OPSMPEm Resource

From: West, Stephanie
Sent: Monday, November 04, 2013 4:45 PM
To: OPSMNPEm Resource; OPSMPEm Resource
Subject: OPA Blog archival for September & October 2013
Attachments: blog-published-2013-11-01@09-23-23.pdf

OPA

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U.S. NRC Blog

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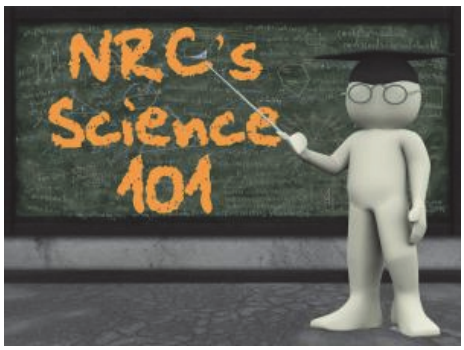
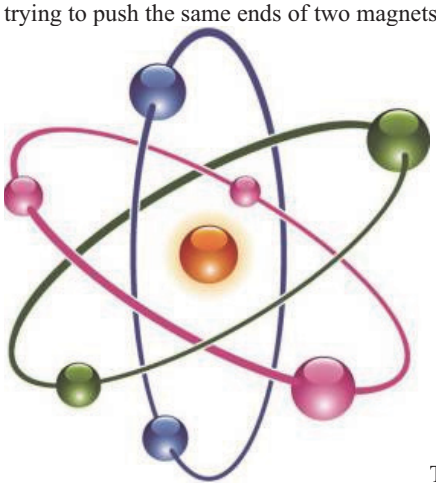
NRC Science 101 – What is an Atom?

posted on Tue, 03 Sep 2013 13:23:18 +0000

Suzanne Schroer
Reliability and Risk Analyst
Office of New Reactors



Welcome to the NRC's new blog series, Science 101. Over the course of this series, NRC experts will discuss various scientific principles, with some of the later posts relying on principles and ideas discussed in earlier ones. So, in that sense, this blog series will play out much like a textbook, with each post (or chapter) building upon the previous one. We hope the information in this series will be helpful to teachers, students and the public who want to better understand the science behind the NRC. So where do we begin? The topic for today's post is the atom. It's considered the basic building block of matter. Anything that has a mass—in other words, anything that occupies space—is composed of atoms. While its name originally referred to a particle that couldn't be divided any more—the smallest thing possible—we now know that each atom is generally made up of smaller particles. Given that these particles make up atoms, they are often referred to as subatomic particles. There are three subatomic particles: protons, neutrons and electrons. Two of the subatomic particles have electrical charges: protons have a positive charge while electrons have a negative charge. Neutrons, on the other hand, don't have a charge. A fundamental rule is that particles with the same charge are repulsed from each other, while particles with opposite charges are attracted to each other. So, much like opposite ends of a magnet, protons and electrons are attracted to each other. Likewise, just as when you experience resistance trying to push the same ends of two magnets together, protons are repelled from other protons and electrons are repelled from other electrons.



The nucleus (or center) of an atom is made up of protons and neutrons. The number of protons in the nucleus, known as the "atomic number," primarily determines where that atom fits on the Periodic Table. The number of protons in the nucleus also defines in large part the characteristics of an atom—is it a gas or a metal, for example. Two atoms with an identical number of protons in their nuclei belong to the same element. An element, like hydrogen, oxygen or iron, is a substance that cannot be broken down—outside of a nuclear reaction—into anything else. In other words, one element cannot be transformed into another (again, with the exception of nuclear reactions). Now, while the protons are the same in an element, the number of neutrons may vary from atom to atom. The number of neutrons determines what isotope an atom is. This is important to the NRC because the number of neutrons relative to the protons determines the stability of the nucleus, with certain isotopes undergoing radioactive decay. While radioactive decay can occur in a variety of ways, it is, simply put, the process by which unstable atoms break down, releasing particles (and energy). Generally speaking, atoms with roughly matching numbers of protons and neutrons are more stable against decay. Given how important it is to the work of the NRC, the concept of radioactive decay will be taken up as part of a future blog post. The nucleus of an atom is surrounded by a cloud of electrons. Remember, electrons are negatively-charged and are attracted to the positively-charged protons in the nucleus. An atom is considered to be electrically neutral if it has an equal number of protons and electrons. If an atom has a different number of electrons and protons, it is called an ion. An important principle to know is electrons may be transferred from one atom to another or even shared between atoms (allowing atoms to bind together). These bonds allow for the formation of molecules, combinations of atoms (including those of different elements). Just as several atoms make up a molecule, many molecules make up a chemical. Chemicals will be the subject of our next Science 101 post.
The author has a bachelor's degree in Nuclear Engineering and a master's in Reliability Engineering.

Comments

comment #146417 posted on 2013-09-03 10:39:30 by Joyce Agresta

Awe interesting could you explain in more detail the effect of neutrinos in binding with organic vs chemical molucules and what us lay folk are calling free radicals or these that act differently than most. In specific is it possible for decay to be reversed accidentally ? You know could stored fuels possible produce fusion with indroduction of implosion from whatever the source as unlikely as it may be ? there are some possibilties found at RSOE site and as dutiful as you good people are you must have considered others even the improbable ..... "An important principle to know is electrons may be transferred from one atom to another or even shared between atoms (allowing atoms to bind together)" Thank you

comment #146711 posted on 2013-09-04 11:29:04 by Moderator in response to comment #146417

Thanks for reading our first Science 101 post. We'll consider the subject areas you raise for future posts. Moderator

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Watching Over a National Research Tool

posted on Thu, 05 Sep 2013 12:55:04 +0000

Alexander Adams
Research and Test Reactor Licensing

NRC inspectors can find themselves most anywhere in the United States, but one of the facilities we oversee is just down the street. The Center for Neutron Research, at the National Institute of Standards and Technology (NIST), is only about 20 minutes from our headquarters in Rockville, Maryland.  The Center is the largest research and test reactor we regulate, but large is a relative term – the Center's reactor is 75 times smaller than the smallest U.S. commercial nuclear power plant. The reactor exists for only one purpose – to generate neutrons, pieces of atoms than can help researchers examine fantastically small details in many areas of science. The Center's latest experiments have looked at materials that could improve oil and gas refining, and have examined biological cell wall behavior in real time. As important a research tool as the Center is, it still has to operate safely. NRC inspectors check on the NIST facility at least twice annually to verify the reactor is operated safely and that only properly trained and licensed personnel run the reactor. Our ongoing reviews of the research reactor show that, even in the very unlikely case of the reactor's systems failing during an accident, no effects are expected outside of the Center. Security is another key factor in our oversight of the Center, and we inspect the facility's security at least once every two years. NIST must follow our requirements to properly control access to the Center. Our security rules also keep fresh reactor fuel under strict control until it goes into the reactor, as well as keeping the reactor's used fuel securely stored until it can be sent back to the Department of Energy. Our security inspections at the Center show it has complied with the additional requirements the NRC imposed after the 9/11 attacks. In fact, the Center has worked with other federal agencies to add security features that go beyond our requirements. The bottom line is that used fuel is highly radioactive, very difficult to handle safely by untrained people, and very strong measures are in place to protect the facility and the material.

Comments

comment #147013 posted on 2013-09-05 16:23:03 by Moderator in response to comment #146944

You can learn mroe about what the Center does at this link: http://www.ncnr.nist.gov/ And, yes, they have an excellent safety record. Alexander Adams

comment #147012 posted on 2013-09-05 16:21:56 by Moderator in response to comment #146924

DOE stores the fuel in storage facilities at Savannah River National Laboratory, and will continue to hold the fuel for final disposition. More information is available at www.srs.gov/general/programs/spentfuel/index.htm. As to the question about the length of time it takes the fuel to cool, that depends on the "shipping package requirement" for the minimum amount of time the fuel must be cooled until it can be shipped, as well as the availability of appropriate shipping packages. NIST must periodically ship fuel in order to meet the "possession limits" in its NRC license. Alexander Adams

comment #146944 posted on 2013-09-05 10:55:00 by Joyce Agresta

That is intersesting. Where may we read more about the experiments? By the way do they have a good saftey record at this Center ?

comment #146924 posted on 2013-09-05 09:07:28 by Fred Stender

> And where does that used fuel go after "sent 'back' to the Department of Energy" Does it sit for 5 years at the reactor to "cool down"

Checking the Status: Finding the Power Levels

posted on Tue, 10 Sep 2013 18:50:05 +0000

Diane Screnci
Senior Public Affairs Officer, Region I

One of the most frequently accessed pages on the NRC website is the plant status report. Inquiring minds, apparently, are very interested each morning on checking the power level of each of the nation's 100 operating nuclear reactors.

The plant status report is 'born" each morning around 4 a.m. The NRC's Headquarters Operations Officers call each control room for a few reasons, including checking the phone line to the control room and gathering the current power level at each operating reactor. Plants are licensed with a limit on how much heat their cores can generate, and the report lists reactor power as a percentage of that limit. The information about power level is then compiled into a report that's posted on our website by about 7 each morning. The information is not a real-time update, it's a 4 a.m. snap shot of the unit's operating status. If a reactor shuts down mid-morning, or returns to full power in the evening, it's not reflected in a plant status report until the following day. Plant status reports are issued every day, including weekends and holidays. Plants come off the list once the company has decided to permanently shut down and has notified the agency that the fuel has been permanently removed from the reactor vessel. The reports are also archived. After about a month, additional information is added to the report. A "comments" column includes additional information, such as important equipment that had been out of service or why a plant was operating at reduced capacity. The "change in report" column indicates plant status that had changed over the past 24 hours; and the "number of scrams" shows the number of unexpected reactor shutdowns over the past 24 hours. A variety of folks use the reports, including reporters and members of the public who check to see whether anything changed at the nuclear plant they cover or live near. Many of the calls the agency receives in the early morning stem from the plant status reports. If you've never checked out the report, give it a look at. It's interesting information.

Comments

comment #149623 posted on 2013-09-17 10:29:57 by Moderator in response to comment #149443

> The NRC's Glossary is available online: http://www.nrc.gov/reading-rm/basic-ref/glossary.html . In the nuclear power world, "scram" means the chain reaction in the core has been automatically ended. The agency's fact sheets and brochures can also offer details on some of the topics covered in event notification reports. The difference between "hot shutdown" and "cold shutdown" is simply the temperature of the water flowing through a core where no chain reaction is underway – a plant in "hot shutdown" is closer to being able to run normally. If an event could affect the public near a plant, both the NRC and the utility running the plant would keep people informed through the media. Diane Screnci

comment #148484 posted on 2013-09-12 06:45:26 by Dan Williamson in response to comment #148107

> Would you be interested in the same information relative to each of the coal plants? Or is that irrelevant in your worldview? Besides, if you're really up on this process, you already know that the nukes are required by law to submit annual radioactive effluents reports.

comment #149325 posted on 2013-09-16 03:39:14 by Alex Smith

> Always we are really looking for such report. Thanks for this article. But I want to know more about the other resources like: Solar, Bio-gas energy plant etc.

comment #148107 posted on 2013-09-10 15:48:52 by CaptD

These reports should also include any radioactive releases including the data about exactly what was released and the quantity released...

comment #149397 posted on 2013-09-16 12:50:58 by Moderator in response to comment #149325

You might try visiting the website for the Department of Energy -- www.energy.gov -- for information on other sources of electricity. Moderator

comment #149443 posted on 2013-09-16 18:09:24 by Joyce Agresta

Do you have anywhere on your site a key code or glossary for instance what is "scram" I see this one alot does it mean run ? What is the difference of a planed shut down and a hot shut down and so on. How many days does a hot shut down take to complete ? If the hot shut down procedure don't work does it start the melt down procedure? Saw one 2 weeks ago and another today on the incident reports is a hot shut down pretty common then ? Some of the Jargon on the incident reports might be better understood if defined. And where do we find real time updates ?The incident reporting people take the weekends off and accidents can happen anytime right?

comment #148313 posted on 2013-09-11 12:24:48 by mjd

As a Public Affairs Officer I think you'd agree that clear concise information is important. Is what you refer to as the "plant status report" actually the same thing called the "Power Reactor Status Reports" page on your web site? It also might be useful to inexperienced users of your "not user friendly" web site navigation system to tell them how to find it, i.e. from the home page click on the "Event Reports" box on the right sidebar menu, then on the "Reports Associated with Events" page, select on the "Power Reactor Status Report" line, either current or archive. This will make it a lot easier for interested parties to "give it a look at.". mjd

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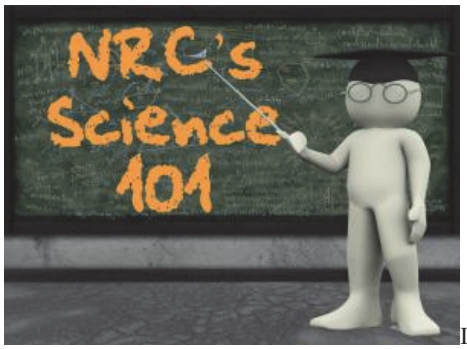
NRC Science 101 – What are Chemicals?

posted on Thu, 12 Sep 2013 18:36:51 +0000

Suzanne Schroer
Reliability and Risk Analyst
Office of New Reactors



In the last Science 101 blog post, we talked about the atoms, the basic building blocks of matter, and molecules. In this post, we'll talk about chemicals, which are made up of a collection of molecules. A chemical is any substance that has a defined composition. In other words, a chemical is always made up of the same "stuff." Some chemicals occur in nature, such as water. Other chemicals are manufactured, such as chlorine (used for bleaching fabrics or in swimming pools). Chemicals are all around you: the food you eat, the clothes you wear. You, in fact, are made up of a wide variety of chemicals. A chemical reaction refers to a change in a chemical. More generally, a chemical reaction can be understood as the process by which one or more substances change to produce one or more different substances. Chemical changes are different from physical changes, which don't result in a change in substances. One example of a physical change is when water freezes into ice. While ice may have different physical properties, it is still just water. Another example is when you dissolve salt into a cup of water. While the salt may appear to disappear into the water, you still have water and salt—no substance changed into a completely new substance. Here is one example of a chemical reaction: Iron + Oxygen → Iron Oxide Iron oxide, also known as rust, cannot become iron or oxygen again. It is a completely new substance. In the equation, the substances on the left-hand side of the arrow are considered reactants (the substances that participate in a chemical reaction). The substance on the right-hand side of the arrow is considered a product (a substance that results from a chemical reaction). It's important to note from this example that no material is "lost" in the reaction. On one side of the equation you have iron and oxygen; on the other you still have iron and oxygen (now just combined into one chemical). In that sense, this example illustrates what is known as the law of conservation of mass. By "law," we mean a general rule of how something works or how something occurs. This description is considered to be extremely reliable due to a large amount of supporting experimental testing and observation. Considering the given example, the law states the products of a chemical reaction have the same mass ("stuff") as the reactants. In other words, while things are rearranged, nothing is created or destroyed. Here are some ways to tell if a chemical change is occurring: 1. You might notice bubbling or a change in odor, indicating the production of a gas. Such is the case when baking soda is mixed with vinegar. 2. When two clear solutions are mixed together and the resulting mixture is cloudy (due to the

presence of some solid substance now in the liquids). This is known as the formation of a precipate. 3. A change of color (like in our rust example). 4. A change in temperature or if light is produced, such as with fire. While any of the above may be evidence of a chemical change, physical changes can have some of the same effects. One way to determine the difference between the two is to think about whether the new substance could be physically separated back into its original parts—in other words, if the involved matter could “go back” to how it originally was.
The author has a bachelor’s degree in Nuclear Engineering and a master’s degree in Reliability Engineering.

Comments

comment #148573 posted on 2013-09-12 17:23:27 by Matt

> Dissolving salt into water, while a useful explanation, is not quite accurate, as ionic dissociation occurs as solid NaCl becomes free Na+ and Cl- ions. Perhaps a more useful example may have been dissolving sugar into water, as the hydrophilicity of the -OH groups enable sugar's solubility. This sort of nuance is actually what you state in 4, regarding temperature change - many chemical species have associated enthalpies of solution. A simple one is the reaction between acid and water - if you remember back to general chemistry lab, and they mention to always add acid to water, and not the other way around. This is because many acids have highly exothermic reactions when dissociating in water. Excellent article!

comment #148551 posted on 2013-09-12 14:49:35 by Dolley, Steven

> Chlorine is not a "chemical" by your definition. Compounds containing chlorine might be manufactured, but chlorine per se is a basic element. See periodic table, Cl. Steven Dolley Managing Editor, Inside NRC Platts [cid:image001.jpg@01CEAFC7.424BF530] 202-383-2166 Office 202-383-2187 Fax

comment #148554 posted on 2013-09-12 14:56:40 by Dolley, Steven

> Sorry, I worded my reply poorly. An element is in fact a chemical. It is, however, incorrect to say that chlorine is "manufactured," as it's a basic element. Steven Dolley Managing Editor, Inside NRC Platts [cid:image001.jpg@01CEAFC8.40215790] 202-383-2166 Office 202-383-2187 Fax

comment #150231 posted on 2013-09-19 10:12:10 by Mary Ann Walsh

> typo in the word "just"

comment #148741 posted on 2013-09-13 14:08:06 by Moderator in response to comment #148573

> Great point. You are correct. We didn’t mean to perpetuate any myths. Salt into water is considered a chemical reaction because of the ionic dissociation. It is one of the trickier reactions to identify because one of the common tests to differentiate between physical and chemical changes (can it revert back to its original state) does not hold true for salt water because the ions recombine. Thanks for making sure we had this straight! Suzanne Schroer

comment #150254 posted on 2013-09-19 11:05:06 by Moderator in response to comment #150231

> Thank you. We fixed it! Moderator

comment #149417 posted on 2013-09-16 14:40:19 by Tony Young (@NextWaveCreate)

> We can simply put the idea of chemical in this way. Chemical can be gas, liquid, and solid. It cannot be separated easily.

comment #148754 posted on 2013-09-13 14:39:44 by Moderator in response to comment #148554

> Chlorine as a basic element is gaseous and poisonous. It is also doesn’t exist in its basic elemental state naturally on Earth. Chlorine (as a compound and as a basic element) is manufactured. (Reference http://www.bt.cdc.gov/agent/chlorine/basics/facts.asp) Just because something is an element, does not mean that we can’t create it. In fact, at least 20 elements on the periodic table do not exist on Earth, but are considered “synthetic” elements, as they were created artificially. Actually just last month, a new element was created/discovered. (http://www.cnn.com/2013/08/28/world/europe/new-chemical-element/index.html) Oftentimes, isotopes used for medical purposes are created at reactors, such as the Missouri University Research Reactor, because the natural occurrence of isotopes is low here on Earth. I do concede, though, that the more correct term, for the examples given, would be chlorine compound (such as calcium hypochlorite, which is manufactured for use in swimming pools or as a bleaching powder). Suzanne Schroer

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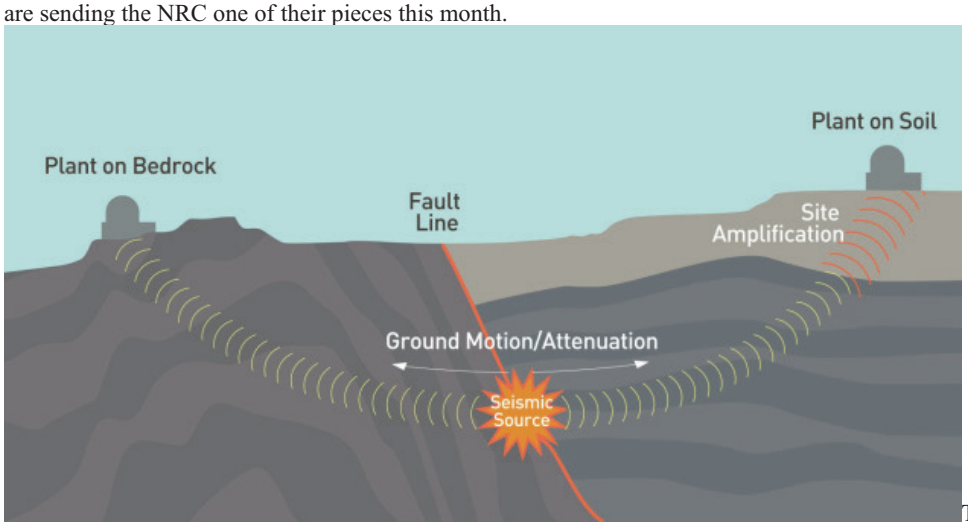
Adding a Piece to the Seismic Puzzle

posted on Tue, 17 Sep 2013 14:18:45 +0000

Clifford Munson
Sr. Technical Advisor for Nuclear Plant Siting

Office of New Reactors

One of the important lessons from 2011's Fukushima Dai-ichi accident was the need for U.S. reactors to better understand their earthquake hazard. Reaching that understanding is a bit like assembling a jigsaw puzzle, and reactor owners in the central and eastern parts of the country are sending the NRC one of their pieces this month.



The graphic shows the three pieces of information U.S. reactor owners need in order to analyze their specific hazard: • Where quakes are generated • How the country's overall geology transmits quake energy, and • How an individual site's geology can affect quake energy before it hits the reactor. The first two pieces are taken care of. The NRC partnered with the Department of Energy and the Electric Power Research Institute to publish updated earthquake source information last year. We also recently approved the most recent model of quake energy transmission. U.S. plants east of the Rocky Mountains have been enhancing their ability to describe their sites' soil and rock properties, in some cases obtaining more information on what lies beneath the reactors. Sites made up primarily of hard rock (at left in the graphic) tend to amplify high-frequency quake energy, while sites with more of a soil-like makeup (at right) tend to amplify low-frequency energy. Central and eastern U.S. reactor owners are starting the process of putting all three pieces together to update their site's hazard. They'll report the results to the NRC by March of next year. They've provided updates on their sites' soil/rock makeup now so the NRC can examine the information and ensure it meets the basic standards needed for the overall hazard review. Plants west of the Rockies have a more complicated version of the puzzle to consider, so they'll submit information to the NRC later.

Comments

comment #149812 posted on 2013-09-18 01:31:10 by Aladar Stolmar

> Another whitewashing effort from the NRC. The issue is the ignition and firestorm of the cladding, reducing the steam and generating metal oxide and Hydrogen. The earthquake is just one of the possible causes of this key process in a severe accident. Yes, there is a possibility to avoid such events, the severe destruction of reactor cores, if we prevent the ignition of cladding-coolant interaction. Yes, we can keep cold the cladding, if we vent the steam and relieve the pressure in the reactor and provide sufficient staged by the different pressure levels passive coolant reserves. Why are there such whitewashing efforts instead in the NRC?

comment #149677 posted on 2013-09-17 15:54:14 by Moderator in response to comment #149633

> The NRC is aware how important it is to clearly identify and incorporate uncertainty into seismic hazard evaluations. We use a detailed and comprehensive approach for modeling seismic hazards that seeks to include all technically defensible interpretations into the final hazard estimates. This "Senior Seismic Hazard Analysis Committee" approach is described in detail in NUREG 2117, online at http://pbadupws.nrc.gov/docs/ML1211/ML12118A445.pdf . Clifford Munson

comment #150274 posted on 2013-09-19 11:50:24 by Aladar Stolmar in response to comment #150081

> They are not doing it. The entire basis - MAAP and Relap - does not recognize the ignition and firestorm - the real process in the TMI-2, Chernobyl-4 reactors, Paks-2 fuel washing vessel, Fukushima Daiichi 1, 2 and 3 reactors - and misrepresent the rates of metal-coolant reaction. Therefore the required venting and cooling is for a false representation, not to prevent the real thing. See the Hydrogen re-combiners...

comment #150289 posted on 2013-09-19 13:29:23 by joey racano (@joeyracano) in response to comment #150081

> As the only agency with regulatory discretion, the NRC should not allow any more plutonium production at least until such a time as its safe storage is solved. Joey Racano, Director Ocean Outfall Group .com On facebook: stop the diablo canyon seismic testing

comment #149633 posted on 2013-09-17 11:49:45 by Robert J. Geller

Unfortunately the situation may be somewhat more complicated than is suggested by this post. The problem is that the methods being used to make the seismic hazard maps have not been validated, and in many recent cases cases damaging earthquakes have occurred in areas specified by the hazard maps as being at relatively low risk. Please see our recent the paper in Tectonophysics (by S. Stein, R.J. Geller, and M. Liu, 2012) for more details. http://www.earth.northwestern.edu/people/seth/Texts/mapfailure.pdf

comment #149644 posted on 2013-09-17 12:35:17 by CaptD

===> Planning for the future by depending on the past does not guarantee nuclear safety! FACT: A once in a hundred year or even a thousand year event is just as likely to happen tomorrow as many years in the future; then what? This is where the NRC and the nuclear Industry fails the public trust because they live in Nuclear Denial* because they believe nothing BAD will happen to any Nuclear Power Plants (NPP's) because nothing BAD has happened before... The USA cannot afford a Trillion Dollar Eco-Disaster like Fukushima. Example: French Nuclear Disaster Scenario Was So Bad The Government Kept It Secret http://www.businessinsider.com/potential-cost-o... via @bi_contributors snip Catastrophic nuclear accidents, like Chernobyl in 1986 or Fukushima No. 1 in 2011, are, we're incessantly told, very rare, and their probability of occurring infinitesimal. But when they do occur, they get costly. So costly that the French government, when it came up with cost estimates for an accident in France, kept them secret. But now the report was leaked to the French magazine, Le Journal de Dimanche. Turns out, the upper end of the cost spectrum of an accident at the nuclear power plant at Dampierre, in the Department of Loiret in north-central France, amounted to over three times the country's GDP. * http://is.gd/XPjMd0 The illogical belief that Nature cannot destroy any land based nuclear reactor, any place anytime 24/7/365!

comment #149736 posted on 2013-09-17 21:04:03 by Joey Racano

The people of the United States and elsewhere have already done your work for you. And we have found that the dangers posed by the use of nuclear energy far outweigh any benefits. The waste lasts so long that something is bound to happen no matter what we do, or how we plan or prepare. 200 thousand years is a long time and you won't be around to see your waste safely through the bottleneck. Earth movement is a danger as well, but your seismic tests can actually cause Earth movement, so your disease is terrible but your cure is fatal! No nukes is no fukushima. No nukes is no Chernobyl. No nukes is good news. Goodbye nukes. hello sunshine. On Facebook: stop the diablo canyon seismic testing Joey Racano, Director Ocean Outfall Group .com

comment #152235 posted on 2013-09-25 20:20:30 by CaptD in response to comment #152138

To Anonymous A link, sure beats posting a bunch of blah blah, especially when it is not factual! Posting links to what the Former PM of Japan and/or the Former Chairman of the NRC are now saying are great ways to inject to this conversation!

comment #151870 posted on 2013-09-24 19:24:09 by CaptD in response to comment #149984

Reply to Robert J. Geller September 18, 2013 at 5:13 pm Great comment ans I'd be interested in a short update on the two schools of thought you mentioned, especially the one that the NRC is not listening to...

comment #151873 posted on 2013-09-24 19:30:44 by CaptD

To: Clifford Munson What do you and the NRC have to say about what Robert J. Geller's September 18, 2013 at 5:13 pm comment listed above? + What does the Chairman of the NRC, a noted Geologist, have to say about the NRC siting methodology?

comment #150347 posted on 2013-09-19 20:01:07 by CaptD in response to comment #149980

"Misrepresenting facts" in what way? You have a problem with probability being random? or You don't think the French Gov't. did a good job with their investigation?

comment #149693 posted on 2013-09-17 17:33:55 by Robert J. Geller

Sorry, but Dr. Munson appears not to have been following recent research in seismology. Let me bring you up to date. The research in the pdf file he cites is based on a probabilistic model that makes particular assumptions about how earthquakes occur. Essentially the assumption being used is that "characteristic earthquakes" (the hypothetical "maximum earthquake" in each region) recur more or less periodically. That assumption unfortunately has failed to survive statistical testing. For example, see our paper which explains this (Y.Y. Kagan, D.D..Jackson, R.J. Geller: Seismological Research Letters, 2012): http://www.seismosoc.org/publications/SRL/SRL_83/srl_83-6_op/ Then please take a look at the our paper that I cited in my earlier post, which shows that in fact the hazard maps simply aren't working: http://www.earth.northwestern.edu/people/seth/Texts/mapfailure.pdf Finally, you can take a look at a criticism of our paper on the problems of current hazard maps by one of the leading hazard map makers and our reply to his criticism, published in Tectonophysics in 2013: https://dl.dropboxusercontent.com/u/8943731/2013-frankel-comment-stein-etal-reply-tecto.pdf Essentially the hazard mapper says that lots of guys have all agreed on a consensus, so how can they possibly be wrong. To which we reply, because physics works by objective testing, not consensus, and your models don't agree with the data, so they're wrong. It would be desirable for the people in the nuclear industry to keep up on current research in seismology, and to realize that to date you've apparently only been listening to one group of people who are wedded to a particular model, one that alas fails to agree with the data. There should be a better and more inclusive dialog from now on.

comment #149696 posted on 2013-09-17 17:42:41 by Anonymous in response to comment #149644

Your grasp on probability and risk management seems tenuous at best.

comment #151151 posted on 2013-09-22 13:57:23 by CaptD in response to comment #149633

Great comment and thanks for the link to your paper, which I was glad to see included LUCK, which too often is left out of EQ analysis... I'd be very interested in your opinion of my comment just before yours which was written for the general public...: CaptD September 17, 2013 at 12:35 pm ===> Planning for the future by depending on the past does not guarantee nuclear safety!

comment #151149 posted on 2013-09-22 13:53:55 by CaptD in response to comment #149677

The Committee can do and/or say whatever they want but LUCK plays an important part of any earthquake defense as Robert J. Geller's paper points out (see comment above). The NRC is now trying to somehow justify that the risk of another Fukushima nuclear accident happening is so small that it is "worth" taking the gamble, when in effect it is really a suckers bet when compared to using another form of energy which does not have any RISK of a nuclear accident... The NRC is protecting the nuclear industry while at the same time justifying its own usefulness, instead of protecting the USA from all future nuclear disasters caused by Nature...

comment #151419 posted on 2013-09-23 10:23:31 by A Green Road (@AGreenRoad)

On top of earthquakes, what is being done to address this risk? Super Solar Storm To Hit Earth - 'Carrington Effect'; 400 Nuke Plants Will Melt Down/Explode; via A Green Road Blog http://agreenroad.blogspot.com/2012/03/super-solar-storm-predicted-to-hit-2013.html

comment #151422 posted on 2013-09-23 10:30:42 by A Green Road (@AGreenRoad)

Never mind the earthquake dangers..... your former Nuclear Regulator NRC Chairman Says - 100% Of ALL US Nuclear Reactors Should Be SHUT DOWN PERMANENTLY! via @AGreenRoad http://agreenroad.blogspot.com/2013/09/former-nuclear-regulator-nrc-chairman.html

comment #152138 posted on 2013-09-25 13:13:01 by Anonymous in response to comment #151422

Anyone else notice that almost all of the anti-nuclear posters on this site post some sort of link to their own website in these replies? Fear sells, people.

comment #152163 posted on 2013-09-25 14:39:26 by Joey Racano in response to comment #151873

Learn about the studies done by award winning seismologist Jim Brune, who told us everything PG&E didn't want us to know. En Echelon faults. Learn. stopthediablocanyonseismictesting on facebook Joey Racano, Director Ocean Outfall Group

comment #150081 posted on 2013-09-18 21:50:34 by hiddencamper in response to comment #149812

In case you haven't been following, the FLEX initiative and NRC orders require venting and cooling to prevent the metal-water reaction. If they are already doing it, how is it whitewashing?

comment #149980 posted on 2013-09-18 13:42:04 by Anonymous in response to comment #149644

Either that, or you are purposefully misrepresenting facts to fit your narrative.

comment #149984 posted on 2013-09-18 13:47:20 by Anonymous in response to comment #149693

You say that the assumption of characteristic seismic events occurring periodically is incorrect. This seems fairly intuitive. If this is incorrect, then what is the correct assumption? That they occur at random?

comment #150025 posted on 2013-09-18 17:13:10 by Robert J. Geller in response to comment #149984

This is a good question and the answer is that we don't know yet. On a global level the "tapered Gutenberg-Richter" (G-R) distribution appears to be the best model of the frequency-magnitude relation. See a recent paper http://onlinelibrary.wiley.com/doi/10.1002/grl.50416/abstract for example. As far as time-dependence, a Poisson model may be safest to use. There is unquestionably some time-dependence of probabilities, but absent an established model it may be dangerous to use more complex models of time-dependent probability variation. So this is a bit frustrating for everyone involved in this field. On the one hand, PSHA appears to work well, in the sense that if you turn the crank you get out definite numbers that seem to be authoritative, and give the customer what he/she wants to know to get on with the job. But, on the other hand, the hazard maps just don't agree with the data http://www.earth.northwestern.edu/people/seth/Texts/mapfailure.pdf The March 11, 2011 Tohoku earthquake (a magnitude-9 quake which occurred in a place where the national hazard map said only a magnitude-8 was expected, with a much lower hazard level than other regions of Japan that supposedly were at much greater risk) should have been a wake-up

call not only for seismologists but for also for users of hazard maps, like the people reading this blog. But there seems to be a lot of cognitive dissonance here, as typified by the NRC post-Fukushima view that PSHA has solved the problem and that everything has been taken care of. Tthere seems to be a great demand for products that produce PSHA-type answers. Some research is being undertaken now (by the UCLA group, for example) on trying to get PSHA-type modeling done without using the characteristic earthquake model. But if it is appropriate to use the tapered G-R distribution on a regional basis (and this has not yet been established) the answers will vary enormously depending on the value of the "corner magnitude" which is selected. So, I suppose the bottom line is that nuclear engineers have to be aware that the PSHA models they are using appear to be giving answers that don't agree with the data, so they're probably not reliable, but that research has not come up with a consensus on what to replace them with. The nuclear community should also be aware that there is an ongoing debate in the seismological community, but that so far the nuclear community has only been listening to one side in this debate. So the nuclear community has to take responsibility for seismic and tsunami risk assessment issues rather than just taking whatever the usual group of consultants may tell them as established truth. Not what the nuclear community wants to hear, I suppose, but that's the way it is.

comment #150037 posted on 2013-09-18 17:35:04 by Joey Racano in response to comment #149984

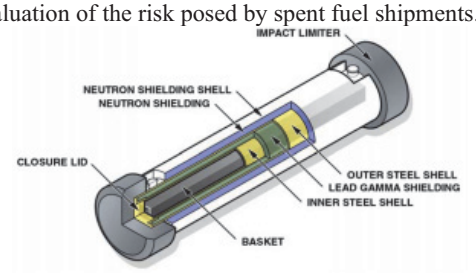
Random isn't the right word. They happen in a more complex way than is prudent to have nuke plants on faults...

Transporting Spent Nuclear Fuel: How Do We Know It's Safe?

posted on Thu, 19 Sep 2013 15:12:07 +0000

John Cook
Senior Transportation Safety Scientist
Division of Spent Fuel Storage and Transportation

In May, we talked about changes to NRC regulations regarding shipments of nuclear materials – including spent fuel. This month, we wanted to share the results of a periodic evaluation of the risk posed by spent fuel shipments. The NRC expects to publish the final study later this year. A draft was published in 2012.



Generic Truck Cask for Spent Fuel

Spent fuel shipments are strictly regulated and have not released any radioactive materials since they began more than 30 years ago. But the NRC still periodically evaluates the risks. As more data become available and computer modeling improves, these studies allow us to refine our understanding of these risks. The latest study, Spent Fuel Transportation Risk Assessment, modeled the radiation doses people might receive if spent fuel is shipped between various sites. The study confirmed that NRC regulations for spent fuel transport are adequate to ensure safety of the public and the environment. Both the NRC and the U.S. Department of Transportation oversee radioactive material transport. DOT regulates shippers, vehicle safety, routing, and emergency response. The NRC certifies shipping packages for the more hazardous radioactive materials, including spent fuel. To be NRC-certified, a package must provide shielding, dissipate heat, and prevent a nuclear chain reaction. It must also prevent the loss of radioactive contents under both normal and accident conditions. The package must be able to survive a sequence of tests meant to envelope the forces in a severe accident. These tests include a 30-foot drop onto an "unyielding" surface (one that does not give, so the package absorbs all the force), a puncture test drop onto a steel peg, and then a 1475-degree Fahrenheit fire that engulfs the package for 30 minutes. The 2013 risk assessment examined how three NRC-certified packages would behave during both normal shipments and accidents. It modeled a variety of transport routes using population data from the 2000 census, as updated in 2008. It used actual highway and rail accident statistics. It considered doses from normal shipments to people living along transportation routes, occupants of vehicles sharing the route, vehicle crew and other workers, and anyone present at a stop. And it used state-of-the-art computer models. The risk assessment found: Doses from routine transport would be less than 1/1000 the amount of radiation people receive from background sources each year There is less than a 1 in 1 billion chance that radioactive material would be released in an accident If an accident did release radioactive material, the dose to the most affected individual would not cause immediate harm The 2013 risk assessment builds on earlier studies of transportation risks. It uses real-world data and equipment in place of generic designs and conservative assumptions. The first study, done in 1977, allowed the NRC to say that its transport regulations adequately protect public health and safety. Other studies done in in 1987 and 2000 found the risks were even smaller than the 1977 study predicted. These studies, together with analyses we perform on major transportation accidents, previous physical testing of package performance, and the global experience with thousands of completed spent fuel shipments, give the NRC confidence in the safety of spent fuel shipments. For more information on how the NRC regulates spent fuel transportation, click here. To read our updated backgrounder on the subject, click here.

Comments

comment #150272 posted on 2013-09-19 11:47:02 by Richard McPherson

You write for the past "30 years..." in fact we have been transporting nuclear materials safely for over 70 years. This is my 50th year in nuclear. Richard McPherson

comment #150326 posted on 2013-09-19 17:45:15 by joey racano (@joeyracano)

How do we know its safe?? Is that a loaded question? We know it in fact ISN'T safe, because the spent fuel being a million times more radioactive than fresh fuel, wasn't safe even when NOT being transported! What a bunch of flim flam artists. NO NUKES. PS- did ya hear the one about YET ANOTHER quake hitting Fukushima today? Joey Racano

comment #150801 posted on 2013-09-21 11:43:46 by Jack Coupal, Ph.D.

I'm always amazed at the large number of anti-nuclear-anything folks who appear parked on this commenting site 24/7.

comment #151379 posted on 2013-09-23 06:58:16 by Dan Williamson in response to comment #150326

"...in fact ISN'T safe." And your definition of "safe" is what exactly? Zero releases and zero exposure to the public in 30-plus years of transporting spent fuel from shipyards have proved the technology. But you can improve on that, huh? Fulminate elsewhere, please.

comment #152332 posted on 2013-09-26 06:05:28 by andiradi

Reblogged this on AntiRadiation.

Floating Nuclear Power Plants: A Technical Solution to a Land-based Problem (Part I)

posted on Tue, 24 Sep 2013 13:47:43 +0000

Thomas Wellock
NRC Historian

In July, Russia announced it planned to build the world's first floating nuclear power plant to supply 70 megawatts of electricity to isolated communities. If successful, the plan would bring to fruition an idea hatched in the United States nearly a half-century ago. It's not widely known, but in 1971, Offshore Power Systems (OPS), a joint venture by Westinghouse Corporation and Tenneco, proposed manufacturing identical 1,200 MW plants at a $200 million facility near Jacksonville, Fla. Placed on huge concrete barges, the plants would be towed to a string of breakwater-protected moorings off the East Coast. Using a generic manufacturing license and mass production techniques, Westinghouse President John Simpson predicted this approach could cut in half typical plant construction time and make floating reactors economical. While Simpson touted their economic advantages, utilities wanted floating power plants to overcome mounting opposition to land-based reactors. Site selection had ground to a near halt in the Northeast and the West Coast due to public opposition, seismic worries and environmental concerns. In July 1971, a federal court complicated siting further by forcing the NRC's predecessor, the Atomic Energy Commission, to develop thorough Environmental Impact Statements for nuclear plant projects. In fact, West Coast utilities met defeat so often on proposed coastal power plant sites they turned inland in an ill-fated move to find acceptable arid locations. By heading out to sea, Northeast utilities hoped they could overcome their political problems. [caption id="attachment_4659" align="alignright" width="630"]

FIGURE 1. ARTIST'S CONCEPT OF TWO FLOATING NUCLEAR POWERPLANTS.

Drawing from a 1978 GAO report.
[/caption] New Jersey's Public Service Electric and Gas Corporation (PSEG) responded enthusiastically and selected the first site, the Atlantic Generating Station, about 10 miles north of Atlantic City at the mouth of Great Bay. A PSEG spokesman said floating reactors were "the only answer to the problem of siting nuclear power plants." Other reactor vendors, including General Electric, also studied the possibility of floating reactors. A supportive regulatory response heartened OPS officials. The AEC's Advisory Committee for Reactor Safeguards issued a fairly positive assessment of floating reactors in late 1972. "We think this is a very favorable letter," a Westinghouse official said of the committee response, "and we don't see any delay whatsoever." Westinghouse moved forward with its grand plan and built its manufacturing facility near Jacksonville. The facility included a gigantic crane that was 38 stories high -- the world's tallest. It appeared to be smooth sailing ahead for floating plants with a RAND Corporation study that touted their superior ability to withstand earthquakes and other natural hazards. Spoiler alert: RAND selected for floating power plants one of the most ill-conceived yet prescient of acronyms, FLOPPS. Exactly how the seas turned rough for floating plants will be unveiled in Part II on Thursday.

Comments

comment #152268 posted on 2013-09-25 23:11:56 by Bruce Behrhorst

> The problem w/ the U.S. is its energy sources distribution is corrupted to tilt toward the Hydrocarbon Industry and the 'politcally correct' Green Envy in underpowered scarcity politcs. I doubt Americans really understand Russia is a vast topographical area. Energy is need to process resouces in isolated areas without having the disadvantage of oil/gas fuel transport to onsite operations. The advantage of nuclear re-fueling a reactor takes place in 6-10 yr. cyles not 6-10 wk. cycles.

comment #151898 posted on 2013-09-24 20:43:54 by Dan

> This is a joke, right? This is not good, this is very bad. Have we learned nothing about nuclear energy? Have we forgotten about Chernobyl, Fukushima or Gulf Coast Oil Disaster? We dump garbage in the sea, oil and now nuclear waste. The sea is already poisoned enough with high mercury levels, destruction of coral reef habitats, overfishing, whaling and loss of biodiversity. Is it that we don't care because we don't see what's beneath the waves? Do we not care because we judge what we see what washes upon beaches? Do we not care because we blindingly think it won't effect us? No man is an island. The fish we eat, plagued with chemicals, mercury and radiation - do you call this safe? In your heart of hearts, could you let your children eat seafood contaminated and filled with such things? Ever wonder why cancer and other diseases are becoming more common? It doesn't take a rocket scientist to figure it out. Nuclear power has no place in this world. There is no Planet B.

comment #151821 posted on 2013-09-24 15:43:19 by nova9

> Small (less than 300 MWe) floating nuclear power plants far away from coastlines could be immediately successful today if they were used to manufacture ammonia through the electrolysis of water from the production of hydrogen synthesized with nitrogen extracted from the atmosphere. Nearly 130 million tonnes a year of ammonia is produced globally mostly from greenhouse gas polluting natural gas. Ammonia production though nuclear power plants, however, could be carbon neutral. Ammonia production could be a way to initiate the large scale manufacturing of small floating nuclear reactors which could eventually be used for the production of synthetic hydrocarbon fuels synthesized from seawater, again far away from coastlines. Carbon neutral fuels such as

methanol could be produced at these floating nuclear facilities and then transported by tankers to coastal cities for peak-load or even baseload power production or conversion into gasoline or dimethyl ether for ground vehicles and ships. Marcel F. Williams

comment #151790 posted on 2013-09-24 13:44:09 by Eugene Cramer

}}} INSERT by amateur Nuclear Historian EN Cramer {{{{ http://en.wikipedia.org/wiki/Army_Nuclear_Power_Program MH-1A: 10 MWe, plus fresh water supply to the adjacent base. Mounted on the Sturgis, a barge (no propulsion systems) converted from a Liberty ship, and moored in the Panama Canal Zone. Initial criticality at Ft. Belvoir VA (in Gunston Cove, off the Potomac River), January 24, 1967.. The MH-1A was designed by Martin Marietta Corporation. It remained moored at Gatun Lake in the Panama Canal from 1968 until 1977, when it was towed back to Ft. Belvoir for decommissioning. It was moved to the James River Reserve Fleet in 1978 for an expected 50 years of SAFSTOR. This reactor used low-enrichment uranium (LEU) in the range of 4 to 7 percent. The MH-1A had an elaborate analog-computer-powered simulator installed at the Training Division, USAERG, Ft. Belvoir. End historian's note {{{{

comment #152088 posted on 2013-09-25 09:34:41 by Moderator in response to comment #151790

Yes, I should have noted that the commercial floating reactor projects by Westinghouse and the Russians were preceded by the Army's MH-1A, which was part of their reactor development program. It did valuable duty in the Panama Canal Zone for about eight years. Thanks for reminding us. Thomas Wellock

comment #152794 posted on 2013-09-27 19:33:00 by Bruce Behrhorst

While the US revels in history. ROSATOM builds floating reactor system. Photos https://www.facebook.com/media/set/?set=a.632731343434356.1073741860.233828576657970&type=3#!/media/set/?set=a.632731343434356.1073741860.233828576657970&type=3

comment #152136 posted on 2013-09-25 13:09:35 by Anonymous in response to comment #151898

FYI, there are many nuclear power plants on/in the seas which have operated for decades without any adverse affect on people or the environment, namely nuclear submarines and aircraft carriers.

Waves of Uncertainty: The Demise of the Floating Reactor Concept (Part II)

posted on Thu, 26 Sep 2013 13:38:54 +0000

Thomas Wellock
NRC Historian

Offshore Power Systems, apparently, did not appreciate that putting land-based reactors out to sea was bound to raise new safety, environmental and regulatory questions. Concerns about ship collisions, off-shore fishing grounds, barge sinking and the challenge of creating a new regulatory process for floating reactors were just some of the unique issues facing regulators. Even the trade press raised concerns. Nuclear News worried about the “incredibly tangled mass of overlapping jurisdictions, state, national, and international law, inter-agency authority” that included new players such as the U.S. Coast Guard. [caption id="attachment_4659" align="alignleft" width="300"]

Drawing from a 1978 GAO report.[/caption] Events conspired to worsen OPS’s prospects. The oil crisis that began in 1973 made construction financing expensive and slowed electricity consumption. Facing slack demand, PSEG postponed delivery of the first floating plant from 1981 to 1985 and later to 1988. Tenneco backed out of the OPS partnership in 1975. With the entire enterprise threatened, Westinghouse and the Florida Congressional delegation asked the federal government to purchase four plants. But, the prospect of “bailing out” OPS did not appeal to officials in the Ford Administration. The purchase proposal died. Floating reactors did not solve regulatory or political problems. The production facility in Jacksonville needed an NRC manufacturing license. There were so many technical and regulatory uncertainties that the licensing review ran three years behind schedule. A 1978 report from the U.S. General Accounting Office criticized the NRC for what it believed was an incomplete safety review, particularly for not accounting for impacts on the ocean ecosystem during an accident where a melting reactor core broke through the bottom of the barge. Local and state opposition to the plant was intense. Nearby counties voted in non-binding referendums 2 to 1 against the Atlantic Generating Station, and the

New Jersey legislature refused to introduce a bill to turn the offshore site over to PSEG. Westinghouse held out hope for a brighter future; PSEG didn't. In late 1978, the utility announced it canceled its orders for all four of its floating plants. Slack demand, it noted, was "the only reason" for the cancellations. "We simply will not need these units" in the foreseeable future, a utility official admitted. Others blamed excessive regulation. In March 1979, John O'Leary, a Department of Energy deputy secretary, provided to the White House a "grim—even alarming report," as one staffer said, that the NRC delays with the OPS license were symptomatic of a larger problem. "It has become impossible to build energy plants in America" O'Leary said, due to excessive environmental regulations and an indecisive bureaucracy. Environmental laws, O'Leary complained, had created "a chain of hurdles which effectively kill energy projects" and damage to the nation's economy. He wanted presidential action. [caption id="attachment_4659" align="alignright" width="150"]  Drawing from a 1978 GAO report.[/caption] Events rendered O'Leary's plea for action moot. Two and a half weeks later the Three Mile Island accident occurred, ending any hope of an imminent industry rebound. The accident raised anew questions about a core melt accident and further delayed the manufacturing license. The NRC did not issue a license until 1982. In 1984, Westinghouse formally abandoned the OPS enterprise, dismantled the Jacksonville facility, and sold its huge crane to China. Going to sea, OPS discovered, did not allow it to escape the problems that beset nuclear power. A novel technological solution could not overcome public distrust and economic, technical and regulatory uncertainty. We shall see how Russia handles the challenges.

Comments

comment #152390 posted on 2013-09-26 10:45:36 by CaptD

> Fukushima is providing a great example of what happens when nuclear reactors go BAD near the ocean and hopefully if mankind is very lucky we will not learn what happens when super hot corium(s) meet ocean water, creating a non-controllable radioactive steam which will then be spread globally via the jet stream for decades if not longer! When the Japanese started to use sea water to cool there melting reactors at Fukushima, radioactive steam explosions occurred and their fallout was measured in North America, Europe and beyond!

comment #152546 posted on 2013-09-26 22:07:57 by Marcel Williams

> Again, this is why small floating nuclear reactors should be deployed far away from coastlines for the production of ammonia and synthetic fuels. This avoids the local politics while allowing the safest and most environmentally benign energy source ever invented to replace the need for greenhouse gas polluting fossil fuels-- far out to sea. Marcel F. Williams

comment #154430 posted on 2013-10-02 15:55:13 by Henry Lynn in response to comment #152390

> Corium would quickly be cooled by the ocean. Yes, some initial steam would be created, but steam explosions and massive plumes of radioactivity would not be expected. The ocean is considered the ultimate heat sink and would cool the corium in a time frame that could be measured in days, not decades.

Potential Government Shutdown: The Path Forward for the NRC -- UPDATED

posted on Fri, 27 Sep 2013 20:12:08 +0000

> *Mark Satorius*
> *Executive Director for Operations*
>
> **Update: This week's Waste Confidence meetings will be held as scheduled. We'll keep you updated on the status of meetings scheduled for next week.** The NRC can't predict the likelihood of a government shutdown next week, but we are prepared for all contingencies in case of a lapse of appropriations for federal agencies effective on Tuesday. If there is a lapse, many agencies will shut down operations and furlough employees except for those necessary to support possible emergencies. At the NRC, however, we have some "carryover" funding, which is essentially previous year's funding that was not expended. By being careful with that money, the NRC should be able to remain open for at least one additional week of largely normal operations. At this time, then, the NRC is not issuing employee furlough notifications. Should the lapse of appropriations last longer than our "carryover" funding allows, the NRC has a plan reviewed by the Office of Management and Budget for identifying staff members who will remain on the job to perform the excepted NRC functions for emergencies. The planned staffing for NRC "excepted functions" necessary to support emergency operations during a lapse of appropriations is approximately 300 of the agency's 3,900 employees. Of that number, roughly half are resident inspectors assigned to reactor and fuel facilities. The rest of the "excepted" personnel include staff necessary to initially respond to emergency situations at NRC licensed facilities. The Chairman, the NRC Commissioners and Inspector General are in addition to this number and are exempted from furloughs because they are Presidential appointees. We will notify licensees and external stakeholders through a Regulatory Issue Summary if there is a lapse of appropriations on Oct. 1, and then again if the lapse exceeds our carryover funding. OMB and OPM websites have more information about the situation government-wide. The NRC will to continue to uphold our important mission of protecting public health and safety. We will also make every effort to reduce uncertainty and disruption for our valuable staff members, to the extent we can.

Comments

comment #154163 posted on 2013-10-01 21:13:28 by tjmackism in response to comment #154086

> I don't know, I'm just a country boy, but there is something fishy about continuing to collect annual fees for an agency that is in an essentially shutdown status. Sounds a lot like paying something for nothing. Like I said, there is just something non-commonsensical about that.

comment #154338 posted on 2013-10-02 08:07:37 by Moderator in response to comment #154185

> As the blog post says, the NRC is currently using "carryover" funds and is operating nearly normally at this time.

comment #154717 posted on 2013-10-03 10:15:23 by tjmackism in response to comment #154338

> This is what I don't understand. NRC is 90% funded by "user fees". By my cipherin', that means that you should be able to operate at 90% capacity. Other federal agencies funded by "user fees" are still operating at normal capacity. The Federal Highway Adminstration, which is funded by taxes on fuel, is operating normally. The FDA receives its funding from "fees" paid by pharmaceutical firms, and it is functioning. Where Obama plays golf, the course at Andrews AFB, is open for business at normal capacity, because it is funded by "user fees" (although somehow I don't think Obama pays them). So how is it that these other fee-based agencies are functioning, but NRC can't function? Something seems really, really fishy here.

comment #154710 posted on 2013-10-03 09:53:34 by Moderator in response to comment #154338

> If the shutdown lasts longs than the NRC's carryover funds can provide, construction inspectors will remain on the job along with resident inspectors at operating plants.

comment #153582 posted on 2013-09-30 15:03:19 by Michael Green

> What will happen to the planned Waste Confidence public meetings scheduled outside NRC Headquarters?

comment #154138 posted on 2013-10-01 19:39:20 by usurbrain

> Does this mean the Site Inspectors will go home?

comment #153645 posted on 2013-09-30 18:42:40 by tjmackism

> I thought you all were 90% funded by fees paid by licensees. Are those payments going to be suspended? If not, and you are still taking in the fee monies, then the services should be provided. If they aren't, then its a scam, taking in money without rendering the services that were supposedly paid for by those fees.

comment #152771 posted on 2013-09-27 18:22:00 by CaptD

> It is a real shame that DC Politics puts everyone in Jeopardy: On December 21, 2012, the US Nuclear Regulatory Commission (NRC) blog posted a letter from Chairman Macfarlane titled, “A Visit to Japan: Reflections from the Chairman.” She said, “Regulators may need to be “buffered” from political winds, but they need to be fully subjected to the pressure of scientific and engineering truth and cannot be allowed to make decisions or order actions that are “independent” of facts.” Too bad there is not a huge penalty for all elected Congressional Leaders for each day the US Government is threatened with a shutdown by their inaction!

comment #154086 posted on 2013-10-01 16:58:48 by Moderator in response to comment #153645

> The NRC will not suspend fees collections during the shutdown due to a lapse in appropriations. NRC fee collection amounts are governed by the Omnibus Budget Reconciliation Act of 1990 (OBRA-90), as amended, which requires NRC to collect approximately 90 percent of its budget in the year appropriated, not including amounts appropriated for Waste Incidental to Reprocessing and Generic Homeland Security. NRC collects hourly fees for regulatory services provided and an annual fee from licensees to recover the remainder of approximately 90 percent of its budget. If the NRC shuts down, the hourly fees will be reduced and only billed for the minimal services provided during the shutdown period. Annual fees will be continue to be collected at the present rates described in the NRC FY 2013 Fee Rule and adjustments will be made at the end of the year in the FY 2014 Fee Rule to ensure the proper collections are achieved. Consistent with our existing procedures, any excess fees collected in FY 2014 for a class of licensees will be credited to reduce their fees in FY 2015. Jim Dyer NRC CFO

comment #154391 posted on 2013-10-02 12:32:09 by Brett Martin in response to comment #154338

> And what happens when that 1 week of carryover funds run out? Are you going to staff the new construction gigs, or just live reactors

comment #154339 posted on 2013-10-02 08:08:23 by Moderator in response to comment #154138

No. As the blog post says: The planned staffing for NRC “excepted functions” necessary to support emergency operations during a lapse of appropriations is approximately 300 of the agency’s 3,900 employees. Of that number, roughly half are resident inspectors assigned to reactor and fuel facilities. However, at this time, the NRC is using "carryover" funds and is operating nearly normally.

comment #154370 posted on 2013-10-02 10:15:23 by derya ates

I hope this problem can be solved ASAP.

comment #154185 posted on 2013-10-01 22:14:03 by Brett Martin

The NRC is currently overseeing new construction of AP1000's in SC and GA. If the NRC isnt available will the projects cease progression? If so there will be thousands of middle class citizens out of work. Whos creating jobs now?.....thanks guys

comment #153907 posted on 2013-10-01 09:57:08 by Dan Williamson

Given that 90% of the NRCs operating budget is funded by fees collected from licensees, why should this situation cause any significant disruption?

comment #153913 posted on 2013-10-01 10:17:57 by Moderator in response to comment #153907

The NRC receives its appropriation from Congress. The fees collected from licensees go to the U.S. Treasury and reimburse most of the cost of operating the NRC.

comment #153915 posted on 2013-10-01 10:20:32 by Moderator in response to comment #153582

This week's meeting will be held. We'll keep everyone updated on the status of future meetings.

comment #153920 posted on 2013-10-01 10:33:31 by in response to comment #153913

Then those funds should still be there, yes? There are many things (Obamacare, for one) that receive their funding through other laws. Last I checked, Obamacare was supposedly running today (if you consider crashed websites running). It seems the NRC funding should be a simple pass-through as long as the licensee funds are being collected. If they aren't then shut down, I guess. If they are, do your work. I know if I don't do my work while being paid I get fired. Guess that's the difference between government and the real world.

comment #154423 posted on 2013-10-02 15:08:27 by in response to comment #153913

As 90% of NRC's income is from fees, at most, NRC should reduce its activities by 10%. So Treasury holds our fees and sends funds to NRC. But because Congress did not do its job, nobody at Treasury can send funds to NRC? This is just ridiculous.

SONGS Special Panel Disbands Now That Plant is Being Permanently Shuttered

posted on Wed, 02 Oct 2013 20:37:44 +0000

Victor Dricks
Senior Public Affairs Officer
Region IV

The special NRC panel that was formed last January to oversee the agency’s evaluation of Southern California Edison Co.’s restart plan -- and ultimately make a recommendation about whether to approve the restart of the San Onofre Nuclear Generating Station (SONGS) Unit 2 reactor -- has been disbanded now that the plant is being permanently shut down and no restart decision is needed.

But NRC involvement at San Onofre is far from over. The NRC will continue to ensure activities at the plant are conducted in a manner that protects public health and safety now that the plant is transitioning to decommissioning. The SONGS panel was formed to ensure the root causes of problems with the plant’s steam generators were identified and corrected, and it helped coordinate all SONGS-related communications. This panel documented all of the agency’s major regulatory actions, and coordinated licensing and inspection activities. It also helped plan and conduct periodic public meetings. Edison announced on June 7 it would

permanently shut down Units 2 and 3. The NRC ended its review of the restart plan the same day. The company sent letters to the NRC on June 28 and July 22 certifying all fuel had been removed from both reactors. As a result, Edison is no longer authorized to reload fuel into the reactor vessels or operate the reactors. Inspection activities have been transferred to the NRC's Decommissioning Power Reactor Inspection Program. This will ensure spent fuel is being safely stored and all site decommissioning activities are performed safely. The NRC will maintain a resident inspector at the site for at least a year. The agency is also reviewing lessons learned from the SONGS steam generator failures for possible changes to its inspection program. The NRC held a public meeting in Carlsbad, Calif., on Sept. 26, at which staff outlined the decommissioning process used for nuclear power plants. Edison has until mid-2015 to submit a decommissioning plan to the NRC, although the company has indicated it may submit a plan next summer. When this plan has been submitted, the NRC will sponsor another public meeting. Additional information about the decommissioning process is available on the NRC web site.

Comments

comment #154795 posted on 2013-10-03 15:37:12 by CaptD

> How about the ongoing NRC investigation(s) into San Onofre? Many think that they are being swept under the rug (for the good of both the NRC and nuclear industry) and were the real reason that SCE decided to decommission San Onofre! Example: Is the NRC now re-examining multiple steam generator tube failures as a potential major safety threat or are they still assuming only one tube can fail per each steam generator, which San Onofre proved is no longer a factual assumption?

comment #154796 posted on 2013-10-03 16:01:42 by Ace Hoffman (@AceHoffman)

> So we'll all just forget about getting to the bottom of what really went wrong at SanO? Sure, there were calculation errors on MHI's part (that SCE or NRC could have caught), but nothing definitive explains why anyone thought for 18 months that maybe we could restart Unit 2, and anyway there is probably some legal culpability for the risk Southern California was put through by negligence, whether that negligence reached the level of being criminal or not. Furthermore, if the nuclear industry is going to continue relying on steam generators (ie, PWRs), then a better understanding of the factors causing fluid elastic instability are vital to prevent a cascade of tube failures in some future design, especially during a main steam line break, but the NRC is not requiring utilities to be able to handle multiple tube failures. If a meltdown ever happens because of a cascade of tube failures caused by fluid elastic instability in ANY future steam generator design, the "root cause" can be traced to this decision to abandon the search for the root cause of San Onofre's steam generator failures and disband the special panel. But then again, having already decided not to examine Unit 2's behavior very carefully, perhaps the panel was doomed from the start.

comment #156451 posted on 2013-10-07 14:17:55 by Moderator in response to comment #155165

> No. There is a separate violation for Unit 2 dealing with Criterion III, design control. It is important to note that the SONGS Augmented Inspection Team Report 2012007 states that the one tube with 90% wear was in-situ pressure tested with the following results: "The affected tube was successfully pressurized to 5,300 psi with no leakage, confirming that the Technical Specification 5.5.2.11.b.1 structural integrity performance criteria were met." Although the tube wear was above the Technical Specification limit, the tube passed the structural integrity requirement, which confirms that the tube was okay for the entire Unit 2 cycle. Victor Dricks

comment #156442 posted on 2013-10-07 13:53:37 by Moderator in response to comment #155164

> See Page 86 of NUREG-0844 "NRC Integrated Program For The Resolution of Unresolved Safety issues, A-3, A-4 and A-5 Regarding Steam Generator Tube Integrity" Final Report: http://pbadupws.nrc.gov/docs/ML1219/ML12191A003.pdf Victor Dricks

comment #155205 posted on 2013-10-04 16:28:10 by CaptD in response to comment #155165

> Does that white finding also include operating Unit 2 with a steam generator tube with 90% wear when the safety limit is 35%. Also the Utility had no clue that it was dangerous until Unit 3 started leaking at which time "major" inspections were done to both Unit 2 and Unit 3. It also bears mentioning that SCE failed to use the most advanced tube inspection techniques which would have ID even more damage, choosing instead to use bobbin coil testing that cannot ID fatigue fractures, which are one of the most insidious problems since they remain hidden until the fail! IMO, a nuclear near miss deserves much more than a white finding and a slap on the wrist, especially when problems were uncovered that potentially affect the entire US nuclear fleet!

comment #155178 posted on 2013-10-04 14:44:09 by CaptD in response to comment #155164

> Mr. Victor Dricks Please provide NRC documentation that says that multiple tube ruptures are "UNLIKELY" because the DAB Safety Team has posted a large number of documents to the NRC, NRR and others that do not agree with your statement! Example: https://drive.google.com/folderview?id=0BweZ3c0aFXcFZGpvRlo4aXJCT2s#list

comment #155164 posted on 2013-10-04 14:03:10 by Moderator in response to comment #154795

> There are still ongoing investigations at the plant. They have not been completed. As to your example above, this has been examined. Nuclear plants like SONGS were designed to safely shutdown with a leak in a steam generator (tube rupture), with very low risk to the public. During the TESTING of steam generator tubes at SONGS Unit 3, there were multiple tubes that failed when an individual tube was pressure tested. However, in an accident scenario that would be highly unlikely because if one tube leaks, the pressure

decreases inside the steam generator decreasing the likelihood of another tube leaking. Victor Dricks

comment #155165 posted on 2013-10-04 14:04:20 by Moderator in response to comment #154796

SCE and MHI did complete a root cause. Documents have been made available to the public on the SCE website. There are still ongoing investigations at the plant. They have not been completed. Currently there is no established timetable. In addition, the NRC has proposed a white finding, low to moderate safety significance violation to the SONGS plant operator.The severity or "color" of a finding/violation is based on a risk assessment and looks at a number of factors, including how long did the condition exist; what was the increase in frequency of the accident due to the degraded tubes; and, what are the consequences. Since nuclear plants like SONGS were designed to safely shutdown with a leak in a steam generator (tube rupture), with realistic minimal radiation consequences (< 1 mrem whole body dose) to the public, the severity of this violation is low. Victor Dricks

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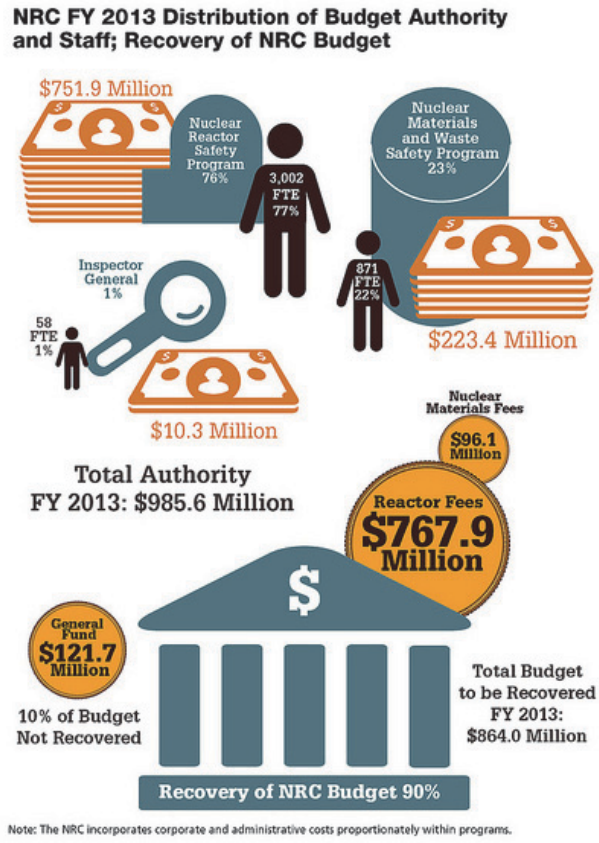
The NRC and the 2013 Shutdown – Next Steps

posted on Fri, 04 Oct 2013 15:53:54 +0000

Mark Satorius
Executive Director for Operations

As you may know, the NRC has been operating largely normally this week using "carryover" funds in the absence of an appropriation. Based on our current projections, however, we do not believe the agency can continue to operate beyond the middle of next week.



In the absence of action by Congress and the President, we expect to begin notifying employees whether they are excepted (non-furloughed) or non-excepted (furloughed). Most of the excepted employees are the resident inspectors and the Headquarters Operations Officers. Individuals assigned as excepted employees will perform the excepted functions listed in Management Directive and Handbook 4.5 if the agency shuts down.

Meetings scheduled for next week are in the process of being cancelled or postponed. We apologize for the inconvenience we know this is causing. For the most up-to-date details, please see our Public Meetings page.

It is possible that circumstances will require additional NRC employees to perform excepted functions, for example, in an emergency event requiring NRC response. If that situation arises, additional NRC employees who are required to perform excepted functions will be contacted, designated as excepted and removed from furlough status.

It is illegal for employees who are furloughed to perform agency work. So once the NRC begins furloughs, most employees will not be coming to the office, taking work phone calls, or reading or responding to email messages. The Office of Public Affairs and the Office of Congressional Affairs will have skeleton staffs on hand to respond as appropriate to inquiries. A limited Allegations staff will also be on hand to evaluate allegations and address those with immediate safety or security ramifications. As Presidential appointees, Chairman Macfarlane and the four Commissioners will not be furloughed and will continue to perform their responsibilities.

The NRC is also reviewing its contractors to determine which ones will receive “stop work orders” during a furlough.

While the NRC website will remain up, it may not be updated once a furlough has started. We will use the blog to provide up-to-date information about NRC actions.

We sincerely regret these actions are necessary and are eager to resume our important mission as soon as possible.

Comments

comment #156569 posted on 2013-10-07 17:57:14 by Robert Summers

> Why does NRC wait until implementing the shutdown day before notifying its licensees that routine business won't occur until the budget restraint is resolved. It seems like for appropriate planning to occur, that NRC should give a more timely notification.

comment #156521 posted on 2013-10-07 17:10:38 by TJ Mackisim in response to comment #156457

> Well, as someone a lot smarter than anyone here once said, if that is what the law says, then the law is an ass. From what I've heard, furloughed employees can't even access e-mail. How assish is that?

comment #157468 posted on 2013-10-09 13:01:49 by tjmackism

> Well, if that is the way it is being done, collecting fees from licensees and depositing them in a general treasury account to go wherever they might depending on the whims of politicians and bureaucrats, then it smells even fishier than it did before. In the criminal world, it might be called a front, or money laundering, or a bait-and-switch. But, I guess if the government does it, it isn't illegal. Where have we heard that before?

comment #157860 posted on 2013-10-10 13:20:05 by TJ Mackism in response to comment #157648

> That is what I have been wondering all along. Why are fees still being collected to fund an agency that is essentially (to hear it told) in shutdown status? The question comes down to this: why should someone pay for services they are not getting? That sounds an awful lot like some kind of scam or shakedown. I would really like a simple straight answer to that question, as well as an opinion from someone in the NRC: is it the right thing to do, from a logical, fairness point of view? I don't want any legalese (i.e., "the law says, blah blah blah...") or appeal to rules and regulations or other bureaucratic mumbo jumbo. All I want to know is, is it the right and just thing to do, to take peoples' money and provide nothing in return? Maybe asking for a simple, straight, non-legalese, non-bureaucratic answer is asking a bit much from a government agency, I know, but I thought it was worth a try.

comment #157481 posted on 2013-10-09 13:29:23 by Trottelreiner in response to comment #155225

> why should they work without being paid? what is this, socialism? scnr.

comment #156457 posted on 2013-10-07 14:23:07 by Moderator in response to comment #155225

> Here is the Q&A from the Office of Personnel Management: May an employee volunteer to do his or her job on a nonpay basis during a shutdown furlough? A. No. Unless otherwise authorized by law, an agency may not accept the voluntary services of an employee. (See 31 U.S.C. 1342.) More information is available here: http://www.opm.gov/policy-data-oversight/pay-leave/furlough-guidance/#url=Shutdown-Furlough

comment #155147 posted on 2013-10-04 13:24:59 by Paul Lindsey

> In the NRC blog post "How the NRC is Funded: following the money" http://public-blog.nrc-gateway.gov/2012/07/03/how-the-nrc-is-funded-following-the-money/ , it was made clear that 90% of the NRC's funding is paid by fees from industry. So I would think that since the NRC only receives 10% of its funding from the government, the effects of the shutdown would be minimal to the NRC.

comment #155272 posted on 2013-10-04 20:36:27 by Chris in response to comment #155169

> Are the fees that will be collected in the current fiscal year established only after the NRC has been granted its appropriation for that

same fiscal year, or are the fees collected in any given fiscal year based on what was appropriated in the previous fiscal year? Or is there an option C? Related to the above questions, if the NRC has not been granted the legal authority to spend federal dollars through the appropriations process, does it still have the authority to continue to assess and collect fees?

comment #155246 posted on 2013-10-04 19:25:00 by tjmackism in response to comment #155125

Like I have said in other posts, something smells really, really fishy here. Other fee-based federal agencies, the FDA, the Federal Highway Adminstration, Obama's golf course at Andrews AFB, are all open for business in a normal way. NRC is 90% funded by licensee fees. Why can't it operate at 90% of normal capacity, then? And no, I don't buy this "Congress appropriates the funds" argument. Even if those payments go to the Treasury, the law says NRC is funded by those fees. There should be no question about the law. If those fees are being collected and not being used as the law stipulates, someone is in violation of federal law. You can't just collect money and sit on it, or use it for something else. That would be misuse of public funds. If an ordinary person did that, they'd go to jail. But, we're talking about the excepted class here, mnot ordinary folks, I guess. So much for "equal protection under the law".

comment #155226 posted on 2013-10-04 17:48:28 by Fred Stender in response to comment #155125

Exactly, just like Obama care has to be "funded" when they been telling me that it is a cost savings. Sheesh.

comment #155225 posted on 2013-10-04 17:47:37 by Fred Stender

Funny--- "it is illegal" for furloughed employees to work. Sheesh. No wonder this country is bankrupt

comment #155169 posted on 2013-10-04 14:11:34 by Moderator

The NRC receives its appropriation from Congress. The fees we collect from licensees go to the U.S. Treasury. This “info graphic” breaks down the agency’s budget: http://www.flickr.com/photos/nrcgov/9670316427/in/set-72157635381738032 Jim Dyer CFO

comment #157222 posted on 2013-10-08 21:26:32 by Douglas White

So this leaves me with several questions. If an nuclear event occurs while NRC is on Furlough does it really exist? Does this mean the reactors will be shut down because they have no regulatory body? The good news... and I would ask the moderator to share this with other NRC employees... Time to read the FOIA documents concerning Fukushima and Plumegate. Watch Hatrick Penry videos on youtube and understand you are part of the machine that is broken. http://www.nrc.gov/reading-rm/foia/japan-foia-info.html http://hatrickpenryunbound.com/?p=3683

comment #157067 posted on 2013-10-08 16:37:45 by What a Shutdown...

Seeing how this "shut down" is being played out thus far leaves me wondering if the US GOV shut down is to be used as plausible deniability for some kind of false flag event. Every bit of it, including its resolution, seems like absolute idiocracy - unless that's what was planned.

comment #156873 posted on 2013-10-08 09:06:36 by Moderator in response to comment #156569

Licensees were notified on Oct. 1 of the government lapse of appropriations. Here is a copy of the notification: http://pbadupws.nrc.gov/docs/ML1105/ML110550923.pdf . NRC has used its carryover funding to continue to operate, so interactions with licensees remain as usual.

comment #157446 posted on 2013-10-09 11:47:22 by Moderator in response to comment #155246

The NRC is not funded by the fees it collects. Although the Omnibus Budget Reconciliation Act of 1990, as amended (42 U.S.C. § 2214), directs the NRC to collect fees in an amount approximately equal to 90 percent of the amount appropriated by Congress, it does not confer upon the NRC the authority to retain and expend these funds. Fees collected by the NRC must be deposited in the U.S. Treasury in accordance with the Miscellaneous Receipts Statute (31 U.S.C. § 3302(b)). As a result of this statutory scheme, the NRC is not permitted to remain fully operational after appropriations have been exhausted. Other agencies operate under different statutory provisions. NRC Office of General Counsel

comment #157445 posted on 2013-10-09 11:46:22 by Moderator in response to comment #155272

The NRC’s authority to assess and collect fees is not derived from its appropriations acts. The authority comes from the Omnibus Budget Reconciliation Act of 1990, as amended, 42 U.S.C § 2214. With that said, the fees assessed are based on the amount appropriated by Congress each fiscal year, which is why these fees are adjusted annually through notice and comment rulemaking. The NRC published its fee schedules for Fiscal Year 2013 on July 1, 2013 (78 Fed. Reg. 39462) and, consistent with our normal practice, will not be issuing for public comment a proposed fee schedule for Fiscal Year 2014 until the early months of calendar year 2014. In the meantime, applicants and licensees will continue to pay fees based on the Fiscal Year 2013 schedule in accordance with the provisions of 10 C.F.R. §§ 170.12, 171.13 and 171.19. The payment of these fees is not dependent on whether the NRC has

received appropriations from Congress for Fiscal Year 2014. NRC Office of General Counsel

comment #157648 posted on 2013-10-09 23:02:29 by Tony Beam

So do the fees from the industry stop coming in? If not then who is in control of said funds and if the funds are held in account interest that is accrued from sitting goes to whom? I would think that 90% of a budget is an amount that could be sustainable for any business, organization,committee,etc... to operate ... and the 10% of taxes shouldn't be paid seeing that there is nothing operational to be paid for. would be interesting to see if any fines have been issued since the shutdown....and fees or any permits issued

comment #155125 posted on 2013-10-04 12:11:38 by Garry Morgan

I and others were under the impression that the NRC was 90% funded by the nuclear industry in their paying for license, license renewal, expenses for inspections, fines, etc.; I guess that is not the case. Would y'all please consider posting the NRC's funding source breakdown by percentages?

From the Chairman: An Update on the NRC Shutdown

posted on Wed, 09 Oct 2013 17:21:40 +0000

Allison Macfarlane
NRC Chairman

Despite our best hopes, the NRC on Thursday will be joining the rest of the federal government in shutting down due to a lapse in appropriations. I believe we all share a deep disappointment that this action has become necessary. By using “carryover” funds, we’ve been able to stay open, but those funds have now been depleted. Wednesday is the last full day that the NRC will be operating normally until we receive an appropriation. Beginning on Thursday, we will not conduct non-emergency reactor licensing, reactor license renewal amendments, emergency preparedness exercises, reviews of design certifications or rulemaking and regulatory guidance. Also suspended for now will be routine licensing and inspection of nuclear materials and waste licensees, Agreement State support and rulemakings, including Waste Confidence. This is just a short list of the actions we are prohibited from performing under Anti-deficiency Act restrictions. Let me stress, however, that all of our resident inspectors will remain on the job and any immediate safety or security matters will be handled with dispatch. We can -- and will without hesitation -- bring employees out of furlough to respond to an emergency. We must, in this regard, err on the side of safety and security. Finally, the shutdown will negatively impact our ability to be transparent. The NRC website will remain available to the public, but it will not be updated until we return fully to work. In addition, routine press releases, meeting notices, plant status and event reports, or other information will not be available. The backlog of normally reportable information will be posted to the website once we are again fully functioning. Updates on the NRC status and the status of upcoming meetings will however continue to be made here, on the NRC blog, and via Twitter. And, importantly, during the shutdown, we will continue to receive safety and security concerns via the web page and the hotlines listed here. The Inspector General’s Office will also be fully functional. Some people are confused about why the lapse of appropriations is affecting the NRC when we collect fees for 90 percent of our budget. The bottom line is this: the NRC is not funded directly by the fees we collect. Fees collected by the NRC must be deposited in the U.S. Treasury, and the Congress provides us an appropriation. We are mindful of the impact the shutdown will have on the public, our licensees, our staff and contractors and others who count on us. We are a proud agency with a serious, important mission and talented, dedicated people who make that mission a reality every day. The NRC staff deserves an enormous amount of credit for continuing to fulfill its normal responsibilities for the past week under very challenging circumstances. We hope this interruption is as brief as possible and we look forward to being back at our desks, hard at work, doing what we do best here at the NRC in service to the nation.

Comments

comment #157882 posted on 2013-10-10 14:52:46 by LillyMunster

Can someone at the NRC confirm if the resident inspectors and the skeleton crew in the offices are being paid or are they considered essential but working without pay as other govt. agencies are doing for critical employees?

comment #157895 posted on 2013-10-10 15:27:34 by Moderator in response to comment #157882

The resident inspectors and other employees who are currently on the job as 'exempt' workers will not be paid until the NRC receives an appropriation. Moderator

comment #159537 posted on 2013-10-14 17:04:30 by Buzz Davies Nuclear Quality Engineer , Retired

Virtually all of the Nuclear Power Plants have been licensed without inclusion of 10 CFR 50 Appendix B Nuclear Quality Programs. Since the NRC will readily tell you that safety is controlled by Items Relied On For Safety. I will tell you that a major duty of Quality is to independently audit all operating systems, including Safety. So without Quality the NRC has allowed the situation where there is no engineering management assurance that IROFS even work. Instead what typically exists is short term profit, feudalistic management at these Nuclear Plants which is fraught with failure and error response approach as controls. In 2011 the Nuclear News stated that 62 of 104 Nuclear Plants suffered unplanned emergency shutdowns. In 2012 the Society for Concerned Nuclear Engineers reported that 50% of our Nuclear Plants had significant problems. On 31 March 2013 the Arkansas Nuclear Power Plant experienced

loss of all electrical power and was venting 500 degree steam from the primary coolant loop of unit 2 for over 10 hours. Fukushima experienced meltdown after 20 hours in exactly the same manner . A radioactive plume from Arkansas would have contaminated the cornbelt and caused economic destruction to our national security!

comment #157865 posted on 2013-10-10 13:37:51 by CaptD in response to comment #157790

Anonymous Yes, I'm both reading and "listening"... My point is that reactor safety is far more important the Congressional gyms, so everyone (even you) should be calling for an end to the Gov't. shutdowns ASAP. Are you with me?

comment #157511 posted on 2013-10-09 15:13:49 by Fred Stender

Nothing to worry about, those driven for maximum profit Nuclear corporations are "self policing", no worries.

comment #157506 posted on 2013-10-09 14:44:38 by CaptD

If the Congressional gym is being kept open, while at the same time the Safety of the all the nations reactors is being left up to all the Utilities that operate them, this is nothing less that a National Security issue that the President of the USA needs to address NOW!

comment #157487 posted on 2013-10-09 13:50:14 by Hester, Thomas J

Dave: this might be a good time for you Areva boys to go back to Florida and restart Crystal River.

comment #158831 posted on 2013-10-12 18:43:19 by Buzz Davies Nuclear Quality Engineer , Retired

Shutting down the NRC is a blessing in disguise! Inspection has always been an after the fact action, which in the NRC's case only helps to identify what needs to be covered up first. The NRC has for decades serepticiously been illegally licensing all nuclear plants without including the 10 CFR 50 Appendix B Nuclear Quality Assurance Program requirements. Not only does this eliminate formal Quality Programs but more importantly it eliminates the mature engineering management systems necessary for feedback controls. In the case of nuclear chemical processing plants, they have been given carte blanche to repetitively release radioactive effluences into the environment. i.e. At Apollo PA over 800 lawsuits exist for radiation caused cancers to the surrounding population; At Rocky Flats CO. over 1500 documented cases of radiation caused illnesses and cancer deaths exist and 10,000 acres of adjacent land has had to be purchased by the NRC due to Plutonium contamination. And that plant is so uncontrolled it has been allowed to produce over 70,000 atomic bomb triggers for our 6,000 stockpiled bombs; At Erwin, TN that plant has had airborne releases of over 100 pounds of Highly Enriched (Bomb Grade 95+ %) Uranium Hexafluoride gas and over 500 documented cancer victims exist in Unicoi County TN and Madison County, NC . The Nuclear Power Plants are growing older and the knowledgible fabricators have long ago retired. Without mature engineering management systems the current operators are second generation

comment #157802 posted on 2013-10-10 09:02:46 by Angry Voter

No border patrol. No food inspectors. No nuclear inspectors. But they still spy on our email to see if we say anything bad about them. The government has demonstrated yet again that they never cared about security - it was all about power the whole time.

comment #157790 posted on 2013-10-10 08:25:45 by Anonymous in response to comment #157506

Have you even been reading these articles, or are you ignoring them on purpose? All of the plants are being held accountable to follow regulations during the shutdown, resident inspectors are still working, reporting pathways are still open, and emergency response resources can and will be activated if need be. Are you even listening?

comment #157737 posted on 2013-10-10 05:20:04 by Rod Adams (@Atomicrod)

Maybe shutting down the important functions of licensing new reactors, fixing the "waste confidence rule" and following the court order to complete the license review of the Yucca Mountain waste repository are on the list of the true goals of the people pushing the shutdown. [Some] in the fossil fuel business love the idea of throwing as many obstacles as possible in the process of developing more nuclear energy capacity. Atomic fission is only power source strong enough to displace hydrocarbon combustion from its vital role in our industrial society. Shifting as much of our energy consumption as possible to that inexhaustible source of emission-free power could push the fossil fuel suppliers and their friends in banking, transportation, media and government from their exalted positions in the established elite. Rod Adams Publisher, Atomic Insights Moderator Note: Some content removed to adhere to the comment guidelines.

comment #157811 posted on 2013-10-10 09:43:51 by in response to comment #157797

All workers in excepted status are working without pay just the same as many other agencies.

comment #157813 posted on 2013-10-10 09:57:46 by Rod Adams (@Atomicrod) in response to comment #157737

Thank you for pointing me to the comment guidelines while still publishing the majority of my comment. I will work harder in the

future to make sure that I do not stray from them. Rod Adams

comment #157589 posted on 2013-10-09 19:47:42 by Virginica Datcu in response to comment #157511

Fred Stender, oh we do worry! You are WRONG!!! I don't believe “self policing” intention of the corporations! That's the big lye. You either are uninformed with what's going on in the world or you try to sell us self assuring thoughts... Keep them for yourself, Fred Stender!

comment #157640 posted on 2013-10-09 22:30:12 by Douglas White

So this leaves me with several questions. If an nuclear event occurs while NRC is on Furlough does it really exist? Does this mean the reactors will be shut down because they have no regulatory body? The good news… and I would ask the NRC Chairman to share this with other NRC employees… Time to read the FOIA documents concerning Fukushima and Plumegate. Watch Hatrick Penry videos on youtube and understand you are part of the machine that is broken. http://www.nrc.gov/reading-rm/foia/japan-foia-info.html http://hatrickpenryunbound.com/?p=3683

comment #157797 posted on 2013-10-10 08:46:18 by Eric Grumling in response to comment #157506

Did you read the release? *all of our resident inspectors will remain on the job and any immediate safety or security matters will be handled with dispatch.* The actual feet on the ground inspectors are still there, still funded, still getting paid. The shutdown is only affecting new applications and funding for things like fire department emergency drills (which could (and IMHO should) be funded by the nuclear plant operators if there were reason to think they will be necessary during the shutdown).

comment #160222 posted on 2013-10-16 12:17:58 by Lowly resident of Georgia

As the Chairman and your cohort EDO, take a leadership position. OMB Circular A-11 provides guidance and legal precedence on what should be funded. As an independent agency what is so indepedent when you don't have your approporiations for critical needs funded over multiple years. Create a solution instead of cowering to your general counsel. The postal service is an independent agency and is still in operation. The social security administration is still in full operation. Not all government functions are funded with annual appropriations. Some operate under multi-year appropriations and others operate under indefinite appropriations provisions that do not require passage of annual appropriations legislation. Social security is a prominent example of a program that operates under an indefinite appropriation. In such cases, benefit checks continue to be honored by the treasury, because there is no lapse in the relevant appropriation. The last time I checked radiation does not take a vacation. Five half lives is millions of years. Wake up as leaders of your Agency and fund your so called excepted functions as multi year approporaitions to prevent such a calamity of your Agency. As a resident and taxpayer I am disappointed of the lack of imagination and leadership from this so called independent agency. I f the decay chain of uranium, plutonium, cesium, and iodine are improtant enough find a new career at a university. Signed resident and concerned citizen of Georgia.

NRC Shutdown: Day Two of Furloughs

posted on Fri, 11 Oct 2013 16:09:18 +0000

Mark Satorius
Executive Director for Operations

As you know, the NRC was able to continue to keep its doors open a bit longer than the rest of the federal government. But yesterday, we, too, shut down due to the lapse in appropriations. Furlough notices were sent to all employees. At this time, only about 300 of our 3900 staff members are reporting to duty. That number includes the resident inspectors, who continue to do their job at the nuclear power plants in your communities. It’s important to reiterate that while we continue to uphold our fundamental safety and security mission – and can bring workers back quickly in an emergency – there is important long-term work that just isn’t getting done. All public meetings are suspended while the NRC is shutdown. Those already postponed or cancelled include both Commission meetings scheduled for next week (Oct. 16 and Oct. 18). Also postponed are the Waste Confidence meetings originally scheduled for the weeks of Oct. 14th and Oct. 21st. No decision has yet been made about other Waste Confidence meetings. As soon as we are back to work, we’ll begin planning for when the postponed meetings will be held. Also postponed is the Atomic Safety and Licensing Board hearing originally scheduled to begin Oct. 16, in Houston, and the public meeting on performance at the Diablo Canyon nuclear power plant scheduled for Oct. 16 in San Luis Obispo, Calif. In addition, we’ve had to temporarily suspend action on all pending licensing or enforcement matters before the licensing boards or Commission, with the exception of those related to the Yucca Mountain licensing proceeding (as that work is funded by the Nuclear Waste Fund, not the general agency appropriation.) Those litigants have all been notified. During the shutdown, we will continue to receive safety and security concerns via the web page and the hotlines listed here. The Inspector General’s Office also continues to function. Unfortunately the NRC’s public website is not being updating during the shutdown. It is still accessible, though. Some key documents related to the shutdown include:

• the NRC’s shutdown plan, approved by the Office of Management and Budget;

• press releases on postponed meetings: and • a Regulatory Information Summary on our shutdown operations. While no one knows how long

the shutdown will last, the NRC staff is already making plans for a smooth, quick “restart” of the agency. While we know there will be some lag time between bringing all employees back and becoming fully functioning again, we want that lag to be as short as possible. We hope we are all back at work soon.

Comments

comment #160910 posted on 2013-10-18 10:20:44 by Fred Stender in response to comment #160227

> Whenever someone says "I just want...." it means that a huge part of reality is being ignored. Just saying.....

comment #159829 posted on 2013-10-15 10:13:16 by Moderator in response to comment #158333

> Construction continues and resident inspectors are there following the work. You can go here, if you questions on what the licensee is doing: http://www.southerncompany.com/

comment #158397 posted on 2013-10-11 17:14:39 by CaptD

> Salute to all Government employees that have had their family vacations and personal lives upset by the GOP, nobody is blaming you! Now you know how those outside the NRC feel when they believe that the NRC has let them down by siding with the nuclear industry!

comment #158333 posted on 2013-10-11 13:35:37 by Fred Stender

> Is the work on Vogtle stopped?

comment #159937 posted on 2013-10-15 16:27:13 by Green in response to comment #158397

> This is not the fault of the GOP. The President refused to negotiate on anything. The government shutdown is as much the fault of the President and the senate -- as it is the GOP.

comment #160349 posted on 2013-10-16 21:37:35 by TraceO in response to comment #159829

> residents --> resident inspectors

comment #160227 posted on 2013-10-16 13:02:40 by Anonymous in response to comment #159937

> Fault should not be the focus. The people should be the focus. Everyone has a point they want to make (Congress, Senate and The President). Obamacare (Affordable Healthcare) and the Debt Ceiling for example. The rate we are going everyone would need Obamacare or welfare. People are in jeopardy of losing rather than gaining some businesses are not working with those furloughed. Mortgage, car notes and other bills still are expected to be paid. Obama can't run for president again and already has made history (good or bad). Therefore, why the attacks on the executive office. Personally, I would rather Obamacare exists than welfare. Welfare recipients don't contribute anything it's free to them. Obamacare does have people bringing something to the table. If I am going to give someone a meal I rather them bring bread or water, rather than an empty stomach leaving all responsibility on me too fill it. I just want this mess over. Notice I said "mess". Listening to breaking news now- if we do reopen; we still have to see what happens January 15th.

comment #160277 posted on 2013-10-16 17:22:57 by JB in response to comment #159937

> Really!!!!! There is enough blame to spread around...what we have are professional politicians not leaders...we the people must send leaders to Washington...not puppets.

From the Chairman: Getting Back to Work

posted on Thu, 17 Oct 2013 16:04:16 +0000

Allison Macfarlane Chairman, U.S. Nuclear Regulatory Commission With the government shutdown over, at the NRC we are back in business and getting back up to speed with our work. We want to welcome back our thousands of employees who endured the furlough and thank those who kept the mission essential functions of the NRC operating during this period. There are many questions to be answered in the coming days, such as when will various meetings we had to postpone be rescheduled, and so on. We are working as rapidly as possible to get answers to those questions and encourage you to check our public meetings page for the latest information. We are lifting the suspension on adjudications. The Waste Confidence meetings seeking public input on this important topic resume their regular schedule the week of Oct. 28. A great deal of our important work has gone undone over the past week or so. We recognize it will take some time to get us back to normal – to catch up with the mail, to reschedule meetings, rebook travel and plow through the in-basket. While we all want to be back to normal quickly, we need to work through the backlog in a careful and deliberate manner. It will take us a few days to get services such as our website caught up. Thank you for your patience and it’s good to be back.

Comments

comment #160925 posted on 2013-10-18 11:19:48 by Moderator in response to comment #160698

> In addition to granting power plant licenses, the NRC processes about 1,000 licensing actions – such as amendments – and conducts hundreds of inspections at the nation's nuclear power plants each year. The NRC also oversees the nation's fuel cycle facilities. We administer and oversee about 2,900 materials licenses in 13 states, the District of Columbia, and U.S. territories, and conduct oversight of state programs in the other 37 states with a total of about 18,900 licenses. Not to mention rulemaking, security, and international activities – well, as you can see, we are indeed quite busy.

comment #160926 posted on 2013-10-18 11:20:27 by Moderator in response to comment #160614

> They were never "without the NRC." Our Resident Inspectors remained on the job throughout the furlough, providing daily oversight of nuclear plant operations.

comment #160914 posted on 2013-10-18 10:54:39 by Moderator in response to comment #160595

> The deal reached by Congress and signed by the President to end the partial federal government shutdown included back pay for furloughed employees.

comment #160725 posted on 2013-10-17 20:21:42 by Joffan (@Joffan7) in response to comment #160595

> Reportedly, yes: back-pay for all furloughed government workers. And no, it wasn't vacation.

comment #160614 posted on 2013-10-17 13:14:43 by Rich Andrews

> What NRC "work"? The real workers were those who actually operate and maintain our nuclear facilities. They did just fine without the NRC.

comment #160595 posted on 2013-10-17 12:22:33 by Fred Stender

> Will the furloughed employees get back pay, i.e. paid vacation for the furlough

comment #160698 posted on 2013-10-17 18:44:06 by Daniel

> They are granting a few licences every other 30 years. They can take their well deserved pay.

New dates for Illinois and California Waste Confidence public meetings

posted on Mon, 21 Oct 2013 20:33:46 +0000

Keith I. McConnell
Director, Waste Confidence Directorate
Office of Nuclear Material Safety and Safeguards

With the government shutdown now behind us, we've been working to get five important Waste Confidence meetings rescheduled. If you recall, meetings to talk about the proposed new Waste Confidence rule and draft generic environmental impact statement were planned in San Luis Obispo and Carlsbad, Calif., and Oak Brook, Ill., and scheduled Oct. 7, 9 and 24 respectively. With the shutdown we had to postpone these and two other meetings. We're pleased to say that most of the meetings are now rescheduled. The Oak Brook meeting is now set for Tuesday, Nov. 12. The one in Carlsbad will take place on Monday, Nov. 18, and the one in San Luis Obispo will be on Wednesday, Nov. 20. The starting times and locations for these three meetings are unchanged. Please see the Waste Confidence Directorate's Public Involvement webpage for meeting times, locations, and how to register to attend the meetings. The Waste Confidence Directorate is still working on rescheduling meetings originally scheduled for Oct. 15 in Perrysburg, Ohio, and Oct. 17 in Minnetonka, Minn. We expect to make an announcement about new dates for those meetings early next week.

Comments

Reducing Proliferation Risks AND Healing the Sick

posted on Wed, 23 Oct 2013 19:08:41 +0000

Steve Lynch
Project Manager
Research and Test Reactor Licensing Branch

It's a little known fact: One of the most useful radioisotopes in medicine comes mainly from highly enriched uranium (HEU), the very stuff that can be turned into a nuclear weapon. We're talking about technicium-99m, or Tc-99m—which has been called the world's most important medical isotope. It's used to diagnose a variety of illnesses in millions of procedures each year in the United States alone. Tc-99m is created from another radioisotope, molybdenum-99, which traditionally has been produced abroad from HEU sources. A supply shortage

that delayed patient treatments several years ago, coupled with the desire to reduce proliferation risks, prompted the world community to find better ways of securing the future supply of this isotope. In 2012, Congress passed the American Medical Isotope Production Act to support private efforts to develop medical radioisotope production facilities using other methods and begin phasing out the export of HEU for medical isotope production. The National Nuclear Security Administration, through its Global Threat Reduction Initiative, has been promoting domestic Mo-99 production using different technologies through formal cooperative agreements with four commercial partners. These partners and several other companies have said they are interested in producing Mo-99 in the U.S. They have proposed using several different technologies, ranging from non-power reactors to accelerator-driven, sub critical solution tanks. To support the transition to new technologies, the NRC is preparing to receive and review applications for construction permits and operating licenses for new facilities. In fact, we are now reviewing the first medical radioisotope production facility construction permit application, received earlier this year. But not all Mo-99 production facilities will need an NRC license. While reactors fall strictly under NRC regulation, accelerator technologies that do not use enriched uranium or plutonium would be regulated by the states. Companies, facilities and technicians involved in producing and administering Tc-99m to patients may also need to be licensed by either the NRC or an Agreement State. (There are 37 Agreement States, which have formal agreements with the NRC allowing them to regulate certain nuclear materials, including medical isotopes). For more information on the role of the NRC and other agencies in regulating the medical use of nuclear materials, visit the NRC webpage. Kara Mattioli also contributed to this post.

Comments

comment #163999 posted on 2013-10-26 16:53:38 by john bowers in response to comment #163202

> It has already been shown that tens of thousands of American babies have died in the womb as a result of Fukushima fallout. Bird populations in areas of California which received Chernobyl fallout had a population collapse after that prompt criticality explosion and meltdown. And you indicate even expectant mothers would have nothing to worry about. Your statement is insane. Reactor 3 and/or its SFP exploded. Those were fuel rods falling back out of that dirty brown mushroom cloud. Fragments and pellets were blown as far as 18 miles away. The censorship and coverrups of Fukushima speak the truth of the matter. The NP industry threatens all life on this planet.

comment #164786 posted on 2013-10-28 16:16:02 by Moderator in response to comment #163202

> To date, there is no evidence that radioactive material from Fukushima exists in the U.S. food supply at levels that would pose a public health concern. The Food and Drug Administration (FDA) monitors the safety of FDA-regulated food, including seafood. For information about FDA efforts to ensure the safety of the U.S. food supply, please see: http://www.fda.gov/newsevents/publichealthfocus/ucm247403.htm Attempts to link the very low levels of Fukushima-related contamination to U.S. deaths have been debunked in the media: http://blogs.scientificamerican.com/observations/2011/06/21/are-babies-dying-in-the-pacific-northwest-due-to-fukushima-a-look-at-the-numbers/ and http://blogs.scientificamerican.com/observations/2011/12/20/researchers-trumpet-another-flawed-fukushima-death-study/ Hydrogen gas from damaged fuel collected at the very upper levels of Units 1, 3 and 4 and later detonated – neither the reactors nor the spent fuel pools exploded. The contamination detected in the neighboring countryside was from windblown microscopic particles, not "fragments and pellets." Scott Burnell

comment #164787 posted on 2013-10-28 16:17:09 by Moderator

> The comments seem to have moved off from the topic of the post. Please feel free to post comments unrelated to this post on our Open Forum section. Moderator

comment #164941 posted on 2013-10-29 01:39:12 by hiddencamper

> Mo-99 can be produced without highly enriched uranium. Clinton power station is supposedly planning to do this (per their wikipedia page). They already produce Cobalt-60 in their reactor for medical purposes

comment #163201 posted on 2013-10-24 14:32:42 by Anonymous in response to comment #163167

> Not sure what percentage, but I believe it is considered HEU, so a good deal more enriched than what they use in power reactors.

comment #163202 posted on 2013-10-24 14:35:32 by Anonymous in response to comment #162949

> The answer to your question, "How many million people will die from Fukushima" is precisely 0. Not a single person will die as a result of exposure to or ingestion of radioactive byproducts released from the Fukushima plants

comment #162949 posted on 2013-10-24 01:01:55 by john bowers

That's nice. Tc-99m. What about the Fukushima technecium which is probably floating around in the air and lodged in all of our lungs? How many million people will die from Fukushima, which is an ongoing supercatastrophe. In any truthful, complete odds vs. stakes analysis, nuclear power is not worth it.

comment #163145 posted on 2013-10-24 10:12:39 by richard123456columbia

Not probably but is in air and food.

comment #163149 posted on 2013-10-24 10:27:31 by Baratta, Edmond

Good morning: I believe at one time (maybe still do) Mo was irradiated to produce Mo-99 (which decays to Tc-99m). This process produced a large amount of radioactive waste. Also, it was (I believe) separated chemically and didn't make for good generators. Currently some manufacturers make generators of up to fifteen(15) curies which can produce large quantities of Tc-99m, unlike the Mo neutron production. You may be aware of this. Ed Baratta Radiation Safety Officer U.S. Food and Drug Administration ORA/NER/WEAC Tel. 781-756-9742 Fax: 781-756-9757 edmond.baratta@fda.hhs.gov

comment #163167 posted on 2013-10-24 11:40:45 by Anders

"the very stuff that can be turned into a nuclear weapon" Oh really? Just how enriched is the Uranium used for Mo-99 production? Rather less than that used in bombs I would suspect... While new technologies are cool and all, this is basically wasting money on the paranoid assumption that there is a "proliferation risk" of any magnitude in exporting slightly more enriched uranium to that known empire of evildoers, Canada. The outcome will be a higher price for Tc99m diagnostics, and more patients that need them will not get it while the number of nuclear weapons made by Canada will suffer a sharp reduction from 0 to 0. The same madness that prohibits the US from making any real strides in recycling spent nuclear fuel, an area where it used to be world-leading.

comment #163259 posted on 2013-10-24 18:44:32 by john bowers in response to comment #162949

Photovoltaic panels are 75 cents a watt now, and that's with severe suppression against the technology.

comment #165194 posted on 2013-10-29 13:49:12 by john bowers in response to comment #163202

RE: Moderator comment, "The Food and Drug Administration (FDA) monitors the safety of FDA-regulated food, including seafood. For information about FDA efforts to ensure the safety of the U.S. food supply..." First off, the federal government apparently ordered censorship and a media blackout on Fukushima shortly after 3-11-13. It's word, and it, can't be trusted. Just look at President Obama's statements 'you can keep your own health insurance plan' and over half a million have had theirs cancelled. Censorship of just about any news about Fukushima would have to have been ordered from the top. You say now, the FDA says food is safe, assuming the FDA's word is honest. The FDA bans the import of apricot kernels, because people were using them to treat cancer. It then banned bitter almonds when people switched to these, even though there was less content. It finally required regular almonds all be pasteurized as there was still enough B-17 content to treat cancer. Therefore the FDA is a bunch of murderers preventing people from treating their cancer. The FDA also presided over the deaths of scores of thousands of people through, I believe it was, Viox, when it was warned there would be problems. It doesn't matter what the exact drug was, it was one of many likewise. If the ^&%$ fish were glowing the FDA would still claim they were safe to eat.

comment #165196 posted on 2013-10-29 13:49:40 by john bowers

3-11-11 that is

comment #165200 posted on 2013-10-29 13:56:02 by john bowers in response to comment #163259

Also, FOI records referenced on the few websites having covered the Fukushima global-impacting catastrophe show the NRC itself talking about reactor 2 having ejected its core. Gunderson provided analysis about detonations versus deflagations, showing evidence in the video indicating a prompt criticality. FOI records also indicated bulldozers were used to bury extremely radioactive materials which were ostensibly if not known to be fuel fragments, to reduce exposure enough to allow some ability to work around the site. Reactors are not supposed to be able to explode, but this apparently discounts prompt criticalities. Chernobyl blew up. Fukushima blew up. Experimental reactors out in the desert in the early days were blown up at the end of experiments. Finally, though not all inclusively, if it was just a hydrogen explosion, why the dirty brown mushroom cloud with masses of debris falling back out? When the other explosions which were hydrogen, did not have the dirty smoke? And why so much higher a mushroom cloud?

comment #165203 posted on 2013-10-29 14:00:48 by john bowers in response to comment #163259

http://enenews.com/japan-expert-second-explosion-more-like-a-bomb-at-fukushima-nuclear-fuel-flew-30-kilometers-away-pellets-collected-by-japan-military-should-have-evacuated-300-kilometer-zone-150-years-t

comment #165208 posted on 2013-10-29 14:13:29 by john bowers in response to comment #163259

http://enenews.com/nothing-like-this-has-ever-been-attempted-yale-professor-all-of-humanity-will-be-threatened-for-1000s-of-years-if-rods-in-unit-4-pool-touch-during-removal-process-tepco-not-clear But, it's damage control at the US NRC as usual. Take a break, go to the vending machine and have a chocolate bar made from TMI area pastures. That was an accident which had 'minimal impact', too.

Sandy's One-Year Anniversary Serves as A Reminder

posted on Mon, 28 Oct 2013 14:36:55 +0000

Neil Sheehan
Public Affairs Officer
Region I

Tomorrow marks the one-year anniversary of one of the worst coastal storms in U.S. history. Hurricane Sandy made landfall just north of Atlantic City and left billions of dollars in damages in its wake. A year later, impacted areas of New Jersey and New York are continuing efforts to recover from the pounding the storm delivered. [caption id="attachment_4724" align="alignright" width="300"]

The one-year anniversary of Hurricane Sandy serves as a reminder of the devastation the storm brought to neighborhoods along the Atlantic Coast.[/caption] The NRC focused on the safety of nuclear power plants in the storm's path as Sandy bore down on the region, dispatching additional inspectors to augment the resident inspectors at some of the potentially affected sites to provide for 24-hour coverage. In addition, the agency shifted to an elevated response mode that involved the activation of the Incident Response Centers in our Region I and II offices, and the Operations Center at our Headquarters office. Throughout the event, the NRC also worked closely with state, county and federal partners, including FEMA. As the storm struck, the plant closest to the eye of the hurricane, Oyster Creek in New Jersey, was shut down at the time but nonetheless had to cope with flooding conditions at its water intake structure and a temporary loss of off-site power. Three other reactors, meanwhile, either shut down or were knocked out of service by the storm's effects. At no time was the safety of these plants or others in the Northeast compromised, reflecting the high level of training for their operators, the hardened nature of the structures at the sites and preparations leading up to the storm's arrival. Still, there are always lessons to be learned from such events. For many nuclear power plants, the storm has led to a fresh evaluation of severe weather guidelines. These guidelines cover such areas as when a plant needs to begin powering down when wind speeds associated with a severe storm begin to impact a facility. As for the NRC, we continue to assess the ability of plants to withstand severe flooding as part of our post-Fukushima reviews. Each plant is required to complete a flooding hazard re-evaluation to confirm the appropriateness of the hazards assumed for the site and the ability to protect against them. Plant owners are required to use updated methods and information, with the results determining whether any additional regulatory actions are needed. More information on the NRC's post-Fukushima reviews is available on the agency's website. Thus far, 2013 has seen low levels of hurricane activity, but Sandy will stand as a powerful reminder of the need for vigilance when it comes to storm preparations.

Comments

Fort Calhoun: Heat-Up, But Not Start Up

posted on Tue, 29 Oct 2013 19:04:46 +0000

Lara Uselding
Public Affairs Officer
Region IV

Following a two-and-a-half year shutdown, Omaha Public Power District (OPPD) is ready to heat up Fort Calhoun's reactor coolant system to inspect for any leaks. Heat-up is not the same as restarting the plant. The plant has been shut down since April 2011 for a refueling outage. The outage was extended due to historic Missouri River flooding followed by an electrical fire and other restart complications. Fort Calhoun Station is heating up the reactor coolant system to ensure that the pipes carrying high pressure water or steam do not have leaks. Rather than heating up the reactor using the fission process, OPPD will use the reactor coolant pumps to heat up water and get steam flowing through the system. NRC inspectors are on site to observe licensee activities as well as perform independent inspections to ensure there are no leaks. In early October, OPPD submitted a license amendment request seeking NRC permission to use a different methodology to evaluate high-pressure pipe breaks. OPPD has to demonstrate that if a high pressure pipe ruptures, that it would not negatively impact nearby equipment. On Oct. 25, after reviewing public comments and additional information provided by the licensee, NRC approved this license amendment. OPPD did plant modifications and has performed calculations that show a potential pipe rupture will not affect nearby equipment. NRC

inspectors are independently verifying the licensee's analysis and modifications. In addition, the staff has finalized its review of OPPD's request to be exempt from the NRC's fatigue rule which sets work hour limits in support of plant heat-up activities. The NRC's fatigue rule puts limits on certain workers' weekly hours to protect against fatigue. For example, during a refueling outage, a worker is allowed to work up to 72 hours every week versus an average of 54 hours over six weeks. Before the NRC issued the exemption, the staff ensured that workers will have sufficient time to rest prior to working additional hours in support of the heat-up activities. In addition, the NRC is continuing independent review of the remaining restart checklist items. Next steps include preparations for the next public meeting whereby staff will update the public on NRC's oversight status. No decision about restart will be made at that meeting.

Comments

comment #165292 posted on 2013-10-29 17:28:51 by Rich Andrews

> As historic Missouri River flooding extended Fort Calhoun's outage, will an NRC-mandated flooding analysis be required to be completed before the plant is allowed to restart? As I understand the requirement, this flooding analysis must take into account not only unprecedented river flooding but in addition must assume failure of the upstream earthen dams. This in effect would threaten the plant with a tsunami-type event.

comment #165255 posted on 2013-10-29 16:01:40 by john bowers

> Just remember, if it gets screwed up, the nation's breadbasket will be ruined forever. And what was the word on the spent fuel pool? Did it make contact with the floodwaters?

comment #165706 posted on 2013-10-30 09:56:24 by Anonymous in response to comment #165255

> Your statements are vague and hyperbolic. What does "screwed up" mean? Even a catastrophe on the scale of Chernobyl would not cause the "nation's breadbasket" to be "ruined forever".

comment #165714 posted on 2013-10-30 10:07:47 by Moderator in response to comment #165292

> The NRC's recognizes the need to address the cascading dam failure flooding issue at nuclear power plants and it is currently being addressed by two agency organization activities: 1) the Japan lessons Learned Directorate (JLD) charged the NRC staff to address the Fukushima near-Term Task Force (NTTF) Recommendations that address flooding and ; 2) The Research arm of the NRC is looking at this issue under its Generic Issue-204 research entitled "Flooding of Nuclear Power Plant Sites Following Upstream Dam Failure." And 3) the 0350 increased oversight panel is conducting a flood analysis. Lara Uselding

comment #165716 posted on 2013-10-30 10:08:16 by Moderator in response to comment #165255

> No, the spent fuel pool did not make contact with floodwaters. Lara Uselding

comment #165720 posted on 2013-10-30 10:16:39 by Rich Andrews in response to comment #165714

> Thanks for the prompt response. Are any of the planned NRC actions slated to be completed as a requirement for restart of the Fort Calhoun Station? Why or why not?

comment #165726 posted on 2013-10-30 10:39:15 by Rich Andrews in response to comment #165706

> A Chernobyl or Fukishima disaster in the midwest US would be absolutely devastating. Vast areas would be rendered uninhabitable and additional areas would no longer be viable for agriculture. Even areas relatively unharmed would have the stigma of being close to the disaster area and products from those areas would not be purchased for human consumption. The focus must be on preventing such a disaster for the consequences are truly horrific.

comment #165840 posted on 2013-10-30 15:06:35 by Rich Andrews in response to comment #165716

> Although flood waters did not reach a level that would allow it to make direct contact with the spent fuel pool, the flood waters threatened plant electrical equipment that is located at a much lower elevation. The loss of that electrical equipment would result in the loss of the ability to cool the radioactive fuel not only in the spent fuel pool but also in the reactor itself.

comment #165856 posted on 2013-10-30 15:42:38 by Moderator in response to comment #165714

> Yes, the specially designed Fort Calhoun web site at: http://www.nrc.gov/info-finder/reactor/fcs/special-oversight.html lists the restart checklist items that must be completed prior to restart. Flooding actions are included in that checklist here: http://pbadupws.nrc.gov/docs/ML1326/ML13262A371.pdf See items 1a. and 2 with a detailed description within the document. Lara Uselding