OPSMPEm Resource

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U.S. NRC Blog

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The NRC Continues to Support Japan's Recovery Efforts

posted on Mon, 01 Aug 2011 14:55:46 +0000

The U.S. government – including the NRC – continues to support Japan as that country works to recover from the tragic effects of the March earthquake tsunami. The NRC continues to monitor events at Fukushima Daiichi and maintains a small team of experts in Japan and at NRC headquarters who track the latest developments. Whenever necessary, these teams are supplemented with additional NRC engineering and scientific specialists to support the U.S. Embassy in Tokyo and the government of Japan. Tokyo Electric Power Company (TEPCO) and the Japanese government are still in the active accident mitigation phase of this incident. TEPCO has established a "roadmap" for their recovery and declared success on the first step of their roadmap on July 19. TEPCO's first step was to make sure the radiation dose around the Fukushima site steadily declined. They are now focusing on Step Two, involves managing the site for the long term and preparing for decommissioning the plants. Meanwhile, Japanese government officials are focusing on reuniting families separated as a result of evacuations around the plant. Last month, Goshi Hosono visited the NRC and met with Chairman Jaczko. Mr. Hosono, previously special advisor to the Japanese prime minister and now the state minister in charge of the Fukushima crisis response, expressed his gratitude for the assistance of the NRC following the accident. Chairman Jaczko extended sympathy to the people of Japan in dealing with the difficult circumstances, and briefed Mr. Hosono on NRC's ongoing review of U.S. nuclear plants. Mr. Hosono discussed the Japanese government's continuing efforts to deal with the challenges posed by the damaged Fukushima reactors and the report Japan submitted in June to the International Atomic Energy Agency. Last week, we watched the path of a typhoon, which was eventually downgraded to a tropical storm. Thankfully, the storm weakened before it hit Fukushima Daiichi and the site only experienced some heavy rainfall. We will continue to provide updates on the NRC's activities in support of Japan periodically on this blog.
Amy Bonaccorso
Senior Communications Specialist

Comments

comment #1784 posted on 2011-08-05 12:34:55 by David

I'm glad to see that we are doing all we can to assist Japan in their time of need. I just hope others around the world are helping out also.

comment #1783 posted on 2011-08-05 12:25:04 by asparaguscutter

Alleged coverups continue to plague the Fukushima nuclear crisis. Three top ministry officials face job loss.Separation of NISA from other ministries is a probability for a more independant regulatory body. A governmental independant regulatory body which is independant of the regulated and othe government agencies is the ultimate of benefit for the citizens of this nation

comment #1737 posted on 2011-08-03 05:25:02 by jamesparkerrrr

Japan had suffered a lot due to tsunami in the month of march this year. Many nuclear plants get damaged due to tsunami. But now it is recovering very fast. You are working a very commendable work for saving the world.Keep it on...

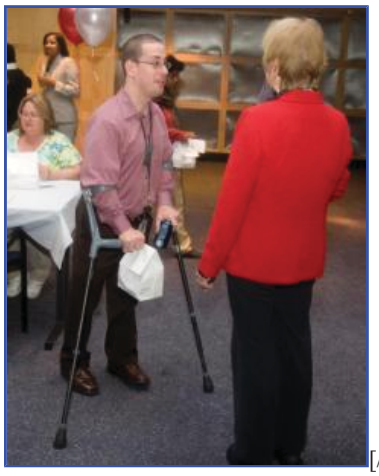
comment #2047 posted on 2011-08-30 01:02:01 by fitness online course

It's nice to know countries have helped Japan recover from a serious and tragic disaster!

Employing People with Disabilities

posted on Wed, 03 Aug 2011 16:31:39 +0000

[caption id="attachment_1532" align="alignright" width="236" caption="NRC Employee Matthew Whorral participates in the National Disabilities Employment Advisory Month luncheon hosted by the Advisory Committee for Employees with Disabilities in October 2010."]

 [/caption] The NRC works hard to recruit and employ people with disabilities. We work with community outreach groups, advertise positions in a variety of publications of interest to those with disabilities, and participate in career fairs sponsored by organizations concerned with disability issues. We even have a special coordinator and e-mail address for those with disabilities to contact the agency.

The NRC provides reasonable accommodations to remove workplace barriers for people with disabilities. These accommodations may include specialized computers and other assistive technology or equipment, telework and other flexible work schedules, and sign language interpreting services. The agency also has a formal mentoring program and employees with disabilities are encouraged to participate in this program to discuss their career goals and aspirations with an experienced staff member. In addition, we have career development and leadership programs that greatly benefit employees with disabilities. Disabled individuals interested in work opportunities at the NRC should send their resume to Disability.Resource@nrc.gov .

Peggy Etheridge
Disability Selective Placement Coordinator

Comments

comment #1948 posted on 2011-08-21 16:17:14 by French Translation

> Great news, it can be often overlooked that those with a disability may also need a translator too. Can you elaborate on what "reasonable accommodations to remove workplace barriers" is about please?

comment #1806 posted on 2011-08-07 19:39:56 by Bangla news

> Very good to know!

comment #1872 posted on 2011-08-12 10:31:20 by Corinne

> What sort of jobs do they do? This is really cool of the NRC.

comment #1900 posted on 2011-08-15 09:30:09 by Moderator in response to comment #1872

> People with disabilities can do any job that a non-disabled person can do; however, some need accommodations to assist them. All individuals must be qualified for the position regardless of their ability or disability.

comment #1972 posted on 2011-08-24 11:47:39 by Moderator in response to comment #1948

> The purpose of reasonable accommodations is to, in a sense, level the playing field for individuals with disabilities so that they have the opportunity to take advantage of the same equal employment opportunities as those who do not have disabilities. The duty to provide reasonable accommodation is a fundamental statutory requirement because of the nature of discrimination faced by individuals with disabilities. Although many individuals with disabilities can apply for and perform jobs without any reasonable accommodations, there are workplace barriers that keep others from performing jobs which they could do with some form of accommodation. These barriers may be physical obstacles (such as inaccessible facilities or equipment), or they may be procedures or rules (such as rules concerning when work is performed, when breaks are taken, or how essential or marginal functions are performed). Reasonable accommodation removes workplace barriers for individuals with disabilities. An easy example of a workplace barrier may be the following: A person has a disability and as a result they have to take medication every morning by 8:00 a.m. The medication causes them to be a little light headed for up to one hour after being taken. As a result the employee cannot drive until they feel better. The employee's regular tour of duty is 8 a.m. to 4:45 p.m. Now, because of the medication he or she cannot arrive to work at the start of the tour of duty (workplace barrier). A reasonable accommodation may be to allow the employee a flexible work schedule where he or she can arrive to work by 10 a.m. and work later to make up that time. With the approval of the new work schedule, the workplace barrier is removed.

comment #2000 posted on 2011-08-26 05:27:39 by Thomas Hack

It's very commendable that the NRC is putting forth this effort, it's a huge step forward for the US, good work!

Months Later . . . Concerns About Effects Remain

posted on Fri, 05 Aug 2011 17:17:58 +0000

It’s been almost five months since the accident at the Fukushima Dai-ichi nuclear plant in Japan, but the phones still ring and letters and e-mails still arrive at the NRC. Although the level of worry has declined, concerns remain. Some members of the public are still concerned about possible effects from Fukushima on the American people. One member of the public, for example, “perceives” radiation fallout where he lives in Oregon. Another refuses to purchase any import from Japan for fear of contamination and will eat no fish caught on the west coast. Some people believe the lessening media coverage of Fukushima means the public is purposefully being kept in the dark. Other members of the public still offer creative ways to fix the leakage and contamination problems at Fukushima. Of course, there are those concerned the Fukushima accident could happen at U.S plants. Concerns include the age of our nuclear plants, proximity of some plants to geological fault lines, and the ability to evacuate all the people if there were an accident. The Office of Public Affairs helps those with radiation fears understand that no unsafe levels of radiation reached the U.S. and explains to those with creative solutions that the NRC is not a channel for possible “fixes” to the crippled plants in Japan. Importantly, we also provide information about nuclear plants in the U.S., how the NRC regulates them to maintain safety and how the NRC is looking at “lessons learned” from the accident. We will continue to respond quickly to public inquiries, which can be directed to OPA.Resource@nrc.gov .
Elizabeth Stuckle
Public Affairs Officer

Comments

comment #1785 posted on 2011-08-05 13:35:19 by Thomas Saporito

Over time, the entire country of Japan will be evacuated because of the spread of radioactive contamination in the food chain and in the water table. Japan will ultimately become the nuclear waste depository for the entire world! Americans depend on the U.S.NRC to protect them - let's hope the recent Associated Press investigative report about the NRC's complacency was received by the agency as a needed WAKE-UP call? Thomas Saporito, Senior Consultant

comment #1812 posted on 2011-08-08 11:52:17 by Moderator in response to comment #1789

