   - NRC's illogical and continued denial of documented harms biases NRC in any study they do.
   - Comments made by NRC in Limerick 5-14-11 (Documented with video), show NRC refuses to look for obvious links between nuclear plants and cancer, and instead denies them.

3. **NRC has consistently denied actual routine radiation releases are harmful radiation releases, regardless of the National Academy of Sciences BEIR VII report saying there is "NO SAFE LEVEL of EXPOSURE.**

   - NRC has NO health or medical experts on its staff.
   - NRC's unsubstantiated conclusions not only ignore the BEIR VII report scientists, they are based on outdated, biased information from the nuclear industry that has a vested interest in the outcome.

4. **NRC has no credibility in its denial of harms from routine radiation emissions from nuclear plants.**

   - NRC admitted it never did its own radiation monitoring, testing, or reporting to prove how much radiation is routinely emitted or accidently released from Limerick (5-14-11 - Video).
   - NRC's unsubstantiated denials are based on industry biased, even potentially manipulated industry data, reports and conclusions.

5. **NRC ignored or opposed any studies indicating health risks from reactors. For example, it included an 8-page critique of a study of Strontium-90 in 5,000 baby teeth near U.S. reactors, results of which were published in 5 medical journals.**

6. **With no requirement of examining disease and death rates near reactors, since 1998, the NRC has approved 71 of 71 applications to extend licenses for 20 years.**

7. **With no requirement to show local health hasn't been harmed, since 1993, the NRC has approved 123 of 123 applications to upgrade (expand) reactors.**

8. **The NRC has never ordered a U.S. reactor shut, even the damaged Three Mile Island reactor (the company closed it voluntarily).**

NRC Fails To Protect Public Health

Limerick's Routine Radiation Emissions Are NOT Safe, As Falsely Claimed By NRC and Exelon.

NRC Covers Up Reality To Save The Nuclear Industry Money

- NRC Denies Harms
- NRC Ignores Risks
- NRC Lowers Risk Estimates
- NRC Weakens Regulations
- NRC Delays Protective Action
- NRC Makes Unsubstantiated Conclusions That Perpetuate and Increase Harms
- NRC Provides Exemptions When Regulations and/or Standards Are Violated

- **Radiation Exposure Limits Were Irresponsibly Weakened**
  By The Bush Administration's EPA - An Action Sought By NRC And DOE

- **Drastic Hikes Were Permitted In Drinking Water, Air, and Soil**
  January 15, 2009 - Right Before The Bush Administration Departed
  http://www.committeetobridgethegap.org/radiation.html.

- **Drinking Water - EPA Radically Increased Permissible Radiation Limits In The Safe Drinking Water Act.**

Safe Drinking Water Act

New Standards Would Permit Radionuclide Concentrations Up To 7 Million Times Higher Than Current Radiation Standards

Examples - PERMISSIBLE RADIATION INCREASES IN WATER

Strontium-90 - Nearly 1000-Fold Increase
Iodine-131 - 3000 to 100,000-Fold Increase
Nickel-63 - Nearly 25,000 Increased

What Does This Mean To Drinking Water In Our Region?

1) **Schuylkill River** - Limerick Nuclear Plant discharges radioactive wastewater into this major source of drinking water 24 hours a day, 365 days a year (over 5 billion gallons each year). Limerick's waste water contains a broad range of radionuclides. Astronomical permissible limits allow Exelon to irresponsibly assert there is no health threat because Limerick meets permissible limits.

2) **Radioactive Groundwater -** Limerick leaks into groundwater under the site have led to a broad range of radionuclides detected in 15 of 15 monitoring wells at the Limerick site. Many residential wells are within a short distance from Limerick. Radioactive levels can rise dramatically in residents' drinking water and still irresponsibly be called safe.

Some Inside EPA Spoke Up To Protect Public Health.

RADIATION EXPOSURE DEBATE RAGES INSIDE EPA

Plan to Radically Hike Post-Accident Radiation in Food & Water Sparks Hot Dissent

Public Employees for Environmental Responsibility News Release (www.peer.org) April 5, 2010

Washington, DC — A plan awaiting approval by the U.S. Environmental Protection Agency that would dramatically increase permissible radioactive releases in drinking water, food and soil after "radiological incidents" is drawing vigorous objections from agency experts, according to agency documents released today by Public Employees for Environmental Responsibility (PEER). At issue is the acceptable level of public health risk following a radiation release, whether an accidental spill or a "dirty bomb" attack.

The radiation arm of EPA, called the Office of Radiation and Indoor Air (ORIA), has prepared an update of the 1992 "Protective Action Guides" (PAG) governing radiation protection decisions for both short-term and long-term cleanup standards. Other divisions within EPA contend the ORIA plan geometrically raises allowable exposure to the public. For example, as Charles Openchowski of EPA's Office of General Counsel wrote in a January 23, 2009 e-mail to ORIA:

"[T]his guidance would allow cleanup levels that exceed MCLs [Maximum Contamination Limits under the Safe Drinking Water Act] by a factor of 100, 1000, and in two instances 7 million and there is nothing to prevent those levels from being the final cleanup achieved (i.e., it's not confined to immediate response of emergency phase)."

Another EPA official, Stuart Walker of the Office of Superfund Remediation and Technology Innovation, explains what the proposed new radiation limits in drinking water would mean: "It also appears that drinking water at the PAG concentrations…may lead to subchronic (acute) effects following exposures of a day or a week. In a population, one should see some express acute effects…that is vomiting, fever, etc."

"This critical debate is taking place entirely behind closed doors because this plan is 'guidance' and does not require public notice as a regulation would," stated PEER Counsel Christine Erickson. Today, PEER sent EPA Administrator Lisa Jackson a letter calling for a more open and broader examination of the proposed radiation guidance. "We all deserve to know why some in the agency want to legitimize exposing the public to radiation at levels vastly higher than what EPA officially considers dangerous."

The internal documents show that under the updated PAG a single glass of water could give a lifetime's permissible exposure. In addition, it would allow long-term cleanup limits thousands of times more lax than anything EPA has ever before accepted. These new limits would cause a cancer in as much as every fourth person exposed.

PEER obtained the internal e-mails after filing a lawsuit this past fall under the Freedom of Information Act (FOIA) but the EPA has yet to turn over thousands more communications. "EPA touts its new transparency but when it comes to matters of controversy the agency still puts up a wall," added Erickson, who filed the FOIA suit. "Besides the months of stonewalling, we are seeing them pull stunts such as ORIA giving us rebuttals to other EPA documents they have yet to release."

Following are the official U.S. government regulatory agency assessments:

U.S. Environmental Protection Agency

"Based on current scientific evidence, any exposure to radiation can be harmful (or can increase the risk of cancer). …. In other words, it is assumed that no radiation exposure is completely risk free.[3]

"[T]here is no level below which we can say an exposure poses no risk. … Radiation is a carcinogen. It may also cause other adverse health effects, including genetic defects in the children of exposed parents or mental retardation in the children of mothers exposed during pregnancy.[4]

"Current evidence suggests that any exposure to radiation poses some risk, i.e. there is no level below which we can say an exposure poses no risk."[5]

U.S. Department of Energy

"[T]he effects of low levels of radiation are more difficult to determine because the major effect is a very slight increase in cancer risk. However, U.S. Government regulations assume that the effects of all radiation exposures are cumulative and should be limited as much as reasonably possible."[6]

U.S. Nuclear Regulatory Commission

"[T]he radiation protection community conservatively assumes that any amount of radiation may pose some risk for causing cancer and hereditary effect, and that the risk is higher for higher radiation exposures. A linear no-threshold dose-response relationship is used to describe the relationship between radiation dose and the occurrence of cancer. ... any increase in dose, no matter how small, results in an incremental increase in risk."[7]

U.S. Department of Health and Human Services

"Ionizing radiation is invisible, high-frequency radiation that can damage the DNA or genes inside the body.
"Some patients who receive radiation to treat cancer or other conditions may be at increased cancer risk. ... it is possible that there is a small risk associated with this exposure.
"... children whose mothers received diagnostic X-rays during pregnancy. ... were found to have increased risks of childhood leukemia and other types of cancer, which led to the current ban on diagnostic X-rays in pregnant women."[8]

National Academy of Sciences

The National Academy of Sciences' 7th study on the effects of radiation exposure declared that any exposure, regardless of how small, may cause the induction of cancer. BEIR-VII also dismissed as baseless the industry-sponsored sham "hormesis" theory that some radiation exposure is good for you.[9] Committee Chair Richard Monson of Harvard's School of Public Health said, "The scientific research base shows that there is no threshold of exposure below which low levels of ionized radiation can be demonstrated to be harmless or beneficial."[10]

National Council on Radiation Protection

"... every increment of radiation exposure produces an incremental increase in the risk of cancer."[11]

1. Philip Hilts, "Higher Cancer Risk Found in Low-Level Radiation," *New York Times*, Dec. 20, 1989.
2. Ian Fairlie & Marvin Resnikoff, "No dose too low," *The Bulletin of the Atomic Scientists*, Nov/Dec 1997, p. 54
3. U.S. EPA, "Ionizing Radiation Series," No.2, Air & Radiation, 6601J, EPA 402-F-98-010, May 1998.
4. U.S. EPA, "Radiation: Risks & Realities," Air & Radiation, 6602J, EPA 402-K-92-004, Aug. 1993.
5. *Ibid.*
6. U.S. Dept. of Energy, DOE/NE-0074, "Understanding Radiation," p. 8 & 9. <http://www.ne.doe.gov/pdfFiles/UNDERRAD.PDF>.
7. U.S. NRC, "How Does Radiation Affect the Public?" www.nrc.gov/what-we-do/radiation/affect.html.
8. U.S. Dept. of Health & Human Services, "Cancer and the Environment: Ionizing radiation," p. 10. <www.cancer.gov/images/Documents /5d17e03e-b39f-4b40-a214-e9e9099c4220/ Cancer%20and%20the%20Environment.pdf>.
9. National Academy of Sciences, "Health Risks from Exposure to Low Levels of Ionizing Radiation: BEIR VII, Phase 2," Committee to Assess Health Risks from Exposure to Low Levels of Ionizing Radiation, National Research Council, June 29, 2005.
10. Associated Press, "Study: No Radiation Level Safe," June 29, 2005.
11. National Council on Radiation Protection, "Evaluation of the Linear-Non-threshold Dose-Response Model for Ionizing Radiation," NCRP report 136, Bethesda, MD, June 4, 2001, cited in *Science for Democratic Action*, IEER, June 2005.

Nukewatch, 740A Round Lake Road, Luck, WI 54853,
(715) 472-4185 <http://www.nukewatch.com/>mailto:nukewatch1@lakeland.ws

RADIATION CLEAN-UP STANDARDS - DRASTICALLY WEAKENED

Radiation Clean-Up Standards Were Changed.

- **They Are Thousands Of Times More Lax Than Previous Radiation Clean-Up Standards.**

Public Health Was Overridden by Economic Considerations. Rather than specify clean-up standards to protect health,

- **Weakened "Benchmarks" allow radiation doses so immensely high that 1 in 4 can get cancer.**

What Lax And Weakened Radiation Clean-Up Standards Mean To People Around Limerick.

- **Exelon Can Avoid Safe Clean Up From Limerick Nuclear Power Plant's Radioactive Emissions Into Air, Water, and Soil. Vegetation, Food, Milk, and Fish Can Remain Highly Radioactive, Further Jeopardizing Public Health In Our Region.**

IN THE EVENT OF A LIMERICK MELTDOWN OR MAJOR RADIATION RELEASE FROM LIMERICK, WE WILL NOT BE PROTECTED.

- **While no agency is taking responsibility for attempting to clean up after a nuclear disaster, all agencies ignore or miss the fact that nuclear "accidents" NEVER end. Will they ever admit that a nuclear plant worst case scenario is likely to be just too bad to clean up?**

Agencies Struggle To Craft Offsite Cleanup Plan For Nuclear Power Accidents

November 10, 2010
http://insideepa.com/Inside-EPA-General/Inside-EPA-Public-Content/agencies-struggle-to-craft-offsite-cleanup-plan-for-nuclear-power-accidents/menu-id-565.html

EPA, the Nuclear Regulatory Commission (NRC) and the Federal Emergency Management Agency (FEMA) are struggling to determine which agency -- and with what money and legal authority -- would oversee cleanup in the event of a large-scale accident at a nuclear power plant that disperses radiation off the reactor site and into the surrounding area.

The effort, which the agencies have not acknowledged publicly, was sparked when NRC recently informed the other agencies that it does not plan to take the lead in overseeing such a cleanup and that money in an industry-funded insurance account for nuclear accidents would likely not be available, according to documents obtained by *Inside EPA* under the Freedom of Information Act (FOIA). (Request Part 1, Request Part 2)

In her response to *Inside EPA*, Pettaway did not include any of this information or acknowledge that the three agencies were actively studying the issue, however. Pettaway said only that questions regarding whether and how EPA would cleanup after a nuclear power plant incident were "based on hypothetical situations/scenarios" and that EPA could not "give an assessment on something that [was] hypothetical."

Determining Cleanup Standards

Whether EPA can assert its Superfund authorities over a cleanup after a nuclear power plant accident is significant not just from the standpoint of securing funding for the cleanup, but also in determining what cleanup standards would apply to the situation.

Walker tells Southerland that if EPA appears to be endorsing non-Superfund cleanup approaches in discussions with the other agencies, policy concerns similar to those surrounding EPA's controversial draft guide for responding to all nuclear emergencies -- known as the protective action guidance (PAG) for radiological incidents -- would arise. With the PAG, officials in EPA's Superfund, water and legal offices raised concerns that the document could set a negative precedent weakening the agency's cleanup and drinking water standards because it included guidelines dramatically less stringent than traditional EPA regulations.

WE CAN'T BELIEVE THE NUCLEAR INDUSTRY'S SELF-SERVING MONITORING AND REPORTING.

Evidence Below Suggests When They Don't Like Radiation Data, They Don't Report It. The Excuse - Equipment Failure.

Industry and Government Monitoring Are Plagued By CONFLICTS of INTEREST.

Examples:

- **95% of Fukushima Radiation Detectors Stopped Working Three Hours After The Nuclear Disaster Started March 11, 2011.**
  - ✓ **22 out of the 23 monitors stopped sending data.**
    COINCIDENCE? PROBABLY NOT!
  - ✓ **3 months later, we learned radiation emissions were twice as bad as reported.**

- **Limerick Nuclear Plant's Yearly Radiation Monitoring Reports From Exelon To NRC - Show repeated claims of equipment failure, some for long periods.**

- **TMI - During critical periods of time throughout the TMI event, radiation monitors were not functioning or their detection limits were being exceeded by an unknown amounts.** The monitors at TMI were wrecked, the stack monitors were saturated and went off scale.. one thermoluminescent dosimeter in the northwest quadrant, where the wind was blowing, showed very high readings. they discounted it by calling it the "northwest anomaly". So they have no idea how much radiation escaped at TMI. In federal court, the judge threw out the class action health damages suit, saying not enough radiation escaped to cause any health damage.

- **Turkey Point - During Hurricane Andrew in 1992, the Turkey Point rad monitors and meteorological monitoring equipment were destroyed. There was no way to prove or disprove radiation leakage.**

- **Brown's Ferry Monitoring Data - Public document room records show EVERY time there were higher than normal readings, the diagnosis was always, MONITORS MALFUNCTIONED.**

Getting Full, Accurate, and Timely Disclosure On Radiation Releases and Risks Is Imperative For Precaution and Prevention.

Unless there is full and accurate disclosure on radiation releases and risks from accidents and meltdowns, the public will not take action for protection and the nuclear industry will not spend the money for precaution in preventing radiation releases and meltdowns.