## OPSMPEm Resource

**From:** Harrington, Holly
**Sent:** Tuesday, June 28, 2011 3:47 PM
**To:** OPSMPEm Resource
**Cc:** Leong, Edwin
**Subject:** NRC Public Blog April 2011 through May 2011
**Attachments:** blog-published-2011-06-08.pdf

This file contains records for all communications posted during the period 4/1/2011 through 5/31, 2011.

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# U.S. NRC Blog

Archive file prepared by NRC

### Top Managers to Lead Review Team

posted on Mon, 04 Apr 2011 14:21:24 +0000

As promised, the NRC has put together a team to look at our regulations, programs and processes in light of the unfolding nuclear emergency in Japan. The team will produce a public report in about three months, which will include recommendations for ways to improve NRC's regulatory system. The task force is led by Dr. Charles Miller, the head of the NRC office that oversees radiological materials and environmental management. He is joined by Daniel Dorman, deputy director of the office that oversees nuclear material safety; Jack Grobe, deputy director of the office that oversee nuclear reactor regulation; and Gary Holahan, deputy director of the office overseeing new reactors. Nathan Sanfilippo, a technical assistant for the Executive Director for Operations, and Amy Cubbage, a team leader in new reactors, round out the team. Together, they offer almost 150 years of experience at the NRC. The team is tasked with conducting a "near-term" review while also identifying topics to be included in a longer-term review. The near term will look closely at U.S. nuclear reactors, including their spent fuel pools, station "blackout" scenarios, events that could lead to a long loss of cooling and emergency preparedness. The task force expects to offer recommendations for Commission consideration on whether we should require immediate enhancements at U.S. reactors. Important dates: On May 12 and June 16 the task force plans to brief the Commission in public meetings on the status of the review, and to offer final recommendations in a public Commission meeting on July 19. We'll let you know more as we get closer to those dates. The task force charter is available online. Just enter ML11089A045 under the "Simple Search" tab.  Eliot Brenner
*Public Affairs Director*

**Comments**

comment #652 posted on 2011-04-06 07:31:03 by Aladár Stolmár

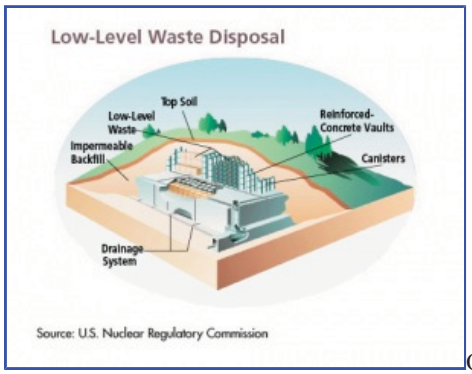
As I wrote in the comment to US NRC http://pbadupws.nrc.gov/docs/ML1033/ML103340250.pdf : „It is a much overdue duty of NRC and IAEA to evaluate the evidence provided by the TMI-2 accident, Chernobyl-4 accident, Paks-2 incident, and related experiments. Evaluating this evidence, one can see that the ignition of the zirconium fire in the steam occurs at a local temperature of the fuel cladding of around 1000-1200'C, [[and that a self-feeding with steam due to the precipitation of eroded fuel pellets and zirconia reaction product from the hydrogen stream into the water pool, causes intense evaporation.]] There are insignificant differences in the progression of the firestorms that occurred in the TMI-2 reactor severe accident, Paks washing vessel incident, and Chernobyl-4 reactor accident; the later defined only by the amount of zirconium available for the reaction. At the mean time, there are significant similarities in the processes leading to the ignition of the firestorm. In all three of the compared cases, it took several hours of ill-fated actions or in-actions of the operators to cause the ignition condition. Also, there are similarities in the end result of the firestorm; namely, that the extent of the fuel damage is much less than it was predicted from any other severe fuel damage causing scenarios, introduced for explanations. Therefore the fraction of released fission products is significantly less than was anticipated from the fuel melting or a so called "steam explosion" scenario. Also, the fiery steam-zirconium reaction results in a much higher than anticipated (from any other scenarios) rate of Hydrogen production, which in turn requires a review of containment designs." I hope the gentlemen will recognize the same process in the Fukushima Daiichi 1-3 reactors as the leading, key process. I hope we will have a thorough investigation of the fiery steam-zirconium reaction and there will be issued a call for shutting down the 11 still operating Chernobyl type (RBMK) reactors in Russia.

comment #644 posted on 2011-04-04 20:11:31 by duxx

SBO is very important. It should not be the exclusive focus. IMHO the emphasis should be on Common Mode failure,which I believe to be the most worrisome aspect of the Fukushima troubles. Will there be a review of SAR spent fuel common assumptions?

### Low-Level Radioactive Waste – A Definition Based on What It Is Not

posted on Tue, 05 Apr 2011 17:24:17 +0000




One of my co-workers was asked the inevitable question of "What do you do?" at a recent party. Her response, "I regulate the disposal of low-level radioactive waste for the Nuclear Regulatory Commission," raised some eyebrows. The reaction was not because anyone found her line of work questionable. Instead, it was a result of not knowing what low-level waste is, or how it is generated. My co-worker quickly jumped in to explain that while the term low-level waste may sound self-explanatory, it is not that clear, technically-speaking. Low-level waste is a somewhat generic term that captures everything that does not fit into other waste type definitions. So, to understand what low-level waste is, you first have to understand what it is not. It is not mill tailings, which are a byproduct of uranium milling and contain several naturally-occurring radioactive elements as well as heavy metals. It is not transuranic waste, which has its own definition based on chemistry. Finally, it is not high-level waste, which is a result of the reactions in a nuclear reactor or reprocessing fuel that has been in a reactor. Basically, low-level waste is everything else. It is created through the operation of nuclear plants, the conversion, enrichment and manufacturing of fuel, the use of radioactive isotopes in hospitals or industry, and the decommissioning of shut-down plants. It can consist of clothing, wiping rags, mops, filters, reactor water treatment residues, equipment and tools, luminous dials, medical tubes, swabs, injection needles, syringes, and laboratory animal carcasses and tissues. What may surprise people is that the radioactivity of low-level waste can span a wide range depending upon the types of waste involved. In other words, while most low-level waste is lower in radioactivity than high-level waste, this is not always true. You need to keep in mind that there are many different types of material with a large range of radioactivity that could be called low-level waste.
*George Deegan*
*Senior Program Analyst (Nuclear Materials/Waste Management)*

**Comments**

comment #647 posted on 2011-04-05 14:00:45 by Rod Grebb

> Correct... classification of radioactive waste in the US is not according to the level of activity, as with the rest of the world, but rather from the source of the waste.

comment #650 posted on 2011-04-06 04:19:41 by sto credits

> Low-Level Radioactive Waste? this is what that means, I do not understand?

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### From Japan: A First Person Account

posted on Thu, 07 Apr 2011 15:09:45 +0000

Within about 16 hours after the massive earthquake and tsunami struck the Fukushima Dai'ichi nuclear power complex on the northeastern coast of Japan, two NRC reactor experts were throwing a few changes of clothing into suitcases and racing for the airport. They hit the ground in Tokyo with a single purpose – provide key technical support and advice to the U.S. Embassy. Just over two days later, the vanguard of what has become a revolving team of more than 30 staff were on their way, including Chuck Casto, deputy regional administrator out of our Region II office. They were part of a U.S. Agency for International Development (USAID) assistance mission launched in response to a request for help from the Japanese government. Now, over three weeks into this terrible tragedy for the Japanese people, the team of NRC experts is working closely with our counterparts in the Japanese government, as well as the power plant operator – TEPCO – other U.S. government agencies, and even the U.S. private sector. We have received tremendous support from the embassy and USAID staff as we've taken over a chunk of the embassy's space as a base of operations and demand all manner of IT support, but we never seem to spend long there. Every day we are off in small groups to various locations around Tokyo to meet with our Japanese counterparts, gathering information on the most current understanding of conditions at the plant and the actions being taken by the Japanese. When we get back to the embassy, we get on the phone to experts back in the states and obtain their best consensus view of the actions needed to stabilize the plants. Then we are off around Tokyo again to share and discuss our advice and recommendations. In addition to this, we are supporting project teams established by the Japanese government to develop long-term plans for clean-up and decommissioning of the site after it is stabilized. In this latter effort, we are receiving tremendous support from colleagues in the Department of Energy and the national labs. When we are at the embassy, we are also working closely with the embassy staff, USAID, and other federal agencies to respond to the specific requests for assistance from the Japanese government. For example, we have supported them with provision of a back-up supply of freshwater and pumping capacity to ensure that stable and sustainable cooling will be available at the plant. Through the generosity of the U.S. nuclear industry, we have been able to supply thousands of sets of protective clothing, radiation dosimeters and radiation monitoring equipment that will be important to ensuring protection of the workers at the site. What has impressed all of us on the NRC team is the

commitment of our Japanese counterparts to bring this very serious situation under control. Japan has long used nuclear power as a mainstay of its electrical generation system, so they have lots of experience. This is a near overwhelming event that would challenge any nation, and I have been impressed at the effort being exerted by those most affected by this tragedy. The nuclear community around the world is, in relative terms, small, and our thoughts are with the Japanese people and, in particular, with the workers at the site. Many of them have already suffered grievous loss of family and property from the earthquake and tsunami. They labor on in difficult conditions. The world has rallied to their aid, contributing protective clothing and equipment. Our team in Japan continues to work with the Japanese government to ensure they have the resources to support and protect these workers. These are the true heroes of Fukushima Dai'ichi and they deserve our utmost respect, our fervent prayers and our continued support. Thanks to Chuck Casto who contributed to this post.
*Dan Dorman*
*NRC Japan Team Member*

**Comments**

comment #663 posted on 2011-04-08 21:20:44 by T M

> I am a Japanese in Tokyo. I am here to ask for just one thing. But before that, I would like to thank you very much for everything you did and you are doing for us. Now, could you please support not the current Japanese government but the people of Japan and those in the future, from now on? We would greatly appreciate and never forget your support! Thank you.

comment #658 posted on 2011-04-08 11:57:22 by Paul

> A truly great article! The plant workers in Japan are showing enormous courage and heroism in the wake of the terrible multifaceted disasters they have faced. This comments main focus and intension is to bring to light the fact that Facebook is considering this blog as spam. In my attempt to show this article to my Facebook circle of friends I was met with a spamming restriction and was unable to post my thoughts. My plan is to paste the article piece by piece into my comments on Facebook and to utilize my Twitter account to share this with the world. This intolerance to information demonstrates an obvious disconnect from society to the advantages of the use of nuclear materials to all humankind. I'm sure it's just wacko sensationalists marking all things containing the term "radiation" as spam. These bafoons are endangering others by blocking the flow of free information provided by "real" sources which is essential in this day and age.

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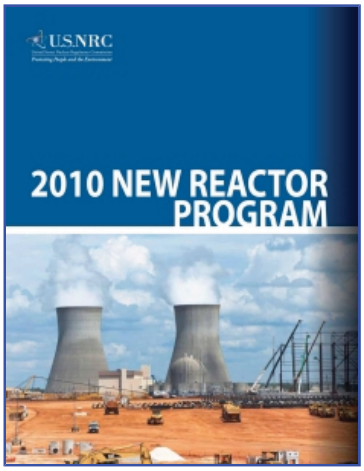
## New Reactor Program Annual Review Unveiled

posted on Mon, 11 Apr 2011 17:30:06 +0000




Did you know that by the end of 2010, the NRC had received 18 combined operating license applications to build and operate 28 new reactors? Or that the NRC has issued design certifications for four reactor designs that can be referenced in an application for a nuclear power plant – three from Westinghouse and one from General Electric-Hitachi? And did you know that NRC inspectors began overseeing construction activities at Georgia's Vogtle nuclear power plant in 2010 or that the NRC conducts oversight of manufacturers and suppliers of safety-related components to ensure they comply with quality assurance and defect reporting requirements? The answers to these questions and much more can be found in the first-ever annual review for the NRC's Office of New Reactors (NRO). The review allows you to keep up with what the agency's doing with regard to new reactors. Available in print form and online on the agency's public web site at http://www.nrc.gov/reading-rm/doc-collections/nuregs/brochures/br0476, the annual review is an easy-to-read and informative 40-page publication. The review includes sections on the office's three main areas of focus, new reactor licensing, construction oversight and the agency's Advanced Reactor Program. In addition, the review features an "International Cooperation" section, as well as an "Overview" summary and "A Look Ahead" write-up. It concludes with "At a Glance," an organizational summary of divisions within the office, their branches and responsibilities. The publication is complete with photos of NRO employees at work, illustrations of state-of-the-art technology, charts and other graphics. Requests for print copies of the review can be sent to: opa.resource@nrc.gov .

*Bob Jasinski*
*Senior New Reactors Communications Specialist*

**Comments**

comment #720 posted on 2011-04-15 18:37:39 by Linda

> For me its a cause and affect terminology, getting more licenses to build these reactors is one thing, but what will NRO do to contain them if they are built that won't cause some adverse effect to surrounding communities.

comment #683 posted on 2011-04-12 22:55:42 by Mike Coursey

> Are there any additional combined operating licenses that NRO is expected to receive in 2011? How long is the process for the granting of the combined operating license and when would it be likely that the first licenses would be granted of those that have been

submitted if they are approved?

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### Coming Soon -- A Better NRC Website

posted on Thu, 14 Apr 2011 14:10:29 +0000


I'm happy to report the NRC is about to unveil the most significant update to our Website in 10 years. NRC.gov will switch to its new design and functionality on midnight this Friday. We'll troubleshoot over the weekend and make the formal announcement of the new and improved site on Monday. You can get a sneak peak now, though, with this video or this video. The redesigned site has better navigation, content and accessibility. Our goal is to make it easier and quicker for users to find the information they want. We consider this redesign an important part of our ongoing support for the goal of openness, transparency and public outreach. Many of the upgrades and changes reflect public input that we got through online surveys, interviews and focus groups. Some important changes or additions: • Reporting a safety concern is prominently located on the home page; • Rotating slides on the home page highlight major areas of interest; • A new interactive calendar allows quick access to the latest NRC public meetings; • A new "Spotlight" replaces the Key Topics on the home page, and now is available on each page of the site; and • Consistent navigation in the header and footer areas aids users in moving through the site. Please visit the improved NRC.gov and then let us know with your comments here what you think.
*Darren Ash*
*Chief Information Officer*

**Comments**

comment #732 posted on 2011-04-18 00:43:22 by Lilly King

I just saw the sneak peek, and I think it is a step in the right direction. I like the new site, I hope it will be easier to navigate as much as this one.

comment #881 posted on 2011-05-04 12:28:51 by Moderator

The NRC Agreement State directory maintained by the Oak Ridge National Lab has been restored and can be accessed at: http://nrc-stp.ornl.gov/rulemaking.html . We apologize for the inconvenience.

comment #696 posted on 2011-04-14 17:23:00 by Kelly

Will you have redirects in place? I have multiple links to subpages on your site. Thanks.

comment #706 posted on 2011-04-15 10:41:06 by Moderator in response to comment #696

We have not moved any content around, so links/bookmarks should continue to work.

comment #736 posted on 2011-04-18 06:28:14 by Ken Pike

Your PWR description is still in error as before the wesite upgrade, perhaps you will fix it now. " The resulting water is pumped out of the condenser with a series of pumps, reheated and pumped back to the reactor vessel. " The water is pumped back to the steam generators not to the reactor vessel. This apparently has been cut and pasted from the BWR description incorrectly. Ken Pike BSNE

comment #738 posted on 2011-04-18 09:15:10 by Ray Wright

Nice so far. I like the new layout.

comment #739 posted on 2011-04-18 11:52:25 by Emily

Please slow down the speed of the pictures on the main page. There is not enough time to figure out what each one references before it changes. Also, if you are trying to look at other things on the page, the moving pictures are distracting.

comment #774 posted on 2011-04-21 13:53:58 by Moderator in response to comment #736

Thank you. This verbiage has been changed.

comment #748 posted on 2011-04-19 02:24:00 by Alex

Love the new website!

comment #749 posted on 2011-04-19 12:39:09 by Jack Tway in response to comment #706

All of my links to various NRC pages that I had saved in my favorites are not working. Where is the access to the SSDR for state rad. people?

comment #762 posted on 2011-04-20 16:35:11 by Moderator in response to comment #756

Agreement States information is here: http://www.nrc.gov/about-nrc/state-tribal/agreement-states.html . Many of the links on this page are hosted by a non-NRC server, which is temporarily down for reasons unrelated to our redesign. We hope it will be restored soon. For help in the interim, contact your NRC state liaison person.

comment #751 posted on 2011-04-19 16:03:40 by James Jarvis

Despite the moderator comment of April 15, 2011 (at 10:41 am), links appear to be broken on the state and tribal programs website area: http://www.nrc.gov/about-nrc/state-tribal/agreement-states.html THE FOLLOWING APPEAR BROKEN: http://nrc-stp.ornl.gov/rulemaking.html http://nrc-stp.ornl.gov/procedures.html http://nrc-stp.ornl.gov/asdirectory.html http://nrc-stp.ornl.gov/ssdr.html http://nrc-stp.ornl.gov/asletters/ Thanks.

comment #759 posted on 2011-04-20 11:55:17 by Moderator in response to comment #696

Jack -- We'll contact you directly. The link to the registry is currently down due to server problems unrelated to the redesign.

comment #763 posted on 2011-04-20 16:37:08 by Moderator in response to comment #757

The links listed above, which have nrc-stp.ornl.gov as part of the address, are directed to a non-NRC server that is currently down for reasons unrelated to our redesign. We hope it will be restored soon. In the meantime, for assistance, please contact your NRC state liaison individual.

comment #758 posted on 2011-04-20 11:54:24 by Moderator in response to comment #739

Thanks for the feedback. We'll look at the timing.

comment #756 posted on 2011-04-20 11:48:12 by Karen Flanigan

It would be nice if the old links took you to the new location, at least for a few weeks. I can't find anything I use. Where is the information for Agreement States? How can find the information on training courses?

comment #757 posted on 2011-04-20 11:54:07 by Moderator in response to comment #751

Thank you for the heads up. We'll get the links fixed.

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### Medical Use Harnesses Radioactive Material for Good

posted on Wed, 20 Apr 2011 15:53:30 +0000

The magic pill that cures cancer has not been invented yet. However, a radioactive “pill” is already in use by physicians to destroy certain cancers from the inside out. Many people fear radiation because it can cause damage to living cells, but modern medicine has learned to harness that characteristic for good use. If the radiation can be focused on the cancer cells, then the healthy cells can be spared. There’s a device used by oncology departments across the country called a high dose-rate remote (HDR) afterloader. If the cancer meets specific criteria, like certain breast tumors, it may be a candidate to receive the HDR treatment. The device looks like a slimmer, sleeker version of R2D2 of Star Wars fame. Except instead of holding holograms from Princess Leia inside, it safely stores a small radioactive source with shielding around it. On the day of the procedure, multiple tiny tubes connected to the HDR device, are inserted into the breast tissue where

the tumor is located. The physicist programs the HDR device to automatically crank its source from the shielded position inside the HDR device, through the connecting tubes, and finally settling at a precise position inside the tumor. For the few seconds or minutes that it is there, the source irradiates the tumor tissue directly surrounding it, sparing most of the healthy breast tissue that is further away. When its job is complete, the source retracts into the HDR device, where its shield keeps radiation inside, and it is safe to re-enter the treatment room. The NRC inspector discusses the procedure with the oncology staff. They talk about interlocks and emergency procedures. While malfunctions are rare, the staff is always ready to respond if the source were to be stuck outside the HDR device or fails to retract when required. The inspector verifies that the physicist uses a radiation meter to check that the source returned to its proper place inside the HDR device. Even though the goal of the treatment is to irradiate the tumor with a large amount of radiation, this must be balanced with the need to reduce the radiation that all the other tissues in the body receive. After treatment, the physicist demonstrates to the NRC inspector how the amount of radiation prescribed by the physician matches the amount of radiation actually deposited in the tumor during treatment. This is only one example of how radioactive materials are used in medicine. There are many others uses in industrial, commercial and academic applications that the NRC inspects to ensure the safety and security of workers and the public.
*Jason Razo*
*Region IV*

**Comments**

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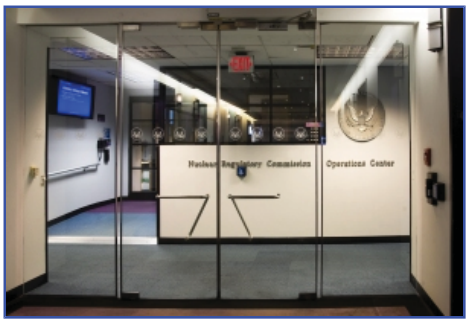
### The NRC: We're Ready to Respond

posted on Fri, 22 Apr 2011 14:12:44 +0000



In the wake of recent events in Japan, we received a lot of questions about how we plan for and would respond to emergencies involving licensed materials and facilities in the U.S. People wanted to know: What happens if there's an emergency? What would the NRC do? What should I do? Every day at the NRC, there are teams of people working to address these very questions. Our emergency preparedness and incident response programs ensure that the NRC and licensees are prepared to respond in the unlikely event of an emergency involving NRC-licensed facilities or materials. We maintain equipment, policies, and procedures for response activities and we regularly test, evaluate, and update them. We have trained personnel who continuously monitor licensee activities to make sure they are in compliance with regulations. We also have specially trained NRC responders who are on-call at all times to be able to respond quickly should an incident occur. We require licensees to have plans in place to respond to incidents, protect against radiological releases, and reduce the impact of incidents. Licensees are required to review these plans on a regular basis. Plans are also tested through regularly scheduled comprehensive exercises. In the event of an emergency at a licensed facility, the NRC would independently assess the licensee's response. If necessary, the NRC has the authority to, and would, order actions to mitigate the potential release of radiation. The NRC's role with licensees is very clear and the incident response program ensures rapid actions by licensees and the NRC in order for the agency to make needed assessments. Under the National Response Framework, the NRC coordinates the federal technical response to an incident that involves one of our licensees. We work closely with the Department of Homeland Security to coordinate response efforts and to understand when the response would shift from being coordinated by the NRC to being coordinated by DHS. We have worked out the details of this in several tabletop exercises. We also work with the Federal Emergency Management Agency (FEMA) and state and local governments to support their needs in planning and preparing to respond to incidents. In response to questions about NRC's incident response program, we updated the Incident Response Backgrounder. In it you'll find more information about how the NRC responds to emergencies involving licensed materials and facilities. I will be using this blog to address your questions and concerns about emergency preparedness and incident response, so please let me know what you'd like to hear about.
*Sara Mroz*
*Emergency Preparedness Specialist*

**Comments**

comment #850 posted on 2011-04-29 20:59:10 by lee Mcleod in response to comment #828

> would also like to know how the NRC ever approved any plants when there was no plan for a long power disruption or being able to shut down plants if operators were prevented from getting to work. There are just too many things that can happen. And if power is disrupted to a nuclear plant our whole country will be ruined because the NRC failed to prepare for something that any rational person would believe was a definite possibility. If someone has made a petition that will fix this mess then I would like it put into effect as well. There are just too many things that can happen that will prevent the power from getting too these plants or workers from reporting. How anyone could even license one plant when they can never be shut down or cut from outside power is beyond me.

comment #913 posted on 2011-05-11 02:08:06 by Thomas Levi in response to comment #847

> Great post Amy and the rest of you guys. I also find it incredible that the NRC is so short sighted that they cannot see that there is a danger that one of these plants will be cut from the electric grid and it may not be possible to get fuel resupplied to the generators. Then it's bye, bye good ole USA. It's crazy that regular people know about this while the "experts" at the NRC sit around and twiddle their thumbs. I've read the full text of petition PRM-50-96 that the Lisa advocates above and I also demand that it be posted for comment and implemented immediately. What's wrong with the NRC that we even have to bring this up. This should never have been an issue to begin with. If you can't totally shut these monsters down they never should have been built, period. But to cut the

NRC some slack I see that on 5-9-2011 they are requesting a cyber security plan implementation schedule from all their plants. This is a step in the right direction the SUX-Net cyber attack on Iran shows that nuclear plants are highly vulnerable to this type of attack. All critical systems should not be connected to the internet at all, however, the architects of sux-net got around this as well. But again this is still a little short sighted, one of the most vulnerable targets to cyber attack is the power grid itself and the NRC has no control over the various entities that control the commercial grid. In light of this the NRC must prepare for the definite possibility that the power grid will suffer cyber attack and be down for months. And again PRM-50-96 addresses this issue when it outlines strategies for solar flare damage to the power grid. Get on this now NRC! We are not as stupid as you think we are, Japan has nothing to do with an earthquake the plant survived that just fine, the thing only self destructed when it lost power for a few hours.

comment #911 posted on 2011-05-09 16:07:46 by Amy Still in response to comment #847

The recent events in Japan has made everyone aware of the issues with extended power outages at Nuclear Power plants except the NRC? If the NRC currently has no plans in place for extended outages at US Nuclear power plants it needs to get one fast. With Solar Maximus (extreme solar flares/space weather on the 11 yr solar cycle) set for 2012/2013 as identified by NASA, this is serious issue affecting not only people, but every species of wildlife in North America. I feel this would be a timely and appropriate issue for the NRC to address. We need solar and wind back-ups at every plant this year and all equipment needs to be protected in EMP Faraday cages.

comment #918 posted on 2011-05-11 20:35:35 by Thomas Levi in response to comment #915

Ugh, I haven't had time to read the report that the moderator provided, but I did notice that it was published in 2005. On July 24, 2006 in a speech by Jeffery Merrifield, Commissioner of the NRC, at the American Nuclear Society Executive Conference on Grid Reliability, Stability and Off-Site Power, Mr. Merrifield, then head of the NRC said, "A big part of our risk-informed regulatory strategy depends on plants having access to reliable offsite power. We assume that there will be very few times when a plant will be subjected to a total loss of offsite power, and when such condition exists it will be for a relatively short period of time (hours or days rather than weeks). Our strategy of allowing more on-line maintenance to be performed on certain important safety equipment such as the emergency diesel generators makes sense as long as the risk of a plant trip remains very low during the period of time that equipment is out of service. This philosophy relies on the fact that a total loss of offsite power is a rare occurrence that will be corrected in a short period of time." As you can see this quote was made after the report the moderator sites was released showing that the NRC still believed that the loss of off-site power for an extended period was something that the NRC did not believe could happen. One of the key lines from this quote was, "This philosophy relies on the fact that a total loss of offsite power is a rare occurrence that will be corrected in a short period of time." think about this , it was the head of the NRC saying this. There are several ways that power can be cut for months or years. I will go into them if you wish? Just look up solar flare, emp attack or cyber attack on the internet. I have been told that the plant owners don't have to prepare for attack by a foreign power, but solar flare is a natural occurrence and thus should be prepared for, thankfully the remedy for solar flare will protect against the other two as well. Now, in the event of a power outage lasting more than a month, possibly years, there will be massive causalities, this is unavoidable should this situation come to pass. But just like with any other natural disaster the people will eventually come back and they may be a little smarter than before. However, if the NRC grossly ignores its duty, as it has been doing in this case for years, and does nothing to harden plants against long term grid disruption the US will be destroyed FOREVER, any people who survive will not be able to live on the land or drink the water! In the 2003 black out 9 plants were affected, in a solar flare event almost all of them will be affected. And it will be much worse than Japan because power will not be restored and the spent fuel pools of these plants will burn. Instead of providing you with a 88 page document to read like the moderator, I'll just tell you what happened in the 2003 black out. All emergency systems worked as designed and it appears that no plants were close to a meltdown. However, the black out only lasted 2 days, most plants can stand a 7 day blackout and if emergency generators are working they can last as long as fuel is constantly resupplied. The danger with a large scale disruption is that it will be chaos and refineries will be off line as well, so when the 7 days of fuel are gone you had better be running away from all nuclear power plants as long as this issue is not addressed. I am heartened to see that the NRC has posted the petition PRM-50-96 for public comment. Go to the link that the moderator has so helpfully provided and post a positive comment on this petition if this situation concerns you, also get as many people as you can to comment

comment #916 posted on 2011-05-11 15:49:13 by Moderator in response to comment #915

On August 14, 2003, a widespread loss of the electrical power grid in the Northeast part of the U.S. resulted in loss of offsite power at nine nuclear power plants. As a result, the NRC initiated a comprehensive program to review grid stability and offsite power issues as they relate to nuclear power plants. The resulting report is available here: http://pbadupws.nrc.gov/docs/ML0602/ML060200510.pdf .

comment #915 posted on 2011-05-11 10:00:19 by ugh

I know nothing about nuclear power but after reading this it's apparent that a protracted outage of the grid means doom for existing nuclear plants. Tell me, why didn't any of this happen with the major blackout in 2003? was there enough diesel fuel to keep the generators running? How close did any one nuclear plant come to having the generators go down?

comment #914 posted on 2011-05-11 08:58:14 by Moderator in response to comment #850

The Petition for Rulemaking PRM-50-96 was posted in the Federal Register on May 6, 2011 and public comments are being sought. The petition requests that the NRC amend its regulations regarding the domestic licensing of special nuclear material to require production and utilization facilities licensed by the NRC to assure long-term cooling and unattended water makeup of spent fuel

pools. The full petition and information on how to comment is available here: http://www.gpo.gov/fdsys/pkg/FR-2011-05-06/html/2011-11112.htm

comment #944 posted on 2011-05-17 11:09:48 by Moderator in response to comment #943

We'll continue to keep the public informed about the status of the petition, which deals specifically with the topic of solar flares and the electrical grid. In the meantime, everyone is free to post comments on any topic through the Open Forum section of the blog.

comment #943 posted on 2011-05-17 02:49:57 by Thomas Levi in response to comment #936

Moderator, Does the NRC consider solar flare damage to the electric grid to be a natural phenomenon that they should be concerned with? I would like a straight yes or no answer to this question, not a link to some report, but feel free to add one if you have it in addition to your yes or no answer. And I also see that post are only available to for comment for 30 days. Will another post be made that addresses the issue of long term gird damage (months or years) or will we have to highjack another topic to get answers on this? Thanks for the responses you have provided so far.

comment #936 posted on 2011-05-14 12:36:03 by Amy Still

Comments from the NRC Station Blackout Meeting, April 28th, 2011: http://www.nrc.gov/reading-rm/doc-collections/commission/tr/2011/20110428a.pdf CHAIRMAN JACZKO: Those alternate ACs are not seismical qualified. MR. WILSON: That's correct, they're not. MR. HILAND: Right, that's correct. CHAIRMAN JACZKO: So they're not intended to necessarily survive -- MR. HILAND: That's correct. CHAIRMAN JACZKO: -- some of those type of events. MR. HILAND: Right. CHAIRMAN JACZKO:...but in the event that there is a station blackout, that's externally driven, I'm not convinced that, in that situation, four hours is a reasonable time to restore off-site power. MR. WILSON: We do have, we do have some data that we've done and that data will be passed on to the, to the look team. And I was not aware of a generic letter. We were looking at a lot of data that we had received, both from FERC and NERC, and some of the NUREG studies, and looking to see whether or not we had to go after rulemaking and -- CHAIRMAN JACZKO: Okay. MR. WILSON: -- enhance the station blackout rule itself. CHAIRMAN JACZKO: So that is, that is effectively ongoing at this point, although not at a, maybe not gotten to a -- MR. WILSON: Yes, we're still, we're still accumulating data. CHAIRMAN JACZKO:...And I think, hinting from Commissioner Apostolakis, we don't necessarily look beyond 24 hours for this kind of situation, into the longer, longer time frame. MR. HARRISON:...What that will mean is if you're into an extended outage after an earthquake or whatever, you're going to have to provide fuel to the diesels, and in that situation it's determined that, within a day, you can get those supplies there. Or, within eight hours, you'll be able to get that fuel supply to the plant and be able to provide it. So, that's an inherent assumption, I would say, that's underneath the PRA: that those capabilities will be there. CHAIRMAN JACZKO: As we go forward, I mean, and again, as we get more information and the task force is looking at this kind of things, I mean, that obviously would probably be relevant data inputs to see if some of those assumptions are no longer unnecessarily valid as we go forward.

comment #926 posted on 2011-05-12 15:41:13 by Trent Sikes in response to comment #850

Moderator, Could you please explain the rule making process to us? If we comment on this petition what will be the determining factor on whether it is adopted or not? And if it is adopted what will happen then? If you would briefly describe this process I would appreciate it. Thanks

comment #927 posted on 2011-05-12 15:56:07 by Moderator

When the NRC decides that public comment would help determine a path forward for a petition for rulemaking, we invite public comment and publish a notice in the Federal Register for a 75-day public comment period. The NRC staff will evaluate the petition for rulemaking and any comments we receive, and will either consider the petition for rulemaking in the NRC’s rulemaking process or deny the petition for rulemaking. If a petition for rulemaking is denied, the NRC publishes a notice of denial in the Federal Register. This notice of denial will address any public comments received and the NRC's reason for denying the petition for rulemaking. In the instances that the NRC addresses the petition for rulemaking through the rulemaking process, the NRC will publish a document in the proposed rule section of the Federal Register explaining NRC’s intent. This Federal Register document will also provide instructions so the public can stay informed regarding future NRC action that addresses the issues raised in the petition for rulemaking. A docket number identifying the project is also published in the Federal Register at that time. More information on our petition for rulemaking process can be found here: http://www.nrc.gov/about-nrc/regulatory/rulemaking/petition-rule.html

comment #847 posted on 2011-04-29 10:08:16 by Moderator in response to comment #828

A Commission meeting held Thursday, April 28th, was webcast and is archived here: http://video.nrc.gov/ . The meeting included a briefing on the status of the NRC's response to events in Japan and, related to your comment above, a briefing on station blackout. A copy of Chairman Jaczko's remarks at the beginning of the meeting can also be found here: http://pbadupws.nrc.gov/docs/ML1111/ML111180271.pdf . The first briefing by the task force reviewing NRC regulations in light of the Japanese nuclear emergency is scheduled for May 9th. It will also be webcast. For more information on that meeting, go here: http://www.nrc.gov/public-involve/public-meetings/schedule.html .

comment #859 posted on 2011-04-30 09:12:31 by jim hardy in response to comment #846

Fair enough. If I were in Tepco's shoes i wouldn't want somebody doing that either. i shoulda thought of that. thanks for the reply, and i'm glad you're lending a hand over there. old jim

comment #849 posted on 2011-04-29 16:30:24 by Lisa Ansell in response to comment #828

I would like to second what the gentleman above me stated, how can you not have a plan for a black out lasting a long time. After reading this post I started looking around and found that you have a petition before you now I believe it is PRM-50-96 that gives solutions to this problem. I'd like to know why the NRC hasn't done more to protect us from this. Reliable power is not a given, anything can happen. You say you have a defense in depth strategy, but it looks like you just have a defense plan that just relies on conventional ways of keeping the US from being destroyed by just one of your plants melting down. The situation the guy describes above would cause several meltdowns and spent fuel fires all at the same time. When I started looking I was shocked to learn that it looks like he is correct. I read that one of your plants was hit by a tornado yesterday and was cut from outside power and had to go to emergency generators, and one of the generators was down. It looks like everything worked ok yesterday; thank God, but what happens if those generators were to run out of fuel? In a long blackout like the ones caused by solar flare or hacker attack the refineries will not work. BP just had a loss of power at their Texas city refinery a couple of days ago, and had to start flaring gas. All of this stuff is tied in together if the electric grid fails then so does oil refining, and what does your generators run off of? Battery backup is not good enough, I read your chairman is advocating longer batteries. This is still not good enough you must be prepared for an indefinite power outage. You need a multi-layered defense that does not depend on the electric grid or petroleum industry. I read that this goes in the public record. I sure hope it does to show people are warning you about this terrible vulnerability that ALL of your plants have. That way if something does happen the people in charge can be held accountable for not taking widely available warnings seriously. Please move as soon as possible to put the petition prm50-96 in affect I haven't had time to read it all but what I have read makes a lot of sense and if the worse happens your plants will destroy this country.

comment #843 posted on 2011-04-29 02:15:39 by jim hardy

i'm a retired plant maintenance guy. would you fellows consider posting photographs of the containments at Fukushima reactors 1-3 operating floors, just beneath the roof rubble? are the top closures still in place and secure? Was this really just H2 ? http://www.youtube.com/watch?v=gnPFJyJDC.... You have the best people on the planet - sure would appreciate a status page for Fukushima from your perspective. thanks old jim

comment #846 posted on 2011-04-29 10:01:30 by Moderator in response to comment #843

The NRC does not have photos of the inside of the plant nor have we been providing public assessments or comments on the actions of the Japanese officials. We continue to have NRC experts in Japan providing assistance directly to the Japanese authorities, however, and we continue to post information on NRC actions on this page: http://www.nrc.gov/japan/japan-info.html

comment #828 posted on 2011-04-26 01:10:13 by Trent Sikes

It is my understanding that the NRC has no plans for a station blackout event (SBO)lasting over 7 days with no resupply of fuel to the affected plants emergency generators. There are several events that can knock out power to large portions of the US commercial power grid for months or years. These include, but are not limited to, solar flare, EMP attack, and cyber-attack. While I realized that nuclear utilities are not required to defend against foreign attack, they are required to prepare for foreseeable natural events. Solar flare defiantly fits into this last category. A large solar flare can knock out power to the majority of the US power grid for years. As you, at the NRC well know ,the disaster in Japan was not caused by an earthquake or tsunami, it was caused by a loss of power to the cooling systems of the plant to the reactor core and spent fuel pools. The earthquake was merely the catalyst that started the SBO event. When anyone reading this looks at the pictures of those destroyed reactor buildings in aerial photographs, realize this is what a nuclear plant looks like when it losses power for a couple of days, and this can and most likely will happen in the US. In the event of long term grid failure a reasonable person would conclude that power to oil refineries will be cut making resupply of diesel to emergency generators impossible for months. As you ( the NRC) well know this will cause the cooling systems to cease to function and the reactor to overheat, even if shutdown, and the spent fuel pools will boil off their coolant resulting in a zirconium fire at all affected plants, spewing radiological contamination for hundreds or thousands of miles around each plant. This will happen at all plants where there is no power. In this situation the US will be dealing with multiple station blackout events and meltdowns at the same time it is dealing with all the things that will be happening if the power is out for an extended period. The US does not have the resources to deal with this scenario, prevention is the only option. In light of this, it is gross negligence on the part of the NRC not of force the nuclear industry to have plans and technologies in place that will make it possible for nuclear plants to survive a station black out event lasting years with no resupply of fuel, or operators on site. Especially, since we know that spent fuel fires at just a few plants will render most of the eastern United States uninhabitable for centuries. What if anything is the NRC doing to address this problem? We are all in grave danger until the NRC does its duty and fixes this glaring weakness in nuclear safety. This is not some farfetched doomsday fantasy, several times in the last few decades weak solar flares have knocked out satellites and power transformers .And in 1859 and 1921 solar storms powerful enough to destroy the US power grid hit the earth, but electric power was in its infancy then, the clock is ticking for us, fix this now.

comment #960 posted on 2011-05-18 09:40:59 by Thomas Popik

**Walkaway Safe Spent Fuel Pools** Hello, my name is Thomas Popik and I am the author of Petition for Rulemaking PRM-50-96. First, I would like to thank those that have supported our petition here on the NRC emergency preparedness and response blog. It is

good of the NRC to provide this forum. Our petition, submitted by the Foundation for Resilient Societies, would require nuclear power plants to install backup systems for long-term cooling and unattended water makeup of spent fuel pools. Or to use another term that is now popular in the nuclear industry, PRM-50-96 would make spent fuel pools "walkaway safe." The Foundation for Resilient Societies advocates cost-effective measures to protect technologically-advanced societies from natural disasters. It may interest readers to know that we are not an anti-nuclear group. Nuclear power plants provide 20% of baseload power in the United States. As a society we need to make reasonable and commonsense safety enhancements to existing nuclear plants. PRM-50-96 was written before the Japan earthquake and submitted to the NRC before the explosion at Fukushima Spent Fuel Pool No. 4. (Note: the PDF of the petition released by the NRC did not preserve the HTML links. You can access a version with HTML links at www.resilientsocieties.org.)

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### Get NRC Correspondence on Operating Nuclear Power Plants by Email

posted on Tue, 26 Apr 2011 13:59:09 +0000

 No need to wait for the mailman anymore. You can quickly and easily receive documents about any operating nuclear power plant you wish electronically. This distribution process makes it much easier for anyone—licensees, local and state government, members of the public -- to quickly get the information they desire. To sign up, go to the Operating Reactor Correspondence page on the NRC website. The webpage is arranged by region and includes maps that indicate where each plant is located, allowing you to easily find the reactors that are of interest to you. The site also allows you to subscribe and unsubscribe from plant distribution lists at any time. By signing up, you will receive all outgoing operating reactor correspondence originating from Headquarters, Region I, III, and IV. (Region II is currently unavailable) Correspondence includes, but is not limited to, license amendments, relief requests, exemptions, requests for additional information and public meeting summaries. Not only is the process faster and easier, but it saves resources, too. In 2010, about 15,000 subscribers received electronic information - avoiding the production of over 5.7 million printed pages.
*Christine Steger*
*NRR Communications Analyst*

**Comments**

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### One-Year Anniversary of NRC's Open Government Plan – Your Suggestions Welcome!

posted on Thu, 28 Apr 2011 15:29:16 +0000


This month the NRC celebrated the one-year anniversary of the publication of its Open Government Plan and posted a self assessment of progress to date on the agency's Open Government page . One of the highlights was the inauguration of this blog, which played a key role in informing the public of our response to the Japanese event. Another was that NRC exceeded its first year goals for the publication of high-value datasets, with 21 high-value datasets published, significantly more than the 11 identified in the plan. The self assessment also noted that the agency ranked 11th out of 32 federal agencies on transparency based on the American Customer Satisfaction Index (ACSI) surveys of federal websites. The ACSI survey also showed positive results from the release of the agency's unified public Web search in December 2010, with the site search satisfaction score improving from 68 before the new search to 73 at the end of March 2011. As we move into the second year of the Open Government initiative, one thing that would help guide our efforts would be to get more input from you, our stakeholders and members of the public. In particular, what additional datasets you would like us to make available through data.gov? Is there other information about our activities that you need? We hope you'll take a few minutes to tell what you think by posting a comment to this blog or by using our Online Comment Form.
*Frances Goldberg*
*Co-Chair NRC Open Government Advisory Group*

**Comments**

comment #873 posted on 2011-05-03 10:00:53 by Moderator in response to comment #871

The EPA is the U.S. government agency responsible for monitoring radiation levels in this country. EPA monitoring information is available here: http://www.epa.gov/japan2011/

comment #871 posted on 2011-05-03 00:12:53 by Catherine euler

My suggestion is that you begin to publish daily radiation readings from Japan and across the pacific, & across the usa. Every indication is that not only has one or more containment vessels beeen breached, but that unusually high amount of "fresh" I-131 indicates ongoing or intermittent criticality somewhere. Also, release any data you have on the explosion at reactor 3, possibly an explosion of the spent fuel pool. The public is not idiotic. If you care about public safety, start posting the actual data on your website instead of forcing Americans to go to Norway or austria for online atmospheric data. there's no reason for the EPA Radnet data not to

be easily available and analysed here.

comment #879 posted on 2011-05-04 09:51:28 by Moderator in response to comment #873

There are many federal agencies with some area of responsibility for nuclear emergencies in the U.S., including Department of Homeland Security, Department of Energy, Centers for Disease Control, FEMA and others. If the emergencies happen overseas, they may also involve the Department of State, Department of Defense, etc. We understand it can get confusing. Look for a blog post in the future outlining "who does what."

comment #876 posted on 2011-05-03 19:37:47 by Catherine euler in response to comment #873

Thank you. It just seemed to make sense that all the information should be available in one place. Also, the EPA recently announced that they were going to stop daily monitoring of the Fukushima fallout and go back to regular weekly monitoring. I'm not sure why that makes sense if the breached reactors are still emitting radiation. Maybe most of the fallout was from the explosion in the spent fuel pond at reactor 3, which sent so much material high enough to get into the jet stream. Anyway, thank you for your response. I will check the website you have listed. The more open and forthcoming our governments the better.

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### Analyzing Cancer Risks Around Nuclear Facilities

posted on Mon, 02 May 2011 14:29:06 +0000

Nuclear facilities licensed by the NRC routinely release very small amounts of radioactivity during normal operations. Even though the NRC closely monitors the plants and assures that these releases are well below regulatory limits, some community members remain concerned about potential health risks from these facilities. To address the concerns, the NRC has asked the National Academy of Sciences (NAS) – an independent group of experts chartered by Congress to carry out transparent, objective and detailed studies independent of the government -- to examine how best to perform a state-of-the-art study on cancer risk for individuals living around NRC-licensed nuclear facilities. The NAS effort will study nuclear power plants that generate electricity and certain plants that create the nuclear fuel used in the power plants. The NRC is seeking the expertise of the NAS to update the 1990 report by the U.S. National Institutes of Health's National Cancer Institute (NCI). This report, "Cancer in Populations Living Near Nuclear Facilities," found that cancer mortality rates were not elevated in these populations. The NRC staff uses the NCI report as a primary resource during public discussions of cancer risk in communities that are near or around nuclear facilities. The NRC is interested in having NAS examine whether it is technically feasible to determine if cancer risks in the vicinity of a nuclear facility are greater than the cancer risks in similar areas without a nuclear facility. The NRC also expects the NAS panel to determine if we can reduce the study areas around the facilities to something smaller than the counties used in the NCI report. (This would provide data more specific to localities.) Phase 1 will determine whether there is a scientifically sound approach that can meet the goals of the study request. If so, the approach will be developed using acceptable methods for evaluating cancer risk that could be associated with nuclear facilities. In January, the NAS formed a committee of 20 experts —chaired by Dr. John E. Burris. The committee has already held public meetings in Washington, D.C., and Chicago, with additional meetings planned for Atlanta and Los Angeles in the future. The meetings will allow committee members to collect data and stakeholder input in developing their conclusions on the first phase of the study. The phase 1 report is due to be publicly released in December 2012. A 60-day comment period will allow stakeholders an additional opportunity to provide input on that phase. The NRC will review the phase 1 report and consider the stakeholder comments before deciding on if and how to proceed on phase 2 of the study. Depending on what's decided for phase 2 a final report would be expected by the middle of 2013. More information on the study is on the NRC website here: http://http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/fs-analys-cancer-risk-study.htmlor on the National Academy of Sciences website here: http://dels.nas.edu/global/nrsb/CancerRisk.
*Scott Burnell*
*Public Affairs Officer*

**Comments**

comment #870 posted on 2011-05-02 15:24:53 by Alan

Useful post, thank you. I do take some issue with the following wording, however:

> The NRC is interested in having NAS examine whether it is technically feasible to determine if cancer risks in the vicinity of a nuclear facility are greater than the cancer risks in similar areas without a nuclear facility.

Technically, in a science-based view, isn't the relative risk of cancer in those communities irrelevant, or at least disconnected, from the topic of the effect of the nuclear plant on the cancer rate? Because I am familiar with the subject I already have the expectation that the impact is far below detectable levels. An important point to stress in regards to radiation risk is the validity of minimizing exposure to something that is known to have a negative effect, regardless of the fact that no observable effect will be observed. In fact, I consider that idea to be a mainstay of consumer and public protection. I have seen peer-reviewed papers that claimed to have found cancer bubbles around nuclear plant, but then categorically dismiss the possibility of the nuclear plant being the cause. Although there is nothing to disagree with, it creates headlines that send a message contrary to the conclusion.

comment #880 posted on 2011-05-04 10:07:10 by Moderator in response to comment #870

The NAS panel is looking at the state of today's science while avoiding prior expectations. They are attempting to see what, if any,

study method can appropriately account for enough variables to see if there's any association between nuclear power plants and cancer risk. The NRC has also asked the NAS to develop brochures or other appropriate means of effectively informing the media and the public to attempt to ensure the "headlines" are accurate. Scott Burnell

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**An Open Forum Now Available**

posted on Mon, 02 May 2011 20:03:45 +0000

The NRC welcomes comments on the topics we're blogging about. But we realize there are other topics you might want to talk about. This post serves as the Open Forum section of the NRC Blog. You may post comments here on any topic relevant to the role and mission of the NRC. Comments here are still moderated and must adhere to the Comment Guidelines. If we determine a comment on another post is more appropriate here, we'll move it over. This post will stay open for comments and not be subject to the 30-day comment period of other posts. You can always find this post by clicking on the Open Forum category on the side bar.
*Holly Harrington*
*NRC Blog Moderator*

**Comments**

comment #282 posted on 2011-03-10 12:22:26 by Peter Van der Does

Thank you for the opportunity to comment. In a few days the NRC will likely give Vermont Yankee another license period. This is the same plant which has had a cooling tower collapse , a two story transformer fire ,unaccounted for missing fuel rods , cracks in the steam dryer and Tritium , Cobalt 60 and Ziinc 55 found in the groundwater test wells nearby and I won't repeat the earlier post about Strontium 90 in the fish in the nearby river. In a recent NRC report ( 2009 ? ) the estimate for a severe accident was every 1 million hours of man-operations. That works out to every 114 years. I suppose "severe accident" is a euphemism for a meltdown. Great research guys ! The 4 partial meltdowns we've had in the US were all within 15 years of starting operations : Simi Valley , Idaho SL-1 , Enrico Fermi and TMI. Your Radioprotection Health Officer , a nice woman who I've met , would be interested to know that a health study was done and the 6 towns surrounding Vermont Yankee were found to have a slightly higher incidence of Leukemia in comparison with the rest of the county. Please forward this comment to your chairman. Thanks.

comment #203 posted on 2011-02-25 10:27:15 by Moderator in response to comment #95

It's not clear what reviews or reports you're referring to, but here are some links that might be helpful: How the NRC reviews new plant designs: http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/new-nuc-plant-des-bg.html How the NRC reviews new reactor applications: http://www.nrc.gov/reading-rm/doc-collections/nuregs/brochures/br0298/ How the NRC reviews reactor license renewals: http://www.nrc.gov/reading-rm/doc-collections/nuregs/brochures/br0291/ Moderator

comment #286 posted on 2011-03-11 10:32:12 by Dan

Is the NRC staff following the recent news from the earthquake in Japan? Can you post some reliable technical information regarding the impact of the earthquake on Japanes nuclear facilities? What is the significance of the evacuations that have been ordered due to "failure of backup generators"?

comment #71 posted on 2011-02-07 16:01:35 by Moderator in response to comment #69

You can learn more about the NRC's license renewal process for existing nuclear power plants here: http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/license-renewal-bg.html .

comment #51 posted on 2011-02-04 16:15:57 by Moderator

Thank you for the opportunity to speak out. The NRC allowed Vermont Yankee to forgo the ASME 10 year welds exam scheduled for 2010 and replace it with their own welds exam while Vermont Yankee has had the same internal radioactive leaks due to old welds in the same area two years running ?!? The Connecticut river now has Strontium 90 found in the fish in proximity to the Vermont Yankee nuclear power plant. Strontium 90 which the EPA says on their website causes Leukemia and bone cancer. Strontium 90 which has a half-life of 27.8 years and was produced at Vermont Yankee as effluents in 2002 , 2003 and 2004. We can collectively thank the NRC for contributing to the health of the American people. Peter Van der Does Moderator: This comment has been moved here from a different post.

comment #52 posted on 2011-02-04 16:17:30 by Moderator

When will the NRC be releasing SER, Volume 3? What is the rationale for holding it up and how does this support the commission's commitment to openness and transparancy? Frank Moderator: This comment has been moved here from a different post.

comment #53 posted on 2011-02-04 16:18:47 by Moderator

I am concerned about the aging nuclear reactors in the US. Recently there have been multiple incidents — scrams — that indicate less than secure conditions. I believe the public is being kept in the dark about the danger they are in because of the lack of repairs and continued use of aging nuclear reactors. I would like to see them all shut down, and replaced by solar and wind systems. Kathryn Barnes Moderator: This comment has been moved here from a different post.

comment #54 posted on 2011-02-04 16:20:13 by Moderator

The NRC Chairman's recent actions regarding suspension of Yucca Mountain staff review of the license application is a disgrace to the NRC as an agency. If one person, chairman or not, can stop a licensing proceeding the stability of the NRC licensing process is undermined. NRC's only job should be nuclear safety — not political favoritism. Not allowing the Commission vote on the Yucca Mountain CAB ruling is nothing short of a coverup. So much for openness in government. Joe Ziegler Moderator: This comment has been moved here from a different post.

comment #55 posted on 2011-02-04 16:26:52 by Moderator

Public Participation Wondering if you will make this a seperate NRC blog issue? (The point I make, is public participation fun for the NRC, they don't take it as a serious business. NRC "having fun" over Vermont Yankee 2.206 So I am on the phone bridge this morning Feb 3, 2011 at 9am, I identify myself to the mechanical voice message system, then I am just kind of waiting around in silence on the phone waiting for them to push the button to join the conference. I assume there are people on the voice bridge, and then there are NRC officials in one or more rooms on a speaker phone device. All of a sudden I hear a click, I hear the snippet "and have a little fun", then I hear the talking of all the NRC officials, then the "welcome to this is a 2.206 petition…". All the background chatter of the officials stops…then we are off to the races with the 2.206 processes. From this point on everything is recorded in the NRC ops center and it is transcribed for addition into the public record. They do the introduction, then they give me the microphone so to speak. I say I got to get this down on the record. I just heard a snippet of "and have a little fun" when I first came into the meeting, when I was connected to the phone bridge…what did you mean by this? It was a male voice talking to a female. I am thinking two NRC officials were talking about outside activities, but you never can tell what is behind it. I said to myself too, they just might be talking about have having a little fun with me in the meeting. The chairman of the petition board pops up explaining on my phone, "I was introducing a new NRC official to the petition board and I was telling her to have a little fun as she participates and listens to your review board" concerning tritium and root cause analyze issues at Vermont Yankee. I want to force a shutdown of VY and remove the licenses of all the Entergy nuclear plants, or at least get peoples attention… Can you imagine a 2.206 petition meeting chairman indoctrinating a new NRC official into the petition process by saying have a little fun with it. Are they all laughing and making faces behind my back as I am stuttering and fumbling my way through my speech. Are they laughing and having a little fun over us all? Mike Mulligan Moderator: This comment has been moved here from a different post.

comment #56 posted on 2011-02-04 19:15:15 by James E. Foster

Since at least 1982, NRC Office of Investigations (OI) personnel at grade levels of GS-12 - 14, and GS-15 have been misclassified as series 1811, "Criminal Investigator." To be classified in this series, an individual must meet most of the "frontline law enforcement" factors, and have them largely constitute the position duties: 1. Perform investigations (long-term, complicated reviews); 2. Investigate individuals suspected of or convicted of violating criminal laws of the United States (employing agency must have criminal investigation authority); 3. Have the authority to carry weapons; 4. Have the authority to arrest, seize evidence, give Miranda warnings, and execute search warrants; 5. Have a "rigorous" position which includes unusual physical hazards due to frequent contacts with criminals and suspected criminals, working for long periods without a break, and being in on-call status 24 hours a day. For LEO retirement credit, one must show that the primary duties of the position are the investigation, apprehension, and detention of criminals or suspects. The most important factors, are: 1) frequently pursuing or detaining criminals; 2) an early mandatory retirement age; 3) a youthful maximum entry age; 4) the job is physically demanding requiring a youthful workforce; and 5) exposure to hazard or danger. The factors (above) may also be considered as appropriate. OI duties and authorities do not match these criteria, especially since NRC lacks statutory authority for performing criminal investigations. They lack arrest responsibilities, agency authority to carry firearms or other weapons, do not perform undercover work, do not execute search or seizure warrants, do not give Miranda warnings, and are not exposed to hazardous conditions nor inclement weather. Most work takes place in an office setting, and is not "rigorous." OI investigations do not involve felonies, but violations of the regulations contained in 10 Code of Federal Regulations (Energy). None of their work is "frontline law enforcement work, entailing unusual physical demands and hazards." In March 2007, the Director of OI admitted that OI personnel have never performed a single arrest. When OI was created, a proposed desk audit of investigative positions to determine the correct job classification was cancelled. OI personnel have indicated that "NRC is the best-kept secret on the 1811 circuit!" Letters from the NRC to the Civil Service Commission or Office of Personnel Management (OPM) regarding 1811 classifications and law enforcement retirement contained vague, erroneous, or misleading and false information. These letters indicated high percentages of criminal investigations, or investigations involving "matters of potential criminality covering a wide spectrum of violations." The position of "Investigation Specialist," later "Investigator," began with the Atomic Energy Commission (AEC). These positions were series 1810, located in the Division of Compliance, and the investigation reports issued were titled "Compliance Investigations." These positions were clearly originally established to conduct civil investigations to determine compliance with the regulations found in 10 Code of Federal Regulations (Energy). OI investigative personnel actually perform the duties and responsibilities of the series 1801 or 1810 classifications, and meet the 1801 or 1810 position classification guidelines and qualification requirements. Personnel classified in series 1801 or 1810 do not receive early retirement nor availability premium pay. The 1801 series guide, for example, specifically speaks to positions where investigations relate to violations of

regulations and criminal matters are referred to another agency for criminal investigation. The result of the misclassification is that the NRC has unnecessarily paid OI investigators early retirement and premium pay (Administratively Uncontrollable Overtime [AUO] or "availability pay" of 25% of their salary), amounting to hundreds of thousands of dollars per year, and totaling millions of dollars during the period 1982-2010. The 25% availability pay is included in the OI investigators' basic pay, and therefore raises the "high three" salary years utilized to determine retirement pay. Also, a more beneficial percentage is used to calculate retirement benefits. A very conservative analysis indicates that the overpayments greatly exceed $700,000 per year (the effect on Thrift Savings Plan agency contributions and retirement benefits of an additional 25% during an employee's "high three" years was not calculated). OI Investigations largely consist of interviews with a court reporter present, and document reviews. Between 7% - 30% of the cases are referred to the Department of Justice (DOJ) for prosecutorial review, but very few are accepted for further investigation, and even fewer result in convictions. In extremely rare cases, the OI investigator may provide assistance to the DOJ in its review or investigation, and may provide testimony in court or before a Grand Jury. In vanishingly rare cases, the investigator may assist in obtaining and executing a search warrant (accompanying the primary law enforcement officers), or collecting physical evidence. A chronology of events indicates that NRC senior management was well aware that NRC did not have the authority to conduct criminal investigations, had not given such authority to OI, and that OI did not perform criminal investigations. In the early years, OI did not even directly interface with the DOJ, but passed their investigations to the Office of Inspector and Auditor for referral to DOJ. Of central importance is a memorandum dated October 15, 1982 in which the NRC Deputy General Counsel advised that, lacking statutory authority, NRC personnel should not conduct criminal investigations under any circumstances. Subsequently, numerous submittals were made to OPM, claiming that all OI investigations were criminal investigations. Perhaps as importantly, on April 9, 1984, the full NRC Commission received a Briefing on Criminal versus Civil Investigations. A draft document giving OI the authority to conduct criminal investigations was discussed, with the Commission strongly objecting to and directing removal of the term "conduct" and substitution of the word "assist." Quotes: "we believe that the Commission – and OGC has taken this position in the past – that the Commission does not have independent authority to conduct criminal investigations." "Yes, our policy is to first serve our civil purpose and then help DOJ." This briefing led to a commission paper used as guidance in negotiating a Memorandum of Understanding with the Department of Justice.

comment #57 posted on 2011-02-05 01:08:01 by Andrew Williams

An issue which the NRC very much needs to address is the matter of the Yucca Mountain Nuclear Waste Repository. NRC Chairman Gregory Jaczko's actions regarding this matter have been extremely disturbing. Last year, the NRC's Atomic Safety and Licensing Board ruled that the Energy Department does not have the authority to withdraw its application to build the Yucca Mountain site. This decision is now appealed to the full NRC commission of which Gregory Jaczko is the chairman. In what took the ASLB 39 days to decide, the NRC commission is still deciding and has been doing so for over 200 days. It is quite obvious to everyone involved as well as the public that the decision is being delayed for political reasons. Of five NRC commissioners, two oppose Yucca mountain (Jaczko and Magwood), two support Yucca mountain (Ostendorff and Svinicki ), and one recused himself from voting (Apostolakis). If the decision on whether to uphold the ASLB decision was made now, the vote would end in a tie meaning the ASLB decision would stand. This scenario is obviously untenable to Gregory Jaczko so he has delayed the commission's vote for over 200 days. It is worth noting, at this point, that George Apostolakis, the commissioner who recused himself from voting on this issue, did so because he earlier worked on the DOE license application for the Yucca project. Ironically, Gregory Jaczko, who was senate majority leader Harry Reid's science advisor and who helped Reid frame arguments against Yucca mountain, has NOT recused himself. In this blatantly political action, Jaczko has made it clear that he will use any means at his disposal to stop Yucca Mountain from going forward. Jaczko has already delayed a commission ruling for over 200 days and I have no doubt that he will delay further. In fact, I believe he will delay the decision until William Ostendorff's term as NRC commissioner expires in June of this year. This will give him free reign to decide the matter how he wishes. Gregory Jaczko has turned the once apolitical Nuclear Regulatory Commission into a political tool for Harry Reid to exert control over America's nuclear policy. He refuses to allow a vote to occur to decide the fate of the Yucca Repository until he can control the outcome. The NRC has lost credibility and will continue to lose credibility in the eyes of the American people until a decision is made by the commission. Gregory Jaczko is delaying a legal proceeding for political gain and should resign immediately from his position, as he has lost the confidence of the public. I also find it abhorrent that on this blog an NRC moderator said "The decision to cancel the Yucca Mountain Project was made by the White House and the Department of Energy, not the NRC." The decision on whether or not to cancel Yucca Mountain is still in review! Furthermore, the NRC ultimately WILL decide on whether or not the project will go forward or not based on the commission's ruling.

comment #58 posted on 2011-02-05 08:06:49 by Tom Clements

The NRC has a regulatory role related to DOE's program seeking utilities to use weapons-grade plutonium fuel (MOX) in commercial nuclear reactors. After Duke Energy withdrew from a failed test of MOX fuel in 2008, DOE was left with no utilities which even had interest in MOX. Now, DOE has turned to the TVA and Energy Northwest (Richland, WA), and is attempting to convince them to use weapons-grade MOX, which has never been used on a commercial scale and never even tested in a BWR. But any use in BWRs or PWRs will need a full three cycles of testing, licensed by the NRC, to see if "batch" use of MOX can be licensed by the NRC. As DOE, Energy Northwest (EN) and TVA, which has a MOU with EN (see that in documents linked below) failed to provide information to the public about the interest in MOX by EN, that has been done by Friends of the Earth, in the public interest: "Secret Plan Exposed to Use Surplus Weapons Plutonium in Washington State Nuclear Reactor" - see: http://www.foe.org/secret-plan-exposed-use-surplus-weapons-plutonium-washington-state-nuclear-reactor

comment #61 posted on 2011-02-05 09:43:01 by Rod Clemetson

Part Two ==> China has grand plans to build enough nuclear power plants to supply 200 gigawatts by 2030, and do it with a modified

(Gen-III) Westinghouse AP 1000 design. Now they've included TFMSR's in the plans, which may eliminate the need for the much more expensive Westinghouse LWR's. Their nuclear capacity is already replacing coal-fired plants amounting to 60 gigawatts since 2006. China has 13 nuclear plants in operation today, another 25 under construction, and 200+ more on the drawing boards. They aren't waiting around to sign any pollution reduction treaties, they're just *DOING* it! Now they're siezing the fantastic opportunity to leap straight ahead to Gen-IV designs, such as TFMSR and Liquid Flouride Thorium Reactors (LFTR's). Please google "Energy From Thorium" and "Thorium Energy Alliance". I promise you'll be amazed. By the way, the United States is preparing to destroy (i.e., down-blend and bury) one thousand kilograms of Uranium 233 (currently classified as toxic nuclear waste). U233 can be used to produce many beneficial medical and industrial isotopes, and is an ideal "starter" fuel for TFMSR's. It's going to cost several hundred million dollars to destroy this valuable stockpile of U233. The United States could proceed with the destruction plans -- which would make the Chinese TFMSR success more difficult -- or, we could develop our own TFMSR program and beat the Chinese to the patent office. The latter notion gets my vote. So here's a new challenge for the NRC: adopt and adapt regulations to take into account the concept of liquid fueled reactors that can operate at atmospheric pressure and passively shut down in an emergency. The SCRAM process for a liquid fuel reactor will manually or automatically drain the molten core into holding tanks where the fuel solidifies and traps all the radioactive materials. What a concept!

comment #66 posted on 2011-02-07 09:09:06 by Mike Mulligan in response to comment #55

This is my test drive of the new car. If this is the new NRC...it is something? This transparency is powerful stuff...having people see events in their near immediacy....having people all see the information at the same time, or at least letting people see indiveguals interpretation of events, not just the bureaucrats' and licensee interpretation of events. ...It is transformational. Congratulations to the NRC!

comment #67 posted on 2011-02-07 12:08:23 by Moderator

I have read that the American military has more freedom as do research labs. If the military wanted to start developing their own Generation 4 reactor is there any reason they need to consult with the NRC? Moderator: This comment has been moved here from a different post.

comment #68 posted on 2011-02-07 12:11:53 by Moderator in response to comment #67

The NRC has jurisdiction over all civilian (e.g., non-weapon) uses of nuclear materials in the United States. For example, the NRC regulates a research reactor operated by the Armed Forces Radiobiology Research Institute, while Congress has directed DOE to seek NRC licensing for the Next-Generation Nuclear Plant, a Generation IV project. The White House can designate specific facilities as being under the self-regulation of either the Department of Energy or the Department of Defense. DOE self-regulates a few of its own research reactors under this authority. The NRC, DOE and DOD have been discussing other small modular reactor concepts, some meeting the Generation IV definition. Both DOE and DOD have indicated they will seek NRC licensing for any small modular reactor projects at their respective facilities.

comment #69 posted on 2011-02-07 14:18:48 by Raphael

I remember seeing "The China Syndrome" as a kid and it kind of freaked me out. I have always wondered how realistic was that movie in terms of what Jack Lemmon's character was freaked out about. Forty years later and I do not recall any big snafus, which makes me wonder about the comment above regarding nuclear infrastructure as "aging". Any insights on this? Raphael

comment #74 posted on 2011-02-07 22:13:44 by Billy in response to comment #54

since you did not include my earlier post it is obvious you are censoring posts you don't like. NRC is living a culture of corruption. Jaczko must go.

comment #79 posted on 2011-02-08 15:54:16 by Moderator in response to comment #74

Posts that do not adhere to our Comment Guidelines cannot be posted. The full guidelines are available here: http://public-blog.nrc-gateway.gov/nrc-public-blog-guidelines/ .

comment #99 posted on 2011-02-11 18:35:19 by A concerned citizen

I have been told by NRC staff that Chairman Jaczko has been directing the staff to take various policy positions in papers being sent to the Commission either for information or for a vote. Recent examples would be the paper on Yucca Mountain and the paper on Waste Confidence which is close to being delivered to the Commission. If this allegation is true, it is quite disturbing. Openness demands that the public know what the professional staff's views are before the Commission acts. If the staff's views are modified by the Chairman before policy papers are delivered, how will the public ever know the staff's real views?

comment #95 posted on 2011-02-11 15:50:37 by Moderator

I would like to know more about your review process. Many people are confused about the long periods of time that are invested in providing a report on requests. For instance is their a research team that needs to study the technology being reviewed? Is there a

consultation with the professionals about their processes? Your role is a complex one to understand so any information that can explain why some reports can take years and not just months. Moderator: This comment has been moved here from a different post.

comment #196 posted on 2011-02-24 21:25:31 by Hamilton

I think it an important step in the right direction to put up this blog site. Collaboration and Communication is essential for projects of the magnitude as energy. Energy project affect everyone and everyone should know how things are going. Thanks.

comment #85 posted on 2011-02-09 10:41:26 by Mike Mulligan in response to comment #66

Official Transcript of Proceedings NUCLEAR REGULATORY COMMISSION Title: 10 CFR 2.206 Petition Review Board RE Vermont Yankee Thursday, February 3, 2011 CHAIRMAN QUAY: At this point I would like to turn it over to Mr. Mulligan. Mr. Mulligan: Hello. I've got to get this on the record. When you first pushed the button when I came on the phone, I heard a snippet of information and the snippet of information was, "Let's have a little fun." What was that about? CHAIRMAN QUAY: That was me. I was welcoming a new Board member. She hasn't been here before and I said, "This will be fun for you." The reason I said that is it's a new experience. It's an experience which all of us need to have is interacting and learning how to interact with the public. MR. MULLIGAN: Who is this? CHAIRMAN QUAY: This is Ted Quay. MR. MULLIGAN: Okay. CHAIRMAN QUAY: Okay? MR. MULLIGAN: Thank you

comment #88 posted on 2011-02-09 11:22:20 by Moderator

As of recent, the NRC is becoming more dependant on industry’s ghost stories, basically unsubstantiation stories and events dressed up as fact. They and the industry are increasingly representing a filament or fragments of the facts, partial and incomplete evidence and truth in documents and testimony. The examples I would give is the engineering, design, licensing bases and UFAR of the VY AOG piping radiological containment system. A developing problem is a factual understanding of the technical meaning of environmental LLD…the standards of how long a sample stays in a scintillation counter that gives us a LLD…what is the minimum level of detection of tritium and what constitutes a indication of a radioactive leak? Don’t give me it is 2000 picocuries per liter… Vermont establishes it at 670 to 700 picocuries. Has the NRC in their deeds and actions…in their hearts… been gaming the first emergent indication of a radiological leak at the nuclear plants? We are getting a lot engineering ghost stories out of the agency recently…the facts are so thin it is like translucent ghost and just fragments of the truth floating all around us. There was a lot of ghost floating around in the part 26 commissioner meeting yesterday, did you see them…in LERs, the ROP and the inspection reports…its like Halloween all time and all year long. The NRC is just becoming a “not facts” based agency! Mike Mulligan Moderator: This comment has been moved here from a different post.

comment #104 posted on 2011-02-13 00:49:53 by Kaye Swain

Thank you for a very informative article, along with interesting comments. It is rather disconcerting to consider all these issues with old and newer reactors, particularly for those of us caring for elderly parents who live far from us but near an older reactor. One more issue for those of us in the Sandwich Generation to have to take into consideration. I appreciate this website to keep us updated and informed.

comment #270 posted on 2011-03-07 18:23:05 by AMA Nation

Its great NCR have this open forum. And it's a good way of communication with the agency through people concerns.

comment #287 posted on 2011-03-11 12:47:51 by Moderator in response to comment #286

Yes, the NRC is following the impact of the earthquake in Japan and the resulting tsunami. Please see our latest blog post outlining NRC actions. However, we cannot speak for the Japanese government on their actions nor on the specifics of their plants. Holly Harrington Blog Moderator

comment #264 posted on 2011-03-05 05:13:49 by Paul Christopher Anzalone

Howdy from Missouri! Just would like to post that NRC.GOV is my home page on my personal home computer. That's all. Sincerely, Paul Christopher Anzalone

comment #391 posted on 2011-03-16 17:49:41 by mapsurfer

OK, I wonder who's bright idea it was to build a nuclear plant on a subduction plate. Even if we survived this catastrophe, what happens down the road when this planet gets into the ring of fire? We might not have a planet left to talk about. Hillary Clinton said on CNN that we didn't have the foresight to see this catastrophe, but I disagree with that.

comment #403 posted on 2011-03-16 21:23:01 by Art

I've done several searches via your NUREG page and the ADAMS interface for NUREG 0408 and other documents applicable to the Mark I containment and Mark I containment short and long term programs from the 1970s and 1980s. Why are these not available?

comment #705 posted on 2011-04-15 10:37:37 by Moderator

> This comment has been moved to this page by the moderator: Hello, Recent Congressional correspondence related to Yucca Mountain SER was made publically available through several websites. They included a letter from Chairman Jaczko as well as another letter signed by four Commissioners. Read together, it appears that the Chairman is not following the will of the Commission as a whole in sending policy views to Congress. If true, this is a major breach of existing protocol and calls into question whether the NRC has a Commission or a sole Administrator. What's really going on? Thank you. Here's a link to one of the stories. http://www.nucleartownhall.com/blog/rebellion-at-the-nrc-jaczko-outvoted-4-1-on-release-of-safety-report/

comment #707 posted on 2011-04-15 11:04:07 by Moderator in response to comment #403

> Unfortunately, many older documents that pre-date our electronic database have not been scanned and made available online, but you can still get them. For help, contact our Public Document Room. Contact information can be found here: http://www.nrc.gov/reading-rm/contact-pdr.html

comment #851 posted on 2011-04-29 22:58:56 by Kyle

> Reg guide 1.8 outlines the training requirements for SRO's and will be looked at on a case by case basis. If an individual without a bachelorette degree had a technical background in quality control would they be considered for the instant SRO program if they have three level III's from the American Society of Nondestructive Testing, a CWI from American Welding Society and over ten years of nuclear experience?

comment #693 posted on 2011-04-14 10:07:43 by TrueNorthist in response to comment #391

> Non sequitur. This is a typically overwrought and hysterical response. The resulting effects from the earthquake and subsequent tsunami on the power station in Fukushima will in all likelihood result in a statistically insignificant number of casualties *of any kind*. The facilities in Japan performed extremely well considering the magnitude of the event, and the operators and authorities there have responded in a most timely and effective manner. I would suggest that the preceding posters' angst would be more effectively directed at banning walking outdoors, as the risk of injury and death from that engaging in that activity is exponentially higher.

comment #829 posted on 2011-04-26 03:11:27 by bestcarins

> I agree with The resulting effects from the earthquake and subsequent tsunami on the power station in Fukushima will in all likelihood result in a statistically insignificant number of casualties of any kind

comment #980 posted on 2011-05-22 14:08:25 by Nancy Allen

> Nancy Allen May 22, 2011 at 1:56 pm Your comment is awaiting moderation. I want to add my concerns about the dangers of station blackout and loss of cooling accident. The disaster in Japan showed everyone that emergency safety protocols must be updated in the US. The present emergency response cannot be considered adequate to address all events that would cut power to the reactors for an extended period of time. There is a need for power generation other than just back up diesel generators and the 4-8 hour back up batteries. There should be an immediate effort by the NRC to have a power supply available for all natural catastrophic events including large magnitude earthquakes, tsunamis, tornadoes, hurricanes and more. If there is no emergency design criteria that can anticipate and fully prepare for this no new plants should be built and old ones relicensed only if they meet stringent NRC safety regulations with a back up alternative energy supply like wind, solar, geothermal and more.

comment #1021 posted on 2011-05-29 20:31:52 by wiwik

> I agree with this I want to add my concerns about the dangers of station blackout and loss of cooling accident. The disaster in Japan showed everyone that emergency safety protocols must be updated in the US.

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### A Full and Fair Hearing

posted on Wed, 04 May 2011 14:05:54 +0000

> [caption id="attachment_1253" align="alignright" width="300" caption="An Atomic Safety and Licensing Board Panel hearing."]

 [/caption] The public can become involved in the NRC's licensing process through many different paths. One of these is through hearings in front of the judges of the NRC's Atomic Safety and Licensing Board Panel (ASLBP). The ASLBP reports to the Commission and is independent of the NRC staff. The NRC offers hearings for the granting, suspending, revoking, or amending of any license. These licenses could be for nuclear power reactors or for the manufacturing, treatment, use, disposal, or storage of certain radioactive materials. Any individual or group whose interests are affected by an NRC licensing action may seek to participate in our hearings. These hearings are an avenue for the public to get a full and fair opportunity to raise concerns related to the licensing action. There are a few ways that members of the public can become involved in a licensing hearing. One of these is to submit a written request to intervene in the licensing action. Because this is a formal way to participate, there are a number of requirements that must be met before an individual or group can become involved in this way. For instance, an individual or group will have to explain their interest in the proposed NRC licensing action and also state their specific concerns and the reasons for those concerns. If a member of the public would like to be involved more informally, Licensing Boards often provide an opportunity either to make an oral statement or to submit a written statement on issues being considered at the hearing. Although these statements are not considered testimony or evidence, they can still help the Atomic Safety and Licensing Board make a decision. Finally, subject to some limitations, individuals and groups may sit in on, or in some instances watch, a live web stream of an NRC licensing proceeding. For some major NRC actions, even if there is no public participation, the NRC will still hold licensing hearings because of a "mandatory" hearing requirement under our governing statutes. This means that even without public involvement, the ASLBP or the Commission will conduct a hearing that evaluates whether the NRC staff has performed an adequate review and reached logical and factual conclusions. The ASLBP or Commission's review explores the staff's conclusions by asking questions and requiring additional information when needed. The Commission itself has decided to conduct the mandatory hearings on uncontested issues on applications for combined licenses (COL) for new reactors. The mandatory hearing process will begin after the NRC staff has finished its final environmental impact statement and the safety evaluation report. The Commission has set a four month objective for completing the mandatory hearing. The Commission will focus these hearings on the non-routine matters associated with each specific COL, such as unique features of the facility or novel licensing review issues. One recent mandatory hearing was held on January 25, 2011. The Atomic Safety and Licensing Board held the first part of a two-part mandatory hearing on an application by AREVA Enrichment Services, LLC, to construct and operate a gas centrifuge uranium enrichment facility in Idaho. Members of the public were invited to attend the proceeding in person in the court room in our headquarters facility in Rockville, Md., or to watch via web stream. There are a number of other mandatory hearings expected to take place in 2011. Stay tuned to our public website for information on dates, times, and places for those hearings: http://www.nrc.gov/reading-rm/doc-collections/aslbp/2011/ and http://www.nrc.gov/public-involve/public-meetings/schedule.html For more information on how to participate in hearings, please see our NRC regulations that govern the hearing process at 10 CFR Part 2, the "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders." The NRC recently proposed changes to Part 2 that are designed to promote greater fairness, efficiency, and openness in NRC adjudicatory proceedings. Those changes may be viewed at: http://www.gpo.gov/fdsys/pkg/FR-2011-02-28/pdf/2011-4345.pdf.

*Kimberly A. Sexton*
*Attorney, Office of the General Counsel*

**Comments**

comment #907 posted on 2011-05-08 18:50:05 by Len Skoblar in response to comment #889

> Conflicts of interest???? Jaczko worked for Harry Reid. Does a year removed from that lackey job really remove hos conflict of interest? Really? I'm afraid, as I've said before, your credibility is in freefall.

comment #906 posted on 2011-05-08 18:47:17 by Len Skoblar

> If the OGC is the group avising Mr. Jaczko regarding Yucca Mt, I would have to say you have no credibility. Speaking about fair and open hearings is just plain ironic, given the mockery you and your boss are making of this once-proud agency.

comment #889 posted on 2011-05-06 10:42:48 by Moderator in response to comment #882

> All employees of the NRC are subject to a number of laws and regulations on ethics. These laws are intended to prevent conflicts of interest involving the NRC and its staff – both current and former. These rules include criminal conflict-of-interest statutes and government-wide regulations on standards of conduct, financial disclosure, and post-employment. For instance, a criminal conflict-of-interest law prohibits employees, unless they receive a waiver, from participating in any government matter (including a rulemaking) that could financially benefit their spouse, minor children, or business associates. Employees also must disqualify themselves from participating in certain matters that could affect the financial interest of anyone the employee worked for in the previous year. The NRC has supplemental standards of conduct that prohibit certain employees from owning certain nuclear-related stock. Finally, former NRC employees – including Commissioners – are barred from representing a private company before a federal agency or

court on certain matters they worked on while at the NRC. Kimberly Sexton

comment #882 posted on 2011-05-05 01:57:31 by Thomas Levi

I take issue with your assertion that the NRC provides a full and fair hearing maybe you could reassure me. I noticed that the NRC will probably rule this year in favor of letting Southern Company put two new Westinghouse AP1000 reactors at its Vogtle site in Georgia and also at a site in South Carolina. I also noticed that Shaw Group is a half owner of Westinghouse. And I also noticed (I'm very observant aren't I?) that former NRC head Jeffery Merrifield was appointed a senior vice president of power operations at Shaw Group after he let his term expire in 2007. Now I'm sure plenty of people who benefited from actions taken on their behalf by Mr. Merrifield are still involved in "regulation" at the NRC. In light of this what assurances can the NRC give the public that any decision regarding the placement of Westinghouse AP1000 reactors at Vogtle won't be influenced by Mr. Merrifeilds time or connections at the NRC. Especially, considering the serious safety concerns sited by many of the world's leading nuclear experts regarding the safety of the AP 1000 design. Namely the separation of the metal containment from the concrete containment, allowing for the corrosion of the metal containment and radiation escaping from the vent hole in the top of the concrete containment vessel. Also how do you respond to the assertion that the NRC is a "captured" agency, ruling not on the safety of nuclear power but on the bottom line of the corporations it "regulates"? And do you have information on how often your former employees go to work for the very same corporations that they were just regulating while working for the NRC? I'm sure that I am in error in thinking that the NRC is captured by industry, if I didn't know any better the fact that the NRC has never denied an license extension request from a nuclear plant would seem to confirm this point, but I'm sure it's just a coincidence. Thank you for your time in responding and listing examples of where the NRC has put public safety before corporate profits.

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## Improving Public Confidence in the NRC

posted on Fri, 06 May 2011 14:47:53 +0000

In June 2010, the NRC released a Groundwater Task Force report providing a number of observations, conclusions and recommendations that the agency should consider in its oversight of incidents involving low level tritium leaks into groundwater at nuclear power plant sites. One of the themes of that report is the need to strengthen trust with the public by communicating promptly, effectively, and clearly regarding the NRC's response and assessment of such releases to the environment. The task force found that some stakeholders view tritium leaks as evidence of inadequate maintenance of the entire facility, which, in turn, casts doubt on the ability of the NRC and the plant to protect people and the environment. Some stakeholders have fear and anxiety regarding their health, even though previous leaks have posed a very low risk and radiation dose to individuals. The Commission recently met with a number of parties, including industry and environmental groups. To enhance stakeholder confidence, the NRC is considering several communication measures: 1) Communicating information on such events in a more timely manner and using plain language, color graphics and charts; 2) Clearly communicating what the NRC and the industry are doing to prevent such releases in the future, identifying the source(s) of such leaks now, and mitigating their impact on the environment going forward; 3) Putting the potential risks of such releases into perspective by comparing them to other typical radiation exposures (such as from the sun, radon, medical procedures) as well as comparing their relative risk to other risks accepted by society; 4) Training our staff to better communicate technical information and risks in layman's terms; and, 5) Requesting more detailed feedback on our communication of technical issues via our public meeting forms distributed at public meetings. What are your thoughts on this subject? What information would you like to see from the NRC? How would you like to see the information presented? In your opinion, what is the best way the NRC can provide you with useful and useable information on such topics? We appreciate any thoughts you can provide. Your ideas will help us consider ways we can improve the way NRC communicates and thus be a more effective regulator.
*Richard Barkley*
*Nuclear and Environmental Engineer, Region I*

**Comments**

comment #909 posted on 2011-05-09 09:54:48 by Hilario

These five points are very important. NRC is very much helpful according to nuclear power plant sites. So I think, these are enough for the people who needs. Thank you for this important post.

comment #899 posted on 2011-05-07 13:27:30 by Leon Whitney

Richard Barkley Nuclear and Environmental Engineer, Region I Subject: Tritium Leaks The NRC needs to describe whether tritium leaks are, or are not, expected operational occurences (such as small fires extinguished within 10 or so minutes). If the leaks are expected, then wouldn't they be discussed in the design basis? If not expected, then there would seem to be a design gap and/or a regulatory gap for these events. Just because the leaks are common does not make them normal occurrences or part of the design basis. Your plan of action seems to focus heavily on calming the public, but has little focus on explaining how the leaks occur, how they could have been or will be prevented, whether the reactor plant design bases are being violated, whether new NRC orders or regulations are being planned in response to the numeous and large volume around the country, whether existing regulations or plant licensing bases are being violated, whether the events are to receive enforcement discretion or escalated enforcement action, whether the staff plans to ask the licensees to come back into conformance with existing requirements (e.g., as was done under GL 2004-02 for a separate issue), etc.. In other words, the plan of action described in the NRC blog does not describe a robust regulatory response. Sincerely, Leon of Newark, Delaware (near Salem/HC, Peach Bottom, TMI and Limerick)

comment #905 posted on 2011-05-08 17:45:41 by Len Skoblar

Improving public confidendence in the NRC starts at the top. I'm afraid Mr. Jaczko has truly soiled the agency and its reputation by bringing politics so prominently into decison-making. He need to be removed.

comment #901 posted on 2011-05-07 23:13:29 by Tom Forgatsch

In the late 60s I use to work at LRL. We had excapes then of tritium from the tritium building on the lab. They had a very tall black smoke stack that allowed the tritium to miss the lab. and plate out on the hills to the east. There were stories among the employees of the lab buying a lot of sheep. They also had solar evaporation pans for low level radioactive fluids that would evaporate off the fluid and the pans would later be scraped out and put into 55 gal. drums and shipped to Handford, WA. The problem was the cyclone fence would not keep out the rabbits, snakes, birds, etc. We would on occasion see dead animals. This lack of transparency was control by the government, the lab. and the employees. That is part of the problem with NRC. The lobbyists throught the corporations controlled the lack of data. Just like Japan the people were lied to.

comment #910 posted on 2011-05-09 10:44:09 by Moderator in response to comment #899

The moderator has removed personal information from this comment, but the information has been passed onto the post author.

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### A Place on the NRC Website for Teachers and Students

posted on Tue, 10 May 2011 19:20:44 +0000


I'm not going to go into my age but when I was growing up there was no internet (shriek!) I had encyclopedias. Yes, I know for young people it is hard to fathom not having cell phones, computers, laptops and now the tablets or iPads. Today, the young have the "world at their fingertips" so they have instant access to information that will help with their education and their future career goals. Inquiring minds (teacher's too!) might want to check out the corner of the NRC website targeted to them. Student's Corner covers topics from what is nuclear energy to radioactive waste. There are games, glossary of terms and the Periodic Table of Elements. Teachers have access to lesson plans for instructional units and classroom activities. We also recently added the Nuclear FHIZ Kids that go with the book "A Journey to Your Future Make Discovering Your Career an Adventure." Check out the "Inside the NRC " video on the About NRC web page to find out fascinating facts about the NRC. Who knows, maybe you'll decide to follow a career path that will help protect the people and the environment.
*Kim English*
*Outreach & Recruitment Branch*

**Comments**

comment #932 posted on 2011-05-13 14:40:12 by Mic

Yeah I think is a good page for this day's kids and also more funny than encyclopedias. Good work

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### As the Water Rises

posted on Thu, 12 May 2011 21:12:17 +0000

Flooding along the Mississippi River Valley has sent thousands scurrying for safety. Amid the havoc, three nuclear power plants along the Mississippi are making preparations to deal with rising flood waters. If all goes as planned, they should be able to safely continue operating through the worst of the predicted flooding. Grand Gulf in Port Gibson, Miss., River Bend near Baton Rouge, La., and Waterford near New Orleans were designed and built to be able to withstand floods, tornadoes, earthquakes and other furies of Mother Nature. Plans are in place at all three facilities to ensure the protection of plant personnel, the public and the environment. NRC's resident inspectors at Grand Gulf have been monitoring preparations by Entergy workers. According to projections by the U.S. Army Corps of Engineers, the plant should be able to keep operating safely even as river levels rise. The plant is located 132.5 feet above mean sea level and the river is expected to crest at 95 feet on May 19. No safety-related equipment is expected to be affected by the flooding. But as a preventive measure, plant personnel are sandbagging and applying waterproof sealants to buildings and non-safety related equipment. Emergency diesel generators have been checked and re-checked as have emergency batteries that would be relied on in the unlikely event the diesels fail. Unlike at Fukushima, the diesels are located in water-proof buildings. Waterford, which is being re-started from an April 6 refueling outage, can continue to operate until waters reach the 27 foot level, which would affect the plant's water intake system. Current projections show the Mississippi River may reach this level if spillways and floodgates are not opened, but plans are in place to do so. The level at Waterford is 29 feet. All safety equipment at the plant is housed behind a walled-in enclosure that is more than 29 feet high. Even with a levee breach, flood levels would still be several feet below the top of this enclosure. River Bend sits 94.5 feet above mean sea level. The Mississippi is expected to crest at 57.5 feet on May 22. A vault housing non-safety related cooling water systems is located in a vault at the 51-foot level, but is designed to operate submerged. The licensee has installed a 7.5 foot tall dam on top of the vault, plugged all external penetrations, and installed sump pumps inside as an extra safety measure. NRC staff in our Region IV office are closely following flooding conditions along the river and

have plans in place to dispatch additional personnel to augment the resident inspectors if needed. There are currently no known impacts on the hundreds of industrial, commercial and medical users of radioactive materials licensed by the NRC in the affected areas along the Mississippi.
*Victor Dricks*
*Public Affairs Officer, Region IV*

**Comments**

comment #977 posted on 2011-05-22 04:46:04 by mark

The above post demonstrates the preparedness of government departments and the fore thought put into emergency situations - we can't prepare for everything, but we can prepare for the elements.

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### Clearing Away Some of the Smoke on Fire Protection Reporting

posted on Sat, 14 May 2011 23:27:16 +0000

One of the topics that keeps popping up in the ongoing coverage of U.S. nuclear power plants concerns how the reactors stay safe if a fire occurs. As simple as the concept is, there's enough going on under the "fire protection" umbrella that perhaps a little explanation is in order. Let's start with the bottom line -- every U.S. nuclear power plant complies with the relevant NRC requirements for protecting its reactor from fire hazards. There may be confusion over the "exemptions" sometimes issued to some plants under the NRC's least flexible fire protection approach, called Appendix R. Appendix R is effectively a one-size-fits-all approach for plants that are in fact custom-built projects. Newer plants tend to be built closer to Appendix R requirements, while older plants are more likely to have difficulty meeting the goals. The NRC knew from the start that the appendix wouldn't apply to every part of every plant, so plants were going to apply for exemptions where Appendix R didn't make sense. The NRC has a well-established process for reviewing exemption requests, which must have solid technical support in order to get approved. The federal court covering southern New York recently upheld the agency's process -- in fact, the court's ruling even noted the NRC rejects exemption requests if they're not justified. You can see an everyday example of exemptions at the DMV, when it comes to having "acceptable vision" for a drivers license exam. Since not everyone's vision falls in the acceptable range, DMV regulations allow people to wear glasses or contacts. This can be considered an "exemption" from uncorrected vision requirements that's still acceptable and compliant with the law. Even if a plant has exemptions from parts of Appendix R, the NRC is satisfied that plant has an appropriate overall fire protection program. Another problem is confusion between the exemptions and separate "compensatory measures" plants will put in place for specific issues until permanent solutions are in place. Exemptions are permanent in any case, and as we noted, plants must justify their requests with solid data. Compensatory measures, while they can be acceptable for extended periods of time, are not a basis for exemptions. As with exemptions, however, the NRC only accepts compensatory measures if they will provide acceptable fire protection capabilities. Compensatory measures also have an everyday example on the roads -- when a traffic light is malfunctioning, a police officer normally directs traffic at the intersection. Instead of the city closing the intersection until the traffic lights are fixed, officials compensate for the degraded traffic light in an acceptable way. Bottom line? The fix for an exemption or a compensatory measure has to be safe. Otherwise it won't fly with the NRC. The NRC will soon start receiving and reviewing applications for plants to switch to an updated fire protection standard, called NFPA 805, which could be described as a way to customize fire protection to differing plant situations based on risk. For example, the risk of fire in an otherwise empty room with concrete walls with electrical cable trays is less than for the same room with a barrel of lubricating oil stored in a corner. Under this new standard, plants use advanced fire analysis tools to determine where their fire protection resources are most needed. It has been tested at two plants with pilot projects. When plants transition to NFPA 805, their analyses can uncover new fire protection issues, and the NRC ensures those issues are appropriately handled as they’re identified. All new issues are accounted for with compensatory measures, and will either be fixed by a change to the plant or evaluated as part of the transition to NFPA 805. Since switching to the new standard is optional, the NRC uses its “enforcement discretion” in deciding whether to take action against plants that find new issues during the switch. That decision is made after the issues are identified and compensatory measures are put in place. There is no question that a fire at a nuclear plant can be serious business. The NRC takes it very seriously. In reading stories about the NRC’s fire safety program, it is important to remember that not all fires carry the same risk, and the risk depends on the size and location of a fire. And do not forget that each plant has its own fire department and trained local firefighters to call on for additional help. Going forward, the NRC Commissioners who set policy for the NRC recently voted on a proposal to be sure the NRC staff has the resources to more efficiently review NFPA 805 applications. "I think long-term this is a good program," Chairman Gregory Jackzo told a reporter recently. "We've seen from the pilot programs that it really enhances safety. And that's what this is all about, is making sure we're doing everything we can to have the right program for safety when it comes to fire protection." The NRC's work on fire protection, as with all its efforts in overseeing U.S. nuclear power plants, is meeting its goal -- ensuring the public remains safe.
*Eliot Brenner*
*Director, Office of Public Affairs*

**Comments**

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### Putting the Axe to the 'Scram' Myth

posted on Tue, 17 May 2011 15:03:15 +0000

The NRC glossary defines a “scram” as “the sudden shutting down of a nuclear reactor usually by rapid insertion of control rods.” But where did the word come from? One deeply engrained legend about the origin of the word dates to the first sustained chain reaction on December 2, 1942, at the Chicago Pile (CP-

1), the first atomic reactor developed for the Manhattan Project. According to the legend, Enrico Fermi created the acronym, Safety Control Rod Axe Man, for Norman Hilberry. It was Hilberry's assignment that day to kill a possible runaway reaction by using an axe to cut a rope to allow the backup safety control rod to drop into the pile. The axe-man story now has a life of its own. A search on Google for "scram" and "axe" yields 124,000 hits. Even the NRC's glossary attributes scram's etymology to the axe man story. Eleven years ago, Oak Ridge National Laboratories reported a fanciful variation of this story where Fermi, presumably unimpressed with the physical prowess of his fellow physicists, recruited a lumberjack from the Pacific Northwest to do the job. That version has now spread on the internet, and the acronym itself has mutated into Super-Critical Reactor Axe Man and Start Cutting Right Away, Man. Hilberry, as it turns out, only learned the story second-hand years later, which lends doubt to the axe-man version, and Hilberry's own recollection of the event didn't accord with the memories of several other participants. Leona Marshall Libby, the only female physicist present that day, wrote in her memoir that it was Volney "Bill" Wilson who called the safety rods "scram rods." She didn't explain why, but her crediting the term's invention to Wilson was supported by others involved in CP-1, including Warren Nyer. I contacted Nyer recently, and he was eager to tell the "scram" story, one that squares well with Wilson's reported version of events. Nyer's job that day was to be Hilberry's backup. If all safety systems failed, he and the other members of the "suicide squad" were to dump a liquid cadmium solution on CP-1 to poison the reaction. The axe-man story is, he recalls, "a bunch of baloney." But he did offer another explanation for the word. His recollection was that Wilson was assembling a panel that included a big red button. According to Nyer, someone asked Wilson the reason for the red knob. Wilson replied you'd hit it if there was a problem. "Well, then what do you do?" he was asked. Wilson reportedly replied "You scram … out of here." The word appears to have stuck. And so it seems likely that scram switches all over the world owe their names not to the nuclear industry's later penchant for acronyms, but to the slang of twentieth-century America.
*Tom Wellock*
*NRC Historian*

**Comments**

comment #945 posted on 2011-05-17 12:21:05 by William Tucker

> I guess I'll have to go back and edit my book, Terrestrial Energy. I put the swining axe story in there.

comment #949 posted on 2011-05-17 14:07:09 by Larry Dunlap

> I have electronic copies of a document called "The First Pile" which is a reprint of an official AEC document USAEC Report TID-292 original printing in March 1955 written by Corbia Allardice and Edward R Trapnell which describes the Axe Man. Additionally several Nuclear News articles, specifically "CP-1: The story of the first nuclear reactor" from the November 1992 issue of Nuclear News and "The etymology of "scram"" by Raymond L. Murray from the August 1988 issue of Nuclear News both of which discuss the "Axe man". As of August 2010 Mr Murray was currently a resident of Springmoor Retirement Center in North Raleigh NC. In his article he cites a reference to a personal letter from Mr Hilberry to himself tha may corroborate the Axe Man. If you like I can send pdf versions of all three of these documents to you for your research.

comment #951 posted on 2011-05-17 22:19:40 by duxx

> I have been amused by the use of acronyms in this industry. ATWS (Anticpipated Trip Without Scram) was an acronym built in part with a (now debunked) acronym.

comment #947 posted on 2011-05-17 12:24:17 by Mark Twain

> Yeah, I had Dr. Norm Hilberry for an NE course in 1982 at the University of Arizona. I seem to recall (I can probably dig up my class notes) him telling us about the cadmium solution. OTH, another NE prof. called him the "Axe Man". Hmm, time to find those class notes...

comment #948 posted on 2011-05-17 14:07:01 by Gary Callaway

> When part of a license class at Palo Verde in ~ 1984, Arizona Public Service contracted fundamentals training to Memphis State University. They povided a doctor Vogel (sp?) to teach us the biological effects of radiation. The good doctor had spent his carreer at Oak Ridge studying this and had performed many of the experiments that led to our current understanding. He regaled us with wonderful stories from his long carreer and then tested us as if we were medical students. I wouldn't have traded the experience for an easier class. I would estimate his age to be at least 70 when he taught our class. He said he was part of the team that achieved the original criticality. On a break, I asked him about the axe man and he said that there was, indeed, an axe man. He told me the person's name, but i did not recognize it, so I forgot it. He also said that the provision was useless. They did not know that a "runaway" reactor would not have allowed time for such a crude intervention, but it seemed like a reasonable precaution at the time. I didn't know him well enough to know if he was pulling my leg, but his response seemed to be serious.

comment #957 posted on 2011-05-18 08:00:09 by J. M. Floyd

> I need to know whether I have been living a (SCRAM) lie! I pray the NRC Historian will review these comments, conduct additonal research, and post an update soon. As Mark Twain (sorta) said: Those who do not read newspapers (and blogs) are uninformed. Those who do….. read newspapers (and blogs) are misinformed.

comment #959 posted on 2011-05-18 09:19:14 by Moderator

> Thank you so much for reading and responding to my post! I do have the sources Mr. Dunlap mentioned. Murray's article, "The Etymology of 'Scram,'" is the key source for the axe-man version of the word. It relies on Hilberry's letter where he recalls his version of events many years later. However, people are often not aware that Nyer wrote a letter in response to Nuclear News disputing Hilberry's story. Admittedly, this is a battle of memories, but I believe Nyer's version for two reasons: 1) Nyer confirmed his recollection of events with two other CP-1 veterans, including Bill Wilson. 2) Nyer and Wilson worked alongside each other daily in the construction of CP-1, and Nyer recalls being present when Wilson made the "scram" comment. Hilberry, according to Nyer, worked in administrative tasks on the project in a building away from the stadium and was unaware of the inside jokes that developed among the students, such as Nyer, working in the squash courts to assemble the pile. Hilberry only learned that he was called the "scram man" a number of years later. I should add that Hilberry did hold an axe that day (that part of the story is true), but the word scram has nothing to do with it. Tom Wellock

comment #961 posted on 2011-05-18 18:50:52 by Will Davis

> Well this helps put that old story to bed... doesn't it? I first heard the story of how this came about in my first Navy school, I think. Please tell me that my favorite acronym... CRUD ... is what I think it is. That would be shattering if it were not. (Chalk River Unidentified Deposits.)

comment #963 posted on 2011-05-19 10:14:43 by Dean Dillinger

> Will: It is claimed that the term "crud" originally stood for "Chalk River Unidentified Deposit", used to describe the radioactive scaling that builds up on internal reactor components, first observed in the NRX facility.[5] However, crud can also stand for "Corrosion Related Unidentified Deposit" and similar expressions. However, origin of the word "crud" is a Middle-English term from the word "curd" that is from about the 12th-13th century, so it's use as a description for radioactive scaling is at-best a "backronym."

comment #964 posted on 2011-05-19 13:07:55 by Moderator in response to comment #963

> As you point out, the word “crud” existed well before Chalk River. In the 1920s it was a slang expression for venereal disease. G.I.s in World War II commonly used the word for many diseases. The word was also used to denote corruption during World War II. So it seems likely that the nuclear industry appropriated the word, and the acronym followed. Tom Wellock

comment #966 posted on 2011-05-19 19:19:35 by Will Davis in response to comment #963

> Dean, that's exactly the story I'd heard behind the acronym... it makes it even hard to use the term "crudburst" without a smile now and again. However, it does seem now that the term isn't a true first-generation acronym, but an appropriated one. Still, the fact that one of the two acronym stories I learned early on is probably true is interesting in itself.

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### Who Does What in an Emergency Involving Radiation?

posted on Thu, 19 May 2011 17:14:05 +0000

The federal government, under the National Response Framework, plans for – and practices – responding to all kinds of possible emergencies. Under the framework, agencies are tasked with doing things based on their usual area of expertise and responsibility. It’s a system that works well. But it can be somewhat confusing for the public to know “who does what” during an emergency – especially an emergency that involves radiation. If an emergency involves a nuclear facility that is licensed by the NRC, we are charged with heading the federal government’s “technical response.” That means our nuclear experts and officials work directly with the facility operator to make sure the incident is ended as quickly as possible, and that the communities and environment around the site are protected. Meanwhile, the Federal Emergency Management Agency (FEMA) works with officials responsible for the communities near the incident to make sure their emergency response is appropriate, and offers help if needed. Who is monitoring the radiation? Monitoring is done by the Department of Energy (DOE), the Environmental Protection Agency (EPA) and interagency teams such as the Federal Radiological Monitoring and Assessment Center (FRMAC). The FRMAC is an important part of the radiation monitoring process. This team monitors, samples and assesses radiation in the United States. The FRMAC is led by the DOE initially, and then the EPA for site cleanup efforts. Members of this team come from many agencies, including DOE, EPA, the Department of Commerce, the Department of Homeland Security and the U.S. Army Corps of Engineers. A different team, the Advisory Team for Environment, Food, and Health, uses this radiation information to give advice and recommendations related to the environment, food, health and agricultural animals (especially dairy cows). This team includes experts from the EPA, Department of Agriculture, Food and Drug Administration, and the Centers of Disease Control. Other federal agencies and the Department of Defense are responsible for other parts of a radiological emergency response, too. While it may seem like an “alphabet soup” of responders, what it really means is the U.S. has a plan that puts the right experts in the right place to do what they do best on behalf of the American people. The NRC is proud to be part of that response.
*Sara Mroz*
*Emergency Preparedness Specialist*

**Comments**

comment #971 posted on 2011-05-20 23:19:08 by duxx

Some years ago I was working from a temporary building outside the protected area at an operating plant. The Gaitronics speakers in our building had been disabled for maintenance. As it happened one wednesday we had an IT tech onsite fiddling with one of the desktops and he was working through lunch to get back to corporate before quitting time. The weekly test of all emergency alarms went off at the usual 12:15 (no one could hear the SRO announcing the test), but the four different whoops, buzzes and sirens could clearly be heard by all in the office. The IT tech bolted to the door and said "What do we do now?". I told him to return to his seat and not to worry until his hair started falling out.

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### A Day In the Life of an NRC Materials Inspector

posted on Mon, 23 May 2011 14:55:51 +0000

An NRC inspector walks up to a pickup truck that has a strange oversized camper. Next to the truck sits a device that looks like a large metallic lunch box with bright yellow labels, except this lunch box has what appears to be 30-foot-long tubes stretching from each end like tentacles. She takes out her radiation survey instrument and it starts to register a faint, familiar chirp. The inspector has just stumbled upon a radiographic exposure device (camera) that contains a radioactive source (pill). Radiography is a type of non-destructive testing and can be compared to a type of mobile industrial X-ray service. The dense shielding within the camera surrounds the pill and protects those nearby from excess radiation exposure. Back to our inspector, she is surrounded by a field of large pipes stretching across the open landscape like capillaries moving the rich natural gas and oil resources from their barren origin in western Wyoming to the urban centers where they are needed. The pressures of the fluids in these conduits is high. Any defects or weaknesses in the system can lead to leaks, failure, or catastrophe. Similar to going to the doctor to get a chest x-ray, radiographers use the radioactive source to get images of the internal welds connecting the robust pipes. The resulting exposure, or image, can tell the engineers whether the pipe weld is weak and needs to be replaced, or if this one is sturdy and will get the contents to their destination safely. The inspector completes her surveys; no readings were out of the ordinary. She discusses security controls with the radiographers; the radioactive source must not fall into the wrong hands. She verifies that the public is safe; the procedures were followed to ensure that no one was allowed near the radiation.
*Jason Razo*
*Region IV*

**Comments**

comment #984 posted on 2011-05-23 11:00:15 by Jean Staton

This is a good description of an industrial radiography jobsite. I'm glad to see comments concerning our industry and not just medical.

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### Working to Keep Our Web Info Current

posted on Wed, 25 May 2011 15:13:14 +0000

With so much information on the NRC website, it is difficult to keep everything up to date. The agency staff works hard every day on licensing actions, certifications, technical reviews and such, which means information can go out of date almost as soon as we post it. But we've recently done several updates on important materials and wanted to point them out. We recently overhauled the NRC's Uranium Recovery page to include current information on the staff's reviews of several applications for new uranium recovery licenses out West. We also recently made a change to our Fact Sheet on Biological Effects of Radiation. The pie chart showed where Americans get their average annual radiation exposure from, and was taken from a 1980s-era report by the National Council on Radiation Protection and Measurements (NCRP). The NCRP had updated the graphic in 2009, almost doubling the amount of average annual radiation exposure because of the rise in medical procedures. We had used the 2009 graphic in our brochure on Radiation Protection and the NRC and in our Radiation Protection section of the NRC website. But we had missed it in the fact sheet. It was an easy update, and today, for now at least, the fact sheet is current. Another fact sheet we recently updated is Decommissioning Nuclear Power Plants. This is a lengthy one that contained information specific to each plant currently being decommissioned. The problem was that work continued after the last update was posted in January 2008, so we worked with the technical staff to make sure the information there is current. The decommissioning folks have been busy the last three years! We work hard to keep these materials up to date. But if you see something on the NRC's website that seems inaccurate, out-of-date, or contradictory to another item or statement we make elsewhere, please let us know so we can correct it! (An e-mail to OPA.Resource@nrc.gov will do the trick.) And be patient – we're trying to keep up!
*Dave McIntyre*
*Public Affairs Officer*

**Comments**

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### Lessons Learned from Japan -- and Elsewhere

posted on Fri, 27 May 2011 12:54:38 +0000

The recent earthquake and tsunami spurred one of the world's most serious nuclear accidents. It was a defining moment in the history of nuclear power and it is a catalyst for the NRC to review how we do our job. But it's important to note that the Japanese emergency is not the first catalyst for dramatic changes in the way the NRC works. While our regulations have consistently changed and improved over time, there were three paradigm-shifting events that brought about dramatic developments in our approach to nuclear risk, safety and security. The first

of these events was the Browns Ferry fire in 1975. The incident started when a plant employee, using a candle to search for air leaks, accidentally set a fire. This was a standard way to check for leaks in coal-fired power plants and – as crazy as it sounds now -- it had been carried over to the nuclear industry. (It may surprise you to learn that one of the preferred methods for plant personnel to extinguish these not-uncommon fires was by beating them out with their flashlights.) In the aftermath of the Browns Ferry fire, the NRC instituted a number of changes to ensure that nuclear power plants more effectively prevented fires and could react more successfully if they did happen. The Browns Ferry fire also spurred the development and incorporation of modern risk analysis into the NRC's nuclear safety program. The second of these defining events was the Three Mile Island accident in 1979. As the most serious accident in the history of the U.S. nuclear industry, this event precipitated changes in nuclear safety so numerous and far-reaching that it's difficult to overstate the impact. We overhauled our approach to emergency management, developed systematic approaches to evaluating operational experience, shifted toward more risk informed regulation, significantly expanded our resident inspector program, and reorganized the NRC. But perhaps the most important insight we gained from Three Mile Island was the central role of people in plant safety. Before this accident, engineering and equipment were considered the foundation for nuclear safety. The Three Mile Island accident, with its operator errors, changed that. This important insight led to an increased focus on human performance, and the revamping of training and staffing requirements for operators. Even today, more than 30 years later, the importance of people to plant safety continues to resonate throughout the NRC and the nuclear industry. The third major event was the terrorist attacks of September 11, 2001. Although not a nuclear event, the attacks spurred the NRC to take immediate, aggressive actions aimed at the security of the nation's nuclear facilities and materials. The long-term effect of September 11th extends far beyond those early steps. By keeping us focused on the ever-evolving and highly dynamic nature of the threat environment, 9/11 has left an enduring imprint on our approach to nuclear security. These three significant events transformed how we understand the nature of nuclear safety and security, and what we needed to do to protect the public. The events in Japan have the potential to raise new concerns and offer lessons that may evolve our understanding of nuclear safety. I can assure you that our ongoing safety review will be systematic and methodical, and conducted with an appropriate sense of urgency. I expect there will be lessons learned and changes made as a result of this tragedy.
*Gregory Jaczko*
*Chairman, NRC*

*Moderator note: An op-ed by Chairman Jaczko on nuclear safety is available here: http://www.huffingtonpost.com/gregory-jaczko/ensuring-nuclear-safety_b_867666.html.*

**Comments**

comment #1017 posted on 2011-05-29 15:43:29 by Amy

> Wake up. Nuclear power is not only unnecessary but down right stupid. What? Does the entire planet have to become unlivable before you "jeniuses" figure that one out? Yeah, I know, you were bought and paid for a long time ago. You suck just like all the other puppets of the power and oil industry. Sick, greedy jerks. Hope all your children enjoy the world you are helping to destroy. Get a soul, if not a brain.

comment #1052 posted on 2011-06-06 01:40:02 by John in response to comment #1037

> Moderator, I apologize if I came off a little hard on the NRC in my post on 6-2-2011, and thank you for posting the link I requested. I just hope the NRC understands the public's (those of us who have a clue anyway) justifiable concern that these plants cannot survive an extended large scale power outage. Some of us live near your plants and our families have lived on the same land for generations, and we are very concerned that an accident at one of your facilities could leave us all out in the cold. None of us relish the thought of running for our lives with a bunch of other scared people. If a large scale power outage were to occur it is reasonable to believe that the government couldn't contain the situation, much less deal with multiple nuclear meltdowns. It is believed that fukushima melted down 3.5 hours after it lost cooling power. The general public may have forgotten about it, but the NRC knows that there has been little improvement in the situation in Japan. Multiple simultaneous meltdowns at your plants have the potential to cause the US to cease to be a functional nation state. This is unacceptable, especially when the utilities will not be held responsible for the damage that is caused to our land, you know what I'm talking about. Please act aggressively to make every plant independent of the power grid and petroleum industry in regard to emergency cooling. Also cut them from the internet to at least mitigate the possibility of cyber attack directly against the plant. It is unrealistic to believe that the power grid can be made safe from cyber attack so make your plants independent from the power grid.

comment #1019 posted on 2011-05-29 17:09:52 by Studio di grafica e fotografia

> Hope we'll find a lot of good alternatives to nuclear power...

comment #1034 posted on 2011-06-01 10:35:20 by Vincent

> The only lesson that should be learned is that we have to put an end to nuclar power someday before it puts an ent to us, the sooner the better. Radiation pollution is something no one cannot hide from, even those who used to profit from nuclear power immensely. I don't say that we should turn off the reactors now. But we need to move to alternative directions and it should be one of our primary tasks and not just a way to entertain some scientific minds. And safety issues need to be better controlled.

comment #1037 posted on 2011-06-02 01:32:34 by John

> The more I learn of nuclear power plants the more I am amazed that they were ever built. This is a prime example folks of what

happens when industry controls government and government regulators. Chairman Jaczko said that they used to check for air leaks with candles, and beat out the fires this invariably caused with FLASHLIGHTS. This is the kind of thought that went into these plants when they were constructed. We are very lucky that we haven't had a disaster here. But it's only a matter of time. When people use the "safe" nuclear argument they fail to realize the industry is only around 50 years old, and the consequences of one disaster lasts centuries. You guys should look at this article http://www.spiegel.de/international/world/0,1518,765949,00.html It's about how the people in a village in Japan are being affected by the nuclear disaster there. Read it and know this could be happening to you and your families and friends. It is only a matter of time. This village is 40km from the plant and the radiation level is higher than in the Chernobyl exclusion zone. The Chernobyl exclusion zone is only 30km and they had NO CONTAINMENT around their reactor. There are 23 of the GE mark I containment systems in the US just like the one that has FAILED in Japan. But the NRC insists they are safe. There is also currently a serious safety flaw at all US plants that prevents them from being cut from outside power or being left without operators. The plants have backup diesel generators, but no one can 100% guarantee that they can be resupplied with fuel in a disaster. The NRC ASSUMES that any power outage will be short and they will be able to get fuel for the generators. Did anyone else's parents tell them what ASSUMING does? The potential exists for power outages lasting years. Mainichi press reported last week that one reactor melted down 3.5 hours after it lost cooling power. A lot is riding on the NRC's belief that power will not be out for long . http://mdn.mainichi.jp/mdnnews/news/20110523p2a00m0na019000c.html Thankfully I heard that one foundation is doing the NRC's job for them. There is a petition open now for public comment (PRM-50-96) that addresses the dangers of long term power outage to the reactors and spent fuel pools. It is NRC-2011-0069 on the regulations.gov site. Please post a comment on it then maybe the NRC will do it's job and make these plants safe. Moderator, please post a link so people can get to the petition on the regulations site. I feel kind of bad asking you to do something after getting on your case so bad, but I'm really looking out for you too. I know your corporate "benefactors" (cough, cough,... bosses)have probably promised you guys a place in one of their bunkers in the unlikely event that their plants lose power and self destruct. But you have to think, even if us serfs are the only ones with radiation raining down on our heads how are you going to eat in the bunker? Most of the US farm land and water will be poisoned for centuries if just a few of your plants implode. That's a long time to wait to grow food again. I hope those corporate bunkers have a deep pantry.

comment #1041 posted on 2011-06-02 16:23:29 by Moderator in response to comment #1037

Here is the link requested: http://www.regulations.gov/#!docketDetail;D=NRC-2011-0069

comment #1045 posted on 2011-06-03 00:30:06 by Thomas Levi in response to comment #1037

Thanks for those links John they were enlightening and thanks moderator for posting the link to that petition. An interesting point was brought up. The nuke plants can't depend on power to come from the grid. They must have plans and technologies in place on-site that can keep cooling going for years. While all that waste is stored in the spent fuel pools they have to be cooled. The pools are more dangerous than the reactors, and have no containment. Chairman Jaczko brought up 9/11, a hostile attack. If he says that this caused changes in policy then I hope the cyber attacks in the news lately have give you pause. In the last week, both Lockheed Martin and Northrop Grumman have fallen victim to cyber intrusion. The goal of these attacks appears to be to steal information about defense systems. These are two of the most advanced defense companies in the world, it is safe to conclude that their cyber security is leaps and bounds above that of the power industry. The power industry makes electricity not weapon systems, but if a nuclear plant were attacked the devastation that it can cause would be worse than if all of Lockheed and Grummans weapon systems were turned against us. In past years it has been admitted that power plants and the power grid have been targets of probing attacks via the internet. It is safe to believe that these probes were designed to find vulnerabilities to be exploited in the event of hostilities with the US. If these defense contractors can be hit anyone can be hit. This includes the power grid. There are hundreds of companies that own parts of the power infrastructure. If a hacker gets access to anyone of them there is no telling what mayhem they can cause. Some government studies conclude that 75% of the power grid can be disabled by cyber attack for months. I hope you at the NRC realize that this will knock out petroleum refining for that long too. And what is it that you are counting on to run the diesel generators for cooling if the power is out? Plants must be made to survive extended blackout and it must be planed that no fuel will be coming for the generators. Last week it was reported that a hole had been found in the security of the software that protects the Siemens technology that runs safety features at power plants and on the electric grid. This hole could allow someone to take over the systems at a plant or destroy the grid. If there is one hole there are more. I would not be surprised in the least, if right now, at this moment there is a 14 year old in Southeast Asia playing with the cooling valve on one of our reactors in the US, from his laptop. I don't want to know what you are doing with cyber security but you better be doing something NRC. Even if you defend the plants you can't defend the grid. Your plants must be walk-away safe. If hackers can take down Sony's Playstation Network they can take down our grid. I just imagine that the Playstation network had better security than some of our electric utilities.

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**Regulating Domestically, Thinking Globally**

posted on Tue, 31 May 2011 15:03:46 +0000

The NRC's Office of New Reactors is mostly focused on nuclear power in the U.S. But we also have a role to play in the global nuclear regulatory community. For example, we have regular meetings with the nuclear regulators of other countries, where we exchange information on "best practices," challenges ahead and ways to communicate more effectively. We also participate in conferences around the world where we inform the public and our peers of our activities, and gain valuable insights into the best practices of regulators around the world. And we support activities that allow us to cooperate with our peer regulators and provide assistance to new regulators organized by the International Atomic Energy Agency, an arm of the United Nations, headquartered in Vienna, and the Nuclear Energy Agency (NEA), a part of the Organization for Economic Cooperation and Development, based in Paris. Meanwhile, we are participating in an important international initiative called the Multinational Design Evaluation Program. The program's goal is to share information that will strengthen our reactor

design reviews. To that end, NRC staffers are working with their contemporaries in other countries on reviewing AREVA's Evolutionary Power Reactor and Westinghouse's Advanced Passive 1000 (AP1000) Reactor. These reactor designs are slated to be used by U.S. companies interested in building new reactors. By sharing this information, the NRC is collaborates directly with regulatory authorities in Canada, China, France, Korea, the Russian Federation and the United Kingdom, among others. We also are a significant partner in the Working Group on the Regulation of New Reactors, a relatively new group formed by the Committee on Nuclear Regulatory Activities (part of NEA) to encourage sharing information on licensing new reactors and overseeing their construction. The bottom line is that NRO is key to keeping important information about nuclear power plants flowing around the world. This sharing of information and experience benefits all the countries that rely on nuclear power for their electricity needs.
*Bob Jasinski*
*Senior Communications Specialist*

**Comments**

comment #1031 posted on 2011-05-31 14:56:47 by Nancy Allen

> I am concerned that the NRCs Senior Communications Speciialist never mentions the word "SAFETY" in this message which should be a major concern for worldwide nuclear regulators, right?