Information about the EPA’s radiation monitoring in the U.S. is found here: http://www.epa.gov/enviro/facts/radnet/index.html Radiation readings from around the Japanese nuclear power plants at Fukushima, (in English) are posted here: http://www.mext.go.jp/english/incident/1304082.htm

comment #1789 posted on 2011-08-06 02:27:41 by Jane Swanson, Mothers for Peace

The Moderator comment of Aug. 5 is an insult to the readers. The problem is not that the public is worried. The problem is that the planet is contaminated; there is no way to "recall" the radioactive elements that CONTINUE to spew out of some of the Japanese plants. Since neither the NRC, the EPA, or the DOE is forthcoming about radiation readings following 3/11 in Japan, California, Idaho or anywhere else, the public is correct to be skeptical of claims that "no unsafe levels of radiation reached the U.S.". Furthermore, the NRC's definition of "unsafe" does not match that of the medical community. The NRC is NOT applying lessons learned from the Task Force it appointed to study this disaster. 12 sensible recommendations for U.S.plants were made by the Task Force that the NRC appointed to study the Fukushima disaster, but the NRC shows every sign of stalling and NO signs of implementing any of the recommendations.

comment #1973 posted on 2011-08-24 12:09:28 by Susan R in response to comment #1812

Thank you so much! I am looking at moving to Japan for one year and this is my biggest concern. It's not worth any amount of money if I'm cutting my life short with high levels of radiation. Thanks for the links; I truly appreciate it!

comment #2002 posted on 2011-08-26 06:50:21 by Thomas Hack

The damage was much worse than they originally thought, I believe the PM just announced that he is stepping down due to "his government’s perceived insufficient response". A sad situation.

What is the ACMUI?

posted on Tue, 09 Aug 2011 15:55:37 +0000

The Advisory Committee on the Medical Uses of Isotopes (ACMUI) is an official advisory committee that comments on changes to NRC medical regulations and guidance. The committee also evaluates certain non-routine uses of radioactive material, provides technical

assistance in licensing, inspection, and enforcement cases, and brings key issues to the attention of the Commission. This committee was established in 1958 to represent a variety of technical perspectives and provide independent advice that is factored into NRC's decision making. (The NRC oversees regulations for hospitals and physicians using radiocative materials in medical treatment.) Who sits on the ACMUI? Thirteen health care professionals sit on the committee. They include a nuclear medicine physician, a nuclear cardiologist, a medical physicist in nuclear medicine, a medical physicist in radiation therapy, a radiation safety officer, a nuclear pharmacist, and two radiation oncologists. The committee also includes a patients' rights advocate, a Food and Drug Administration representative, an Agreement State representative, a health care administrator, and a diagnostic radiologist. Members go through a formal nomination and selection process and are appointed to four-year terms. They may serve up to two consecutive terms, for a maximum length of eight years. The ACMUI holds meetings twice a year at NRC headquarters in Rockville, Md., in additional to several teleconferences a year. Most committee meetings are open to the public and any member of the public may ask to make an oral statement during the meeting. More information and a meeting schedule can be found on the ACMUI web page.
Sophie Holiday
Alternate ACMUI Project Manager

Comments

comment #1867 posted on 2011-08-12 02:46:06 by business letter sample

> My uncle is a nuclear physics professors and he does all kinds of work with isotopes all the time. He worked all the up in Canada at the Chalk River facility when he was first starting out. I think he said something about how they provide the majority of the isotopes to a lot of medical institutions around the globe. Anyways, very interesting stuff!

comment #1847 posted on 2011-08-11 06:19:45 by zanzibar Paradise

> All are expert professionals and we expect the best from them all

comment #1820 posted on 2011-08-09 12:19:00 by asparaguscutter

> Inclusion of the name and organization of each member and source of provided buget and funds would further increase the transparency of this transparent functional organization.

comment #1835 posted on 2011-08-10 08:42:52 by Moderator

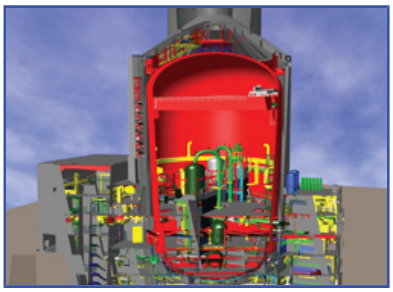
> The biographical information on each member is available here: http://www.nrc.gov/about-nrc/regulatory/advisory/acmui/membership.html The ACMUI is funded by the NRC.

comment #1869 posted on 2011-08-12 04:16:28 by Tony

> Play its role, ACMUI

One step closer to the AP1000 finish line

posted on Thu, 11 Aug 2011 18:47:38 +0000



The Nuclear Regulatory Commission has recently reached two milestones related to the Westinghouse AP1000 reactor design, but we're still months away from any final decisions on these matters. The first milestone deals with the NRC's review of the design itself, to see if it can be approved, or certified, for U.S. use. Certification is required before the NRC can consider licenses to build and operate the design. The agency's Office of New Reactors completed its technical work on the AP1000 by issuing a 1,500-page Final Safety Evaluation Report (FSER) last week – it will be available on the NRC's document database under accession number ML112061231. The technical review leads to the final step, where the agency issues a rule that declares the design certified. The New Reactors staff began this process by issuing a proposed rule in February, and the public provided more than 13,000 comments on that rule through early May. The staff are accounting for those comments, as well as information Westinghouse submitted after the proposed rule was issued. The staff must draft a final rule based on all that information and provide the rule to the agency's five Commissioners to consider and vote on; this step is expected to occur in the next few weeks. The Commissioners' vote, expected by the end of the year, will provide direction to the staff that determines if and when the NRC finishes the certification process and approves the AP1000. The second milestone involves the first Combined License application that uses the AP1000, for the Vogtle site in Georgia. The New Reactors staff, based on their AP1000 work, completed their technical review of safety issues for the Vogtle project and issued a separate FSER last week. That document, combined with a Final Supplemental Environmental Impact Statement, marks the end of the staff's review. As with design certification, however, it's not the end of the licensing process. The agency's rules call for a "mandatory hearing" to examine whether the staff's work supports the legal conclusions necessary to issue a license. The Commissioners are going to conduct that hearing, based on the Vogtle FSER and environmental review, later in September. The Commissioners will consider the results of the hearing when rendering a decision late this year on whether the conclusions can be made. If the AP1000 final certification rule has been approved, the Commissioners will issue their decision immediately. If the rule is still under

discussion, the Commissioners must hold their decision until the rule is approved. The bottom line is that the NRC still has months of work to do before either the AP1000 or the Vogtle license can be approved.
Scott Burnell
Public Affairs Officer

Comments

comment #1859 posted on 2011-08-11 16:51:09 by Moderator

> If a thorium-based reactor were submitted for NRC review and licensing, we would review it – and if approved – regulate it per our existing processes. However, to date, no one has submitted a thorium-based reactor for NRC review. Scott Burnell

comment #1877 posted on 2011-08-12 15:51:47 by Moderator in response to comment #1871

> The NRC will review the groups' submissions and respond appropriately in each current proceeding. If one of these submissions falls under the "late-filed contention" category it goes to the various ASLB panels. The administrative law judges will examine whether the relevant requirements have been met before deciding on whether to incorporate the issues into the existing proceedings. If one of these submissions is styled as an addition to the previous petition to suspend all new reactor and license renewal activity, it will be handled under that process. The petition itself was made available to all the parties in the related proceedings so everyone had the opportunity to respond. The Commission has been considering the petition for several weeks. It's useful to consider the agency's repeated statements that any Fukushima-related regulatory changes will apply to all U.S. reactors. It's also important to remember the task force report's very direct statements regarding the AP1000 certification process: "By nature of [its] passive designs and inherent 72-hour coping capability for core, containment, and spent fuel pool cooling with no operator action required, the … AP1000 designs [has] many of the design features and attributes necessary to address the Task Force recommendations. The Task Force supports completing [the] design certification rulemaking activities without delay." Scott Burnell

comment #1857 posted on 2011-08-11 15:19:29 by asparaguscutterClyde H Stagner

> A moritorium on reactors except Thorium would be great to behold-no meltdowns-a use for all those used fuel rods. A nation that developed the atomic bomb surely has the technological and scientific skills to provide this nation with the safest nuclear electrical power available. What is NRC's position on Thorium reactors?

comment #1871 posted on 2011-08-12 09:57:32 by Joseph King

> Recently, environmental groups filed contentions that the NRC's task force report on Fukushima be taken into account before the NRC can act on the AP1000 Design Certification. These groups believe the environmental impact statement (EIS) for AP1000 fails to satisfy the National Environmental Policy Act and issuing a design certification for AP1000 before a supplemental EIS is complete would be illegal. Will this contention be reviewed by the Atomic Safety Licensing Board or the Commission? What is the time limit to rule on this contention? Can the NRC staff still work on the final rulemaking during this time? If the NRC staff has to issue a supplemental EIS, how much time will this add to the process to complete the AP1000 final approval since the Commission seems to be having "challenges" with the task force recommendations on Fukushima when I read the Commission Vote Sheets?

comment #1898 posted on 2011-08-15 08:08:22 by Joseph King in response to comment #1877

> I was not asking about other proceedings. I am only asking about the AP1000. You wrote quite a few sentences, but you did not answer my questions. Please answer my questions, directly and simply.

Renewing Licenses for Nuclear Power Plants

posted on Mon, 15 Aug 2011 13:28:46 +0000

The NRC issues licenses that allow nuclear power plants to operate for up to 40 years – a time frame originally chosen for economic and antitrust considerations, not technical limitations. The NRC allows plants to continue operation for an additional 20 years beyond the original 40-year period if licensees prove that there are appropriate aging-related programs in place to assure safe operation throughout this period. Getting a license renewal from the NRC is no small feat for nuclear power plants. The renewal application is reviewed along two tracks: one for safety issues and another for environmental issues. The nuclear power plants must prove they have addressed the technical aspects of plant aging and must also evaluate the potential impact on the environment if the plant operates for another 20 years. The NRC closely reviews the application and conducts multiple inspections to verify what the plant reports. There are several opportunities for the public to question environmental impacts or how aging will be managed during the additional years of operation. Additionally, the Advisory Committee on Reactor Safeguards independently reviews the licensee's application and the NRC staff's analyses prior to a final determination on a plant's license renewal request. Some are wondering why the NRC is continuing to relicense plants when our own task force hasn't completed work on all the lessons learned from events at the Fukushima Daiichi Nuclear Power Station. What's important to realize is that the NRC will apply the recommendations from this review, as appropriate, for any changes deemed necessary to improve the safety of operating plants, regardless of whether the plants have been issued renewed operating licenses. So issuing a renewed license now does not exempt the plants from any future requirements that may be issued. And, of course, all nuclear power plants are subject to an ongoing systematic and thorough NRC oversight to ensure nuclear plant equipment continues to meet safety standards – whether the plants

are brand new or 40 years old. This constant NRC oversight ensures a plant will operate safely throughout its life.
Brian Holian
Director of License Renewal

Comments

comment #1904 posted on 2011-08-15 15:27:30 by Melanie

undoubtedly the key issue is the supervision of the plants at all times, beyond having to renew your license eventually.

comment #1905 posted on 2011-08-15 16:27:52 by A-1 Auto Transport

It's comforting to see that there is a good amount of regulation involved in the re-licensing process of these plants. I am curious though...how often are these plants inspected by safety officials once they are licensed?

comment #1908 posted on 2011-08-16 10:05:46 by Moderator in response to comment #1905

On average, the NRC spends more than 6,000 hours of inspection effort at each operating reactor site per year.

comment #1910 posted on 2011-08-16 12:44:35 by in response to comment #1902

If you have been involved in reactor license renewal for any length of time, you would know that there has been significant research into how brittle reactor vessel materials become over time. For an accurate review of the AP hatchet piece you reference as if it was a scientific study, see the NEI website. Kevin Muggleston Senior Consultant

comment #1911 posted on 2011-08-16 13:24:58 by Larry in response to comment #1908

So the NRC spends over 16 hours per day in inspection efforts, 365 days per year, per reactor?

comment #1902 posted on 2011-08-15 14:33:45 by Thomas Saporito

The NRC is simply "rubber-stamping" 20-year license extensions without any rigorous inspection activity to determine exactly how brittle nuclear reactor vessels have become after 40-years of neutron bombardment. The agency is recklessly endangering public health and safety with this unwarranted nuclear experiment. A recent investigation by Associated Press found that nuclear reactors were only designed to operate safely for a 40-year time period. Thus, the NRC's assertion otherwise is simply disingenuous and not true. Thomas Saporito Senior Consultant

comment #1901 posted on 2011-08-15 09:58:46 by asparaguscutteras

Historical meteorlogical data used by a nuclear power plant to compute radiation doses is archaic in a climate changing environment particularly when empirical on going data is available or can be required to be available.

comment #1964 posted on 2011-08-23 13:45:36 by patrick in response to comment #1910

@ anonymous AKA Kevin Muggleston, senior consultant Don’t you think it is a little disingenuous calling the AP report a hack job, then putting the NEI forward as an unbiased(or “correct”) source? That reeks of the pot calling the kettle black to me. The investigation for the AP report began well before the nuclear industry blessed us with the catastrophe at Fukushima. It found among other things that when a plant can no longer meet the historically accepted safety regulations the NRC simply relaxes the regulations until the plant can pass. I can cite examples if you wish. This is similar to what happened in Japan, school children could no longer go to school without exceeding the previous “safe” radiation limit, so the government simply raised what was deemed “safe” ,problem solved. The NEI is a blatant pro-nuclear energy front group. They barely even try to deny this. They are against any safety improvements that will cost their corporate paymasters any money. To put them forward as a reliable source is insulting to the intelligence of the people who actually pay attention to this issue. Case in point, there was a petition filed with the NRC this year, PRM-50-96, that would have made the nuclear industry implement technology to cool their spent fuel pools in the event of long term damage to the US electrical grid. That it is possible for the grid to be destroyed for years is not debatable. But if anyone wishes to contradict this statement feel free, however realize that I can document what I say, can you? The fixes that would have prevented spent fuel fires a numerous nuclear plant simultaneously are available now and are low cost as far as a corporation is concerned. The NRC received 97 comments on this petition from nuclear industry workers, members of the public living in the kill zone of US plants, and citizens of other countries that would be affected if there was a melt down at a US plant. OF THE 97 COMMENTS 96 WERE POSITIVE, CAN YOU GUESS WHERE THE NEGATIVE COMMENT CAME FROM, THAT’S RIGHT IT CAME FROM THE CORPORATE FRONT GROUP KNOWN AS THE NEI. So now members of the public let’s see what the NRC will do. Will it address the serious danger of long-term black out and all the positive comments by citizens and stakeholders or will it follow the advice of the corporate front group known as the NEI. Is the NRC a “captured” agency that is controlled by the industry it is suppose to regulate or does it really serve the “people”? The proof will be in the pudding as they say. We are waiting NRC what say you about the petition PRM-50-96? Will you do what is best for the people or the corporations?

comment #1965 posted on 2011-08-23 21:29:32 by Patty Apostolides

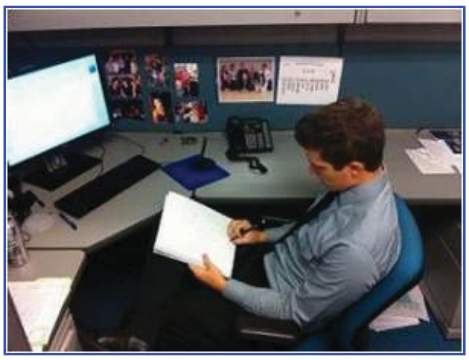
> The older the nuclear power plant, the more spent fuel rods piled up. That means that these 40+ year old nuclear power plants have a LOT more radiation involved than younger ones. And those spent fuel rods are sitting in water. With several nuclear power plants located on major fault lines in the U.S., is the NRC aware that it is just a matter of time before another Fukushima happens here? NRC, why have you turned a blind eye on all those spent fuel rods that are associated with these aging nuclear power plants. Why is that issue not addressed? They should have been placed in permanent storage all these years and instead, are sitting in storage with much, much more radiation than we care to know about - those storage facilities for the spent fuel rod were only intended to store them for a few years and not for 20 more years. A response will be appreciated.

comment #2003 posted on 2011-08-26 07:39:18 by Thomas Hack

> 40 years seems like a long time doesn't it?

The NRC: A View from a Summer Intern

posted on Thu, 18 Aug 2011 19:21:13 +0000



After graduating from Florida State University with a Bachelor of Science in Mechanical Engineering in Spring 2011, I was fortunate enough to be hired as a summer intern at the Nuclear Regulatory Commission. My experience at the NRC so far has been everything I was hoping for and more. I was given a technical project to develop a computer model that would benefit the NRC staff members in their future safety reviews. The model takes spent fuel data as input and gives the transient thermodynamic heat load seen in a spent fuel pool as an output. I will continue to work on this project next year while I pursue a master's degree, because I am involved in a joint university-NRC sponsorship program. This will effectively combine oversight of my college professors with my NRC mentors. In addition, I have been working with various staff members in my branch, the Systems Balance of Plant Branch in the Office of Nuclear Reactor Regulation, on different research items and reviews of spent fuel pool equipment. I also took several training courses this summer that ranged from what the NRC does to the engineering concepts behind nuclear reactors. Through all of this, I have been able to apply what I learned in both training courses, as well as my college courses, to real scenarios in the NRC. Working with the NRC put engineering into a different perspective for me. I always assumed engineering was focused on design, but seeing how engineering principles are applied to the regulation of nuclear power plants in order to ensure public safety introduced me to a whole new side. Because of this, I have shifted my career goals to the nuclear power and safety field. I hope that by the end of this summer, my completed work will add to the NRC's mission of public safety, and further my engineering knowledge and skills.
Jerry Tyberghein
NRC Summer Hire Student

Comments

comment #1925 posted on 2011-08-18 16:25:38 by asparaguscuttera

> Congratulations to NRC and you! Does Fla State ,or any other university,have a three hour nuclear and radiation course for engineering curiculum? Have you evaluated the use of spent control rods in thorium reactors?

comment #1926 posted on 2011-08-18 16:49:54 by EnergySolutions Foundation

> Thank you for sharing your internship experience at the NRC. It sounds like the NRC provided you with a valuable internship experience that really helped you to identify the best career path for you going forward. Congratulations on a successful internship.

comment #1927 posted on 2011-08-18 18:01:21 by Brian Fraser

> Jerry: I am glad you are enjoying your summer internship at the NRC. I have no doubt that you will learn a lot and enjoy thought provoking challenges. Here are other fascinating challenges that nuclear engineers should seriously consider: 1. Design and run experiments on long-known but neglected methods of destroying the radioactivity in nuclear waste. 2. Design a way to scale up these processes so that they can be used on-site at a nuclear power plant. 3. Design a way to use these methods INSIDE a nuclear reactor so that the radioactivity in the fuel rods can be neutralized even BEFORE the rod assemblies are removed from the reactor (!). A good place to start might be my article "Adventures in Energy Destruction" at: http://scripturalphysics.org/qm/adven.html and the references in the article "Transmutation / Remediation of radioactive elements" at: http://scripturalphysics.org/qm/issues.html#CincinnatiGroup Destroying radioactive waste on site obviates concerns about reprocessing, packaging, transportation, storage, and worries about terrorism and off-site accidents. This is certainly consistent with NRC's mission of public safety. May you have a truly enriching experience at the NRC!

comment #1937 posted on 2011-08-20 12:50:55 by Lyrics

Thank you for sharing your internship experience at the NRC. It sounds like the NRC provided you with a valuable internship experience that really helped you to identify the best career path for you going forward. Congratulations on a successful internship.

comment #1924 posted on 2011-08-18 15:30:44 by Thomas Saporito

It is enlightening to learn that young minds are coming to bear on nuclear safety issues centered around spent nuclear fuel. However, please keep your young mind open to the fact that the NRC has miserably failed over the years to protect public health and safety by "rubber-stamping" 20-year license extensions to existing 40-year commercial nuclear plant licenses - despite the fact that the metal in the nuclear reactor vessel has become dangerously brittle after enduring 40-years of neutron bombardment. This is an unwarranted "nuclear experiment" on the part of the NRC recklessly endangers public health and safety! Thomas Saporito Senior Consultant

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An NRC Staffer Reports from Afghanistan

posted on Mon, 22 Aug 2011 12:30:59 +0000

Robert Carlson, a branch chief in the NRC's Office of Nuclear Reactor Regulation, is also a Brigadier General Select in the U.S. Army Reserves. In May, he was called to active duty to serve as the chief of staff for the U.S. Agency for International Development delegation in Kabul. Below is part of a letter he sent to work colleagues about his experiences in Afghanistan.

Dear Friends:

I've been in Afghanistan approximately six weeks and have traveled the entire country from east to west and north to south. Afghanistan is very rugged with harsh environmental and primitive, subsistence living conditions. Daily temperatures this summer in the southern and western parts of Afghanistan bordering Pakistan and Iran are consistently over 110 degrees, with steady winds that feel like a hot blow dryer and cause perpetual dust clouds. I have not seen one drop of rain since I arrived.

After completing many weeks of pre-mobilization training with USAID and the military, I was deployed on June 24th for Afghanistan. What a shock to the senses when I arrived in Kabul! Besides the heat and air quality being quite oppressive, everything was in a state of lock-down due to security concerns posed by the Taliban. I quickly jumped into an armored SUV and headed through the city to the US Embassy. Many stretches of the drive were reminiscent of the movie "Mad Max," with an apocalyptic backdrop of bombed out buildings and piles of rubble, armed guards and military vehicles positioned every 50 meters along the main road and multiple security check-points.

Within the first week of assuming duties as Chief of Staff of USAID, I went on three missions with the Ambassador to various locations around the country. In one instance we started taking incoming mortar rounds during a meeting – quite the wake-up call! In another area our helicopter had to take evasive maneuvers to elude potential incoming fire – rough on the stomach if you don't like roller-coaster effects! Quite a contrast to what I'd been doing a month early -- sporting a coat and tie and working in the air conditioned offices of the NRC.

My typical work schedule is 6 1/2 days a week, 14 to 16 hour days. The days are long and nights are short, and the weeks seem to run into each other after awhile. It's very easy to lose your sense of time here. I'm fortunate to have a private 8x12-ft room with a small toilet, sink, and shower. Most of my military brethren are two to three persons per similar living area with no latrine facilities in the room. My room is in a "container" building surrounded by sandbags and concrete barriers, and the roof is reinforced to protect against mortar fire.

As part of my job, I attend a lot of the high-level meetings with visiting U.S. Senators, high ranking military officers and Afghan government officials. Often the focus of these discussions is on the US's ability to help build capacity among the Afghans to become self-sufficient after we withdraw. However, corruption and graft within the government, ethnic tensions, an ongoing insurgency and a very low national literacy rate are very challenging issues.

Still, I am happy to be here serving my country in a way quite different than how I was serving while working in the NRC. I do hope to be home and back at my office soon.

Bob Carlson

Comments

comment #1960 posted on 2011-08-23 01:16:19 by BR

Dear Sir, I would like to voice my deep thanks for your service to our country. In both of your roles, at home and in military service, you are in controversial positions. I do not understand how it is that you can face such dangers, or possible dangers, on a regular basis. I am grateful that there is someone who can, and support you as you work to encourage peace. Be safe and please return home sound. Barbara R. Rutgers

comment #1959 posted on 2011-08-22 17:57:21 by Curt de la Cruz

Thank you for sharing and opening up my eyes in what you and our American troops face each day in Afghanistan. While it is easy to lose site of the importance you are making there, your candid overview of your service has refreshed my hope that you and the troops come home safely. Thanks for your military service.

comment #1958 posted on 2011-08-22 15:48:51 by James Greenidge

I appreciate your service and grit to work literally under fire. How sober the situtation is there dawned on my high school niece in a conversation with one of the many thousands of Pakistani cab drivers here in NYC. She proposed one way to defang the Taliban was to educate Afghan females to the point of shipping and schooling them here and sending them back to enlighten others home with women's rights and global perspectives so no daughter, sister, mother or wife of a Taliban member would never ever kowtow and humble to the lethally macho Taliban mindset. The Pakistani cabbie grimly told her that such girls and women would never see the first dawn after arriving home in Afghanistan. Worst, others as he concured. She was totally heartbroken at the seeming hopelessness of it. Keep up the good work, sir! James Greenidge Queens NY

comment #1953 posted on 2011-08-22 10:09:20 by asparaguscutter

AM certain that the other Americans in Afghanistan also hope to be back in the US soon. Thank you for your military service!

comment #1954 posted on 2011-08-22 11:20:47 by Dean Chaney

Thanks for your service Bob. Dean Chaney CHP

comment #1952 posted on 2011-08-22 09:14:01 by Joseph King

Dear Brigadier General Select Carlson: I would like to personally thank you for your service to our country. I wish I could do more than just give you my thanks, but I am just an average Joe and I cannot send more troops to help you. I will pray for your safe return as well as your fellow soldiers.

comment #1970 posted on 2011-08-24 03:31:52 by ClickbankScam

What an honor to have people like yourself serving such a great country. Respect to you sir and hopefully all this war will end soon.

comment #2149 posted on 2011-09-06 14:51:53 by Brian

First of all thank you for your service. Thank you also for your description of your day to day life and the climate there. I don't think we American's understand or even stop to think of what it's like to do what you do everyday. God bless you and God bless America.

Follow Us On Twitter

posted on Wed, 24 Aug 2011 17:17:25 +0000

The NRC will begin sending news and information via Twitter beginning today. The NRC Twitter account can be reached at http://www.twitter.com/NRCgov or through the NRC website. Tweets will announce new press releases, speeches, reports, public meeting notices and other content posted on the NRC website. Other information, such as important notices in the *Federal Register*, will also be tweeted. The NRC will still be maintaining its Lyris Subscription Service and RSS feeds, though, for those who still wish to receive information that way. Next month, the NRC expects to launch its new YouTube channel, which will join this blog as another social media outlet being used to enhance communication, collaboration and information exchange in support of the agency mission.
Eliot Brenner
Public Affairs Director

Comments

comment #2034 posted on 2011-08-28 15:03:41 by Roger Kolic

I will be interested to see what the NRC says on Twitter.

comment #1987 posted on 2011-08-25 07:23:37 by Thomas Hack

Twitter is great tool for organizations like the NRC. It's high time that everyone caught on.

comment #2256 posted on 2011-09-15 03:30:17 by Suchmaschinenoptimierung

Im already following you at Twitter, thank you for making it easier and more comfortable for most users to follow NRC

NRC Inspectors Keep Their Eyes on North Anna Nuclear Power Plant

posted on Wed, 24 Aug 2011 19:12:39 +0000

A day after an unusual earthquake in Virginia, the NRC continues to assess operations at the North Anna nuclear power plant, which is a few miles from the epicenter. The plant had originally declared an Alert, the second-lowest of four emergency classifications, when it lost electricity from the grid following the quake just before 2 p.m. yesterday. North Anna's onsite diesel generators provided power to the plant's safety systems until grid connections were restored at approximately 5:40 p.m. that same day. The plant downgraded to an Unusual Event at approximately 11 a.m. today, before canceling its emergency declaration altogether. North Anna personnel are currently assessing the plant's normal operating systems and structures. The NRC's resident inspectors at the plant are observing the plant's activities and providing first-hand information to the agency. In light of the quake's strength and proximity to the plant, the NRC will soon decide whether to conduct a follow-up inspection, aimed at determining how the quake compares to what the plant was designed to withstand. The NRC also contacted Eastern U.S. industrial and medical facilities that possess significant quantities of nuclear materials. All of these locations confirmed their materials are secure. Twelve other Eastern U.S. nuclear power plants had declared Unusual Events while they examined their sites immediately following the quake. All 12 had canceled their event designations by yesterday night and all continue to operate normally. Nuclear power plants are built to withstand environmental hazards, including earthquakes. Even those plants that are located outside of areas with extensive seismic activity are designed for safety in the event of such a natural disaster. The NRC requires that safety-significant structures, systems, and components be designed to take into account the most severe natural phenomena historically reported for the site and surrounding area. The NRC is also continuing a multi-year effort to have U.S. nuclear power plants use advanced methods and updated seismic information to re-examine how the plants would respond to earthquakes.
Scott Burnell
Public Affairs Officer

Comments

comment #1975 posted on 2011-08-24 16:49:06 by Jim Greenidge

> I wonder how many oil, coal, and chemical facilties were "obliged" to take this post-quake evaluation and inspection routine. In lieu this recent East Coast quake that had media hearts a-flutter that it'd pop nuclear plants like overinflated balloons, it's notable that the media has very effectively squashed that Diablo Canyon, in 1989 ate a 7.9 earthquake hitting San Fran. It did knock the plant off, because of vibration, but by 8 AM the next morning the plant was generating at power, and crews were resetting power lines. NONE of the coal or gas generators, was able to start up for weeks because of the damage in the region. Why the omission, fair and accurate mainstream media? James Greenidge Queens NY

comment #2044 posted on 2011-08-29 10:25:16 by Moderator in response to comment #2030

> As the NRC recently outlined in a statement on the agency website, "The NRC requires U.S. reactors to withstand a predicted level of ground motion, or acceleration, specific to a given site. Ground acceleration is measured in relation to "g," the acceleration caused by Earth's gravity." In other words, plants are designed to site-specific seismic requirements. The North Anna site has both "rock" and "soil" characteristics. The parts of the North Anna plant meeting the "rock" definition must be able to withstand at least ground motion of 0.12g. The parts of the plant meeting the "soil" definition must be able to withstand at least 0.18g.

comment #2030 posted on 2011-08-28 09:58:38 by Evelyn Gettys

> What level of earthquake is the plant design to? Is there a generic level that US plants are designed to or does it vary from plant to plant?

comment #1988 posted on 2011-08-25 08:43:56 by Thomas Hack

> Good to know nothing happend to power plants, such a shame about the Washington Monument though.

comment #2105 posted on 2011-09-02 20:12:50 by Bill Sterling

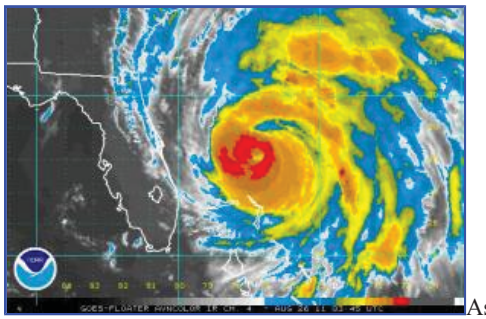
> I noticed there was no schedule for predicted start-up in this statement.

comment #2288 posted on 2011-09-20 14:37:09 by Buck Johnson

> The safe and ongoing generation of electrical power is a concern to all of us. I continue to be amazed at how politicized this is, despite the fact that in this day, electricity is as much a right and essential for our society to function as the freedom to vote. But nuclear generation of electrical power seems to be the fall guy again and again. When will we ever learn?

NRC Preparations for Hurricane Season Enable Agency to Respond Quickly

posted on Fri, 26 Aug 2011 12:36:09 +0000



As Hurricane Irene roars up the East Coast, the Nuclear Regulatory Commission staff has prepared for the challenge and awaits landfall. The annual hurricane season runs from June 1 to Nov. 30 and the NRC staff routinely tracks each storm from formation until dissipation, constantly evaluating whether it could pose a threat to U.S. nuclear plants and other NRC-licensed facilities. As Irene approaches the mainland, Region II in Atlanta and Region I outside Philadelphia are providing regular updates to the NRC's Headquarters Operations Center in Rockville, Md. These briefings include information about staffing of the regional Incident Response Centers, assignment of additional staff to supplement the NRC resident inspectors at the potentially affected plants, and actions underway to ensure continuous communications with NRC-licensed facilities along the projected path of the storm. The NRC's regional offices have already made sure that appropriate equipment, including satellite phones, are available and operational. Before hurricane season even begins, the staff ensures that hurricane response training, computer programs and emergency contact information are all up to date. NRC inspectors also confirm that nuclear power plants in hurricane-prone areas have completed their extensive hurricane preparations. When a storm such as Irene forms and its projected path shows possible impact on a coastline, one or more of the NRC's regional offices begins continuous hurricane tracking using the resources of all federal agencies and commercial weather forecasting services. Within 48 hours of expected hurricane force winds, NRC officials are dispatched to the State Emergency Operations Centers. NRC regional and headquarters personnel are identified and placed "on-call" to respond if needed to any storm-induced emergency. Normal and back-up communications channels are routinely tested. About 12 hours before the arrival of hurricane force winds, the agency will begin receiving continuous status updates from all of the NRC-licensed facilities in the hurricane's path. Communications links will also be established with state emergency response officials and other federal response agencies. During the storm's landfall, NRC staff maintains close contact with the licensee staff and with NRC resident inspectors on site. If normal communications are lost, back-up communications systems are used. Following the hurricane, the NRC inspectors will help assess the extent of any damage to the facility and, if necessary, respond to any storm-induced problems. The agency also works closely with the Federal Emergency Management Agency to determine when evacuation routes are passable and offsite emergency response organizations will be sufficiently recovered from the hurricane response to resume normal activities. We all hope Hurricane Irene and all storms have little effect on NRC-regulated facilities and all other U.S. interests, but in any case, our advance preparation allows our staff to respond quickly and effectively.

Joey Ledford
Roger Hannah

Office of Public Affairs
Region 2

Comments

comment #2071 posted on 2011-08-31 13:55:55 by Moderator in response to comment #2069

We posted an update on the effects of the hurricane on August 29th.

comment #2069 posted on 2011-08-31 12:49:23 by Jeremy Spencer

Now that its pretty much passed, what was the outcome? Any serious damage??

comment #2006 posted on 2011-08-26 10:25:06 by Cathy

Are any of the reactors currently scheduled to shut down BEFORE the storm hits them?

comment #2007 posted on 2011-08-26 11:21:44 by Cathy in response to comment #2005

This is exactly what public information is telling me. They are not going to close any reactors down. We will just wait and see if there are any nuclear accidents first. Sigh.

comment #2008 posted on 2011-08-26 11:53:35 by Moderator in response to comment #2006

Each plant has procedures that detail the actions it is required to take in preparation for severe weather. While the specifics vary from plant to plant, all would be shutdown before a hurricane hit the site.

comment #2004 posted on 2011-08-26 09:25:35 by Claire

What do the nuclear plants do and what are they required to do

comment #2005 posted on 2011-08-26 10:01:14 by Moderator

> Plants have procedures that they follow in advance of a storm possibly hitting the site. The procedures, which vary from plant to plant – generally have plant staff conduct walk downs of all outside areas to ensure equipment that could become a potential missile hazard is tied-down, placed indoors, or moved out of the protected area. Additional workers might be brought to the site in advance of a storm. NRC inspectors are assuring that those procedures are being followed and that plants are taking adequate precautions. They'll assure plants follow their tech specs regarding plant operation during a storm.

NRC Updates Meeting Information for Next Week

posted on Fri, 26 Aug 2011 19:38:12 +0000

Hurricane Irene has affected one NRC-related meeting for certain, and the staff has provided additional details for another meeting. Due to the expected effects of Hurricane Irene, the National Academy of Sciences has canceled its Aug. 29 meeting on the NRC-sponsored cancer risk study. The NAS will reschedule the meeting and provide updates on its website. The NRC staff have updated the notice for a meeting scheduled for Wednesday, Aug. 31, where stakeholders and the public will comment on a staff proposal to act "without unnecessary delay" on several Japan Task Force recommendations. The new schedule has a revised agenda and a notice for the opportunity for written comments. According to the updated notice, members of the public may submit written comments on the Near Term Task Force recommendations 2, 4, 5, 7, 8, and 9 through Friday, Sept. 2, 2011. Comments can be submitted at http://www.regulations.gov/under docket ID NRC-2011-0196. Stay tuned for other public meetings or Commission meetings that may be affected by weather events.
Scott Burnell
HQ Public Affairs Officer

Comments

comment #2083 posted on 2011-09-01 15:10:28 by Used

> Our thoughts go out to the victims and their families affected by Hurricane Irene,

comment #2142 posted on 2011-09-06 06:03:33 by sara prestiti INPDAP

> a hug from Europe to those affected by Hurricane Irene, I hope Obama fulfills its commitment to best serve the victims.

Nuclear Plants Safely Weather Hurricane Irene

posted on Sun, 28 Aug 2011 15:43:54 +0000

Hurricane Irene lingered in the Mid-Atlantic Saturday like a dinner guest who wouldn't leave, soaking the region with rain and pounding it with wind. Throughout the storm, the NRC has kept watch over the nuclear power plants in her path. Initial reports show that only one nuclear plant in the Mid-Atlantic experienced any issues as Irene passed. Unit 1 of the two-reactor Calvert Cliffs plant in Lusby, Md., shut down automatically late Saturday evening after heavy wind ripped some siding off a building. The siding struck a transformer, knocking it offline, and that caused a turbine to trip, which in turn triggered the reactor shutdown. As of Sunday morning, the reactor was safe, there was no release of radioactivity, and NRC inspectors onsite were helping plant personnel inspect and secure the facility. Unit 1 terminated its "unusual event" declaration early Sunday morning. Unit 2 remains operating at 100 percent power. As Irene moved up the coast, the Oyster Creek plant in Toms River, N.J., which was directly in the projected storm path, shut down in anticipation of experiencing hurricane-force winds. Millstone, further north in Connecticut, reduced power in anticipation that it might also have to shut down. These precautionary moves demonstrate the focus of the NRC and industry on maintaining the safety of nuclear power plants in extreme circumstances such as hurricanes. None of the plants in areas hit by the storm on Saturday lost offsite power from the grid. However, several plants reported some of their emergency sirens were knocked offline by power outages. All plants have back-up options for such a situation. The NRC's Office of Public Affairs handled numerous media inquiries about the status of the plants. The BBC World News even cited Fukushima as evidence of what a natural disaster can do to nuclear power plants. There were of course two huge differences between the double whammy that hit Japan and Hurricane Irene. First, none of the projected wind speeds or storm surges even came close to threatening the levels that the nuclear power plants in Irene's path were designed to withstand. And, of course, we could see Irene coming - there was time to prepare and send additional NRC inspectors to the plants before the storm hit. Other questions focused understandably on when Calvert Cliffs 1 and Oyster Creek will be able to resume operations. Unfortunately, it's easier to shut down a nuclear power plant than it is to start one up again. There are protocols the plants must follow to ensure that everything is ready to operate again. We'll have more about what plants must do before restarting in a future blog post.
David McIntyre
Office of Public Affairs

Moderator: This post has been slightly revised from the original.

Comments

comment #2032 posted on 2011-08-28 13:19:31 by Jim Greenidge

"Nuclear Plants Safely Weather Hurricane Irene" As if there was any doubt?? Says something when the media BELIEVES windmill advocates saying windmills can "naturally" take hurricanes better than nuclear plants! Where o where are the nuclear proponents in the media when you need them?? James Greenidge

comment #2055 posted on 2011-08-30 18:43:53 by Bill Sterling

We get our power from North Anna. The feed goes right by the town of West Point. Politicians were very quiet on this one! We don't need to know.

comment #2053 posted on 2011-08-30 15:49:00 by Moderator in response to comment #2046

Nuclear plants typically operate at 100 percent power and are not ramped up and down each day to meet time-of-day electrical demand. Nuclear plants have tight limits on how fast they can heatup and cool down the reactor vessel during startups/cooldowns to avoid large thermal stresses on the metal. While a hydro plant can go from 0 to100 percent quite rapidly, a gas turbine or a large diesel generator takes slightly longer, and very rapid startups cause premature wear of these machines (e.g., like starting your car on a cold day, then flooring the accelerator). Coal plants do take a while to restart and reach full power since they run on a steam cycle and must heatup a lot of water, as well as avoid overstressing their boiler tubes. Grid operators take a number of steps to manage the sudden loss of a large electrical unit. Some of the ways they do it is by having plants online providing a so-called “spinning reserve” (they are running, but at a reduced power level so they can ramp up quickly). Other plants such as hydro units can also ramp up quickly as you mentioned. Since electrical systems are interconnected via large transmission lines, they can also pull in power from neighboring systems if necessary. Nuclear power plants have procedures that they follow when starting up a plant. How long it takes to restart depends on what caused the shutdown in the first place. In the case of Calvert Cliffs, which tripped offline Saturday night when a piece of siding struck a transformer, causing a turbine trip, which in turn caused a reactor trip, workers needed to assess the condition of equipment, make repairs and complete tests before returning to power. At Oyster Creek, where operators conducted a controlled shutdown as a precaution, the plant began the process of restarting not long after Hurricane Irene made its way past the Jersey Shore. There was no equipment damage, so the plant was able to restart sooner.

comment #2036 posted on 2011-08-28 20:43:37 by Kaye Swain

Thank you so much for this interesting update. As a member of the Sandwich Generation, caring for elderly parents and babysitting grandchildren, my "duties" led me to the East Coast for three years. We have since moved again towards the west, but have several friends and relatives that were impacted by Hurricane Irene and one of our concerns were these power plants. What great news to hear that all is well. And how interesting to learn part of the reason for the delay in getting the power back up. I appreciate this very much.

comment #2046 posted on 2011-08-30 00:00:01 by Bob Connor

How long does it take to restart a nuclear plant and why so long? Is it hard to get it "heated up" again becaues they are so large? I know a hydro or gas plant can be started right away but doesn't a coal plant take a long time too? Also, what happens when a nuclear plant goes "off line" suddenly the system loses 1000 megawatts but I don't know of a blackout that happens from that. How do you cope with that?

comment #2052 posted on 2011-08-30 14:47:54 by Moderator in response to comment #2048

As you point out, the loss of electricity in areas affected by Hurricane Irene was unrelated to the nuclear plants that shut down as a precaution. We've revised the post.

comment #2048 posted on 2011-08-30 05:19:57 by Rod Adams (@Atomicrod)

@David - While your report is mostly factual and reassuring, I have a real problem with your phrasing in the following paragraph: "Other questions focused understandably on when Calvert Cliffs 1 and Oyster Creek will be able to resume operations. Irene has left millions of people without electricity, and everyone wants to know when their air conditioners, refrigerators and televisions will be working again. Unfortunately, it’s easier to shut down a nuclear power plant than it is to start one up again. There are protocols the plants must follow to ensure that everything is ready to operate again, including their emergency sirens. We’ll have more about what plants must do before restarting in a future blog post." There is NO relationship between the people who are without power and the decision to preemptively shut down the nuclear plants. The lack of power at residences and businesses is due to open circuits caused by downed delivery systems, not by a lack of sufficient power generation. It is misleading and irresponsible to imply otherwise. IF it was the case that a preemptive shutdown of a nuclear plant in anticipation of high winds that never arrived DID cause people to be without power until the plant started back up, that would be a significant public safety issue that the NRC would have address. As a former submarine engineer officer who operated nuclear plants that reliably supplied vital, life-sustaining power, I know that there is no technical reason why it takes several days to restart a plant that is shut down on purpose and needs no lengthy investigation of the cause of shutdown. The xenon transient might insert a modest delay depending on the time in the fuel cycle, but otherwise the plant should be good to go and back on the line within hours. If that is not the case, there is something dreadfully wrong with our regulatory system.

comment #2050 posted on 2011-08-30 12:54:38 by Jay Snow, Marketing Manager at MTI Systems, Inc.

What are the typical costs associated with the shutdowns? How much electricity is cut off to the public? Where does the alternative power come from during the shutdowns? Thanks Jay

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Picking up the pieces after Hurricane Irene

posted on Mon, 29 Aug 2011 19:26:09 +0000

The weather is perfect in King of Prussia, Pa., today. The sun is shining; the humidity is low; a slight breeze is blowing. It's quite different from over the weekend when Hurricane Irene roared through the area, bringing with it high winds and heavy rain. Two Region I nuclear power plants, which shut down during the storm, are in the process of restarting today. At Oyster Creek in Lacey Township, N.J., operators have already begun increasing power. The plant was shut down early Saturday evening as a precaution in preparation for Irene. The unit weathered the storm and plant workers have assured there was no damage to equipment or facilities. Calvert Cliffs Unit 1 in Lusby, Md., was knocked off-line when some siding struck a transformer, causing a turbine trip, which in turn caused a reactor trip. Workers there are also assessing equipment and making repairs before returning to power. The other units in the region made it through the storm, although several reduced power as a precaution. In addition, electrical power to some emergency sirens was lost at several sites. While many sirens have had power restored or are running on backup power, contingency plans are in place to notify the public of an emergency, if necessary. Crews are working to get the remainder up and running. The NRC had dispatched additional inspectors to nine sites to supplement the resident inspectors during the storm. Those additional inspectors completed their work over the weekend and are back to their normal jobs today. The resident inspectors are busy carrying out our inspection program and assuring the plants are continuing to operate safely. The NRC and the nuclear plant operators worked hard to assure that the plants were safe over the weekend. As we said before the hurricane hit, we were prepared to respond quickly and effectively had any problems developed.
Diane Screnci
Region 1 Public Affairs Officer

Comments

comment #2068 posted on 2011-08-31 12:27:01 by Steve Ruza

Great article. I don't think many people are aware of the nuclear power plants that are in the storm path. The news always shows the guy driving his boat down a flooded street. ....Steve Ruza

comment #2077 posted on 2011-09-01 02:21:54 by Michael Dorf

It's interesting that the news coverage was very minimal about the two nuclear plants that had been shutdown during the storm. But it's comforting to know that they have been kept safe.

comment #2085 posted on 2011-09-01 19:17:50 by Sammy Patus

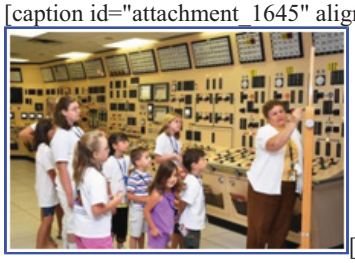
Thank you for this post about the devasting storm Hurricane Irene

comment #2129 posted on 2011-09-05 11:05:26 by Onkyo TX-NR708

I am glad that the plants are safe after the Hurricane. Maybe it really helps that you are prepared to respond quickly and effectively as the hurricane hits the place. It is nice to know that the NRC and the nuclear plant operators worked hard. /Kristen B.

Getting the next generation interested in nuclear science

posted on Tue, 30 Aug 2011 19:00:38 +0000

[caption id="attachment_1645" align="alignleft" width="223" caption="Youngsters tour the NRC training simulator"]

[/caption] The NRC's Technical Training Center, located in Chattanooga, Tenn., recently hosted 12 young scientists and engineers who were children and friends of NRC employees. The training center includes several state-of-the-art classrooms and – most importantly – a control room simulator used to train NRC technical staff. The youngsters got an up-close-and-personal tour of the simulator, and were amazed to see the complexity of the buttons, switches, and alarms covering the control panels. Training center employees enjoyed introducing the kids to the NRC, and the fields of science and engineering. The theme was "Inspector Training" and the day started with a quiz show on the NRC and its inspection program, and then the children had fun with hands-on science experiments. In addition to touring the simulator, the youngsters got a demonstration of the center's x-ray unit and got dressed in the protective clothing that NRC inspectors may wear when visiting nuclear power plants. [caption id="attachment_1647" align="alignright" width="208" caption="Young

visitors try on protective clothing."][/caption] The day was exciting for everyone involved, and served as an important outreach activity to the young community about the NRC and its responsibilities as a regulator. The training center looks forward to future opportunities like this to encourage our youth to apply themselves in the fields of engineering and science.
N. Jeff Griffis, CHP
Senior Health Physicist
NRC Technical Training Center

Comments

comment #2094 posted on 2011-09-02 07:56:25 by watches

Good job. It's great that you decided to settle interest in young kids. It has probably been a great experience for them and I think some are already considering working there when they grow up!

comment #2089 posted on 2011-09-02 01:48:13 by Cathy

that is so cool. I always wanted to be a physicist. Is it open to visitors.

comment #2096 posted on 2011-09-02 12:41:49 by gugi

nice thing...Student's felt like scientist them self....And it is so exciting....Anyway tours is good way to understand things in a better manner.....

comment #2095 posted on 2011-09-02 10:33:13 by Moderator in response to comment #2089

No, the NRC's Technical Training Center is not open to visitors.

comment #2185 posted on 2011-09-09 08:12:19 by Haley

That could be a good idea Bob, especially with what's happened around the world lately. I know in the UK there has been strong opposition to this type of energy and anything that increases public awareness and learning has got to be a good thing.

comment #2112 posted on 2011-09-03 08:06:07 by Joe

wow really exciting. I wish I experience this when I was young

comment #2150 posted on 2011-09-06 21:42:09 by Bob Connor in response to comment #2095

That is why I propose a national nuclear power museum just like they use old ships as museums. It might be possible to decontaminate a nuclear power station that has already had its life span (Shoreham, Zion maybe?) and have it open so that people like me can see what is inside a nuclear power station It would be good public relations. Is there any facility like that today, or anything at the Smithsonian? This would be after all the radiation has been taken away, all the fuel taken away, etc.

comment #2148 posted on 2011-09-06 14:18:52 by Bojana

I wish I could have some experience like this when I was kid...

comment #2289 posted on 2011-09-20 15:34:33 by Kelly

I love your idea for using a former power station! I have not heard of a museum for nuclear power, but even with a career in nuclear work, I was facinated, entertained and above all educated by my tour of the Atomic Testing Museum in Las Vegas. http://www.atomictestingmuseum.org/index.asp The Bradbury Science Museum in Los Alamos focuses on research and defense, of course. http://www.lanl.gov/museum/exhibits/ The National Museum of Nuclear Science and History is now in Albequerque, NM, moved from the Kirtland Air Force Base. http://www.nuclearmuseum.org/general-information/ Of course the American Museum of Science and Energy at Oak Ridge TN covers energy and nuclear topics. http://www.amse.org/content.aspx?article=1138&parent=1841

An Open Forum Now Available

posted on Tue, 30 Aug 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?

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 #1642 posted on 2011-07-26 13:39:26 by Moderator

As much as nuclear energy proves effective on large scale production, a simple breach could be very catastrophic, solar and wind energy is the only safe way out. Lets embrace safe green energy. festow32@gmail.com Moved to Open Forum by the moderator

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.

comment #1600 posted on 2011-07-22 16:40:55 by Moderator

Moved by the Moderator to Open Forum: At the heart of the problem is the fact that safety upgrades will impact the bottom lines for a significant portion of the U.S. reactor fleet. Reactor operators face significant capital expenses such as making SNF pools nuclear safety-rated, movement away from high density SNF storage, repair/replacement of degraded piping, hydrogen mitigation measures, etc.. For instance, According to EPRI, the additional per-reactor costs of placing SNF greater than five years of age into dry storage ranges between $573 million (BWRs) to $760 million) (PWRs). Plus there is the potential for loss of revenue from the closure of aging reactors, that are no longer economical with these additional expense and/or are under siege by a growing number of states – especially BWR Mark I units, reactors in high-risk siezmic areas, or those too close to major population centers (ie Indian Point). This is a big problem for those reactor owners operating in a de-regulated environment, notably Exelon with close ties to Obama, which don’t have a captive rate-base to recover these expenses

comment #1279 posted on 2011-06-25 12:24:50 by Alister Wm Macintyre in response to comment #980

I share Nancy concerns. Remember Katrina - it was 3 days before serious help could arrive, other than Coast Guard helicopters, which were kept very busy. In fact FEMA has some guidelines how many days supplies people should try to have, because of how long until National Guard can get there, so similar thinking is needed for how long a power plant may be without aid, if there is a

regional disaster like Japan, causing reduced capacity to respond to individual events among the thousands, and delays to provide aid, due to damage to transportation infrastructure. There can also be disruption to telecommunications, delaying SOS getting out. In anticipation of this, critical infrastructure ought to have satellite phone available, in case cell towers and land lines go down. Regional homeland security should know what are critical infrastructure, check in with them when regional disaster, to make sure their needs not neglected. There needs to be availability of helicopters and marine landing craft for search and rescue forces along flooded areas. Fukushima plant design has spent pools above containment, and no way to vent hydrogen, leading to holes in roof, radiation escaping, problem managing radioactive water. My understanding is that US design has spent pools closer to ground level, stored longer time period. I sure hope those buildings are earthquake resistant, well protected against flood waters.

comment #1301 posted on 2011-06-27 12:42:03 by Art in response to comment #1295

You might be looking directly for this, John. http://pbadupws.nrc.gov/docs/ML1116/ML11167A114.pdf

comment #1298 posted on 2011-06-27 12:18:32 by Moderator in response to comment #1295

Yes, it is available through our ADAMS system. Here is the link: http://wba.nrc.gov:8080/ves/view_contents.jsp

comment #1295 posted on 2011-06-27 10:00:11 by john

Nrc, Do you have a link to a transcript of the 6-8-2011 meeting with the group Beyond Nuclear where the petition to close the GE mark 1 plants in the US was discussed? Thanks

comment #1332 posted on 2011-06-30 06:25:17 by john in response to comment #1301

Thanks Art and moderator for helping with those links. Yes that’s what I was looking for Art.

comment #1333 posted on 2011-06-30 06:32:56 by john

NRC, I have a question this event notification was from 6-8-2011. It seems to say that the Prairie Island plant’s emergency generators were off line because of excessive outside heat. Am I reading this correctly? If so is this something that affects all nuclear plant backup generators or is it site specific? Thanks “BOTH EMERGENCY DIESEL GENERATORS DECLARED INOPERABLE DUE TO EXCESS OUTSIDE AMBIENT AIR TEMPERATURE "Outside ambient air temperature exceeded the maximum analytical value for operability for Unit 1 D1 and D2 Diesel Generators at 1349 CDT. The calculated limiting outside air temperature needed for equipment in the D1 and D2 rooms to meet their temperature limits is 100.5?F. Outside ambient temperature exceeded this limiting value and both Unit 1 safeguards diesel generators were declared inoperable at 1349 CDT on 6/7/2011. If outside ambient air temperature is above the maximum analytical value, components within the D1 and D2 diesel rooms may not be able to perform their required functions thus preventing them from fulfilling their safety function needed to mitigate the consequences of an accident (10 CFR 50.72 (b)(3)(v)(D)). "Unit 1 is currently in Mode 3, Hot Standby. Ambient outside air temperatures are at or near peak values for the day and expected to decrease approximately 1 to 2 degrees per hour which will restore ambient conditions to less than the maximum analytical value. "The NRC Resident Inspector has been notified." The outside air temperature has peaked at 101.4?F which is unusually high for this location and is expected to drop below the 100.5?F limit shortly. The licensee does not anticipate that this condition will be repeated again any time soon.”

comment #1323 posted on 2011-06-29 08:40:40 by Dolly in response to comment #1279

Yes, well it was 3 days before serious help could arrive because FEMA prevented people (regular folk you know, not "experts") from helping their fellows. I don't think I want the National Guard "protecting" me. These so-called homeland security agencies seem good at taking tax money but not so good on the protection end. I think we need protection FROM them. What did gun confiscation during Katrina have to do with protecting people from flood waters? Let us not forget that levees (thanks to the core of engineers) are blown to flood certain areas so that other "more important" areas are more protected from damage. Who decides? And on what criteria? Who among us is less or more important? I guess that's left up to the actuaries and the insurance companies.

comment #1347 posted on 2011-07-01 11:16:51 by Moderator in response to comment #1333

The plant declared both Unit 1 diesel generators inoperable based on the licensee’s engineering analysis which is not only site specific: it is specific to the type of diesel generators used for Unit 1; their location; and the amount of space and ventilation available to the diesel and associated equipment. In this case, the major concern was not so much the possibility of direct damage to the diesel itself but impact on electrical and other auxiliary equipment located in the diesel room. If, in addition to the heat produced by a running diesel the ambient temperature in the diesel room is unusually high, the auxiliary equipment adjacent to the diesel may overheat and affect its operability. If Unit 1 diesel generators are not available, Unit 2 diesel generators which are of different design could be used to supply power to Unit 1 equipment. The NRC is still reviewing this issue for compliance with NRC regulations and design requirements.

comment #1429 posted on 2011-07-09 15:58:53 by Nathali

Thanks for the open debate

comment #1637 posted on 2011-07-26 09:43:34 by Moderator

hello this is biomenta from germany. as you know the time nuklear machines end in 2021 but other euopean countries like france buld new machines. the question is, why can’t we find a worldwide solution Moved by the Moderator to Open Forum

comment #1920 posted on 2011-08-17 16:57:52 by Micheal

I guess that is why it would be a National project. We could do it. The Atlas rocket does not cost as much as the shuttle rockets. It does not have to get to the Sun to burn up its gravity would pull it in. The amount of energy we could produce would far out weigh the cost. All the jobs it would create would be enormous. I guess it is better to have something like Japans radiation rain down on us right?

comment #1569 posted on 2011-07-21 14:07:55 by aldo in response to comment #53

I agree with you Kathryn. Why government doesn't focus on research of environment friendly power resources like solar and wind systems? Nuclear reactor incidents can kill us all. Perhaps US can prevent nuclear reactor incidents what about other country with poor standard like North Korea, Iran, or Indonesia? If something happen with their reactor its hard to prevent radio active exposure event our location far away from their reactor. In this case, I believe we still have any chance to get radio active exposure.

comment #1630 posted on 2011-07-25 20:13:01 by AstroGremlin

We tolerate risk in all other technologies for generating energy. In fact we tolerate assured depletion of finite resources, loss of miners/drillers, and release of greenhouse gases. Yet nuclear energy has to prove ahead of time that it is utterly without risk. A scientific approach, were the nation to adopt it, would be to consider the risks of traditional energy production when compared with nuclear power. Unfortunately, the emotional has trumped the rational. That an aging reactor survived a direct hit by a tsunami is a triumph of engineering. If we applied the same expectations to automobile design, we would have to drive Bradley fighting vehicles (and go broke paying for them).

comment #2039 posted on 2011-08-29 08:48:44 by Moderator

This comment has been moved by the moderator: Regarding the issue of fiery steam-cladding reaction it is not clear, why it was moved out to this environment. I hope there will be a regulatory resolution, finally accepting that this process was the key process in all major reactor accidents, like the Fukushima Daiichi Units 1, 2 and 3, Chernobyl 4 and TMI2, even the Paks 2 fuel washing accident. [PDF] 2010/11/24-Comment (3) of Aladar Stolmar, on New England … … Van, Attached for docketing is a comment on PRM-50-93/50-95 from Aladar Stolmar that I received via the regulations.gov website on 11/24/10. … pbadupws.nrc.gov/docs/ML1033/ML103340250.pdf – 2010-12-09 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 “steamexplosion” 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. [PDF] 2010/03/24-Comment (3) of Aladar Stolmar, on PRM-50-93 … … From: Aladar Stolmar [astolmar@gmail.com] Sent: Wednesday, March 24, 2010 2:59 AM To: Rulemaking Comments Subject: Docket ID NRC-2009 … pbadupws.nrc.gov/docs/ML1008/ML100830501.pdf – 2010-11-26 Similar destruction and relocation of nuclear reactor fuel was observed in the TMI-2 and Chernobyl-4 severe reactor accidents and in the Paks-2 refueling pond reactor fuel washing accident. The similarities in these tests and accidents are the formation of gaseous (steam) bubbles in the upper regions of fuel bundles, the ignition of Zirconium in the steam and generation of Hydrogen and zirconia (ZrO2) reaction products in a very intense fire, essentially in a firestorm. Therefore, the conservative regulation shall mandate that the owners and operators of Nuclear Reactors and Reactor Fuel Handling Facilities shall demonstrate that there will be no dry-out of the fuel bundles in any circumstances. Also, in order to prevent the exposure of the public to the harmful consequences of an accident in a reactor, the housing of the reactor (containment) shall withstand the detonation of the air-Hydrogen mixture with the amount of Hydrogen calculated from the consumption of the entire inventory of Zircaloy in the reactor core or in the entire enclosed in a vessel volume, where such bubble formation is possible. There are several reports presenting the same issue as Mark Leyse. The cladding of nuclear fuel made of Zirconium alloy ignites and burns in the steam. The same process can be recognized (and should be recognized) as the common cause of the TMI-2 and Chernobyl-4 reactor severe accidents and the Paks-2 refueling pond accident. And the regulations in 10 CFR 50 series shall mandate to deal with the real issues and real processes. [PDF] 2011/06/28 – - NRC Public Blog April 2011 through May 2011 … comment #652 posted on 2011-04-06 07:31:03 by Aladár Stolmár comment #644 posted on 2011-04-04 20:11:31 by duxx … pbadupws.nrc.gov/docs/ML1117/ML11179A192.pdf – 2011-06-29 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 [PDF] 2011/04/08 – - NRC Public Blog February 2011 through March … … comment #441 posted on 2011-03-18 13:44:34 by Diesel comment #412 posted on 2011-03-17 07:06:13 by Aladár Stolmár … pbadupws.nrc.gov/docs/ML1109/ML110980787.pdf – 2011-04-13 A few of us, nuclear engineers were, are fighting for lifetime for the consideration of real processes in the reactor severe accidents. As I formulated in a comment to US NRC: Consideration of the zirconium-steam reaction and the ignition and intense firestorm in nuclear reactor fuel rods is well overdue. Reevaluating the evidence provided by the TMI-2 reactor accident, Chernobyl-4 reactor accident, and Paks Unit 2 fuel washing incident, with consideration of this intense fiery process, will bring us closer to an ultimately safe nuclear power plant design. http://pbadupws.nrc.gov/docs/ML1033/ML103340250.pdf Also, I called two years ago for a review: If the hydrogen which is generated in the reactor core from the reaction of the steam (coolant) with the zirconium alloy (or other low neutron absorbing metal cladding and other fuel bundle elements) explodes inside the building surrounding the reactor, this detonation still will not cause a break of the pressure boundary of the containment. Thirty years after the TMI-2 accident and 23 years after the Chernobyl disaster, I feel obligated to formulate this guideline in order to protect the public from further irradiation from the use of nuclear power. The Chernobyl type reactors (RBMK), which are still operating, have to be shut down immediately because they do not satisfy this guideline. Other nuclear reactors operating and future designs shall be reviewed for compliance to this key requirement and the result of such review shall be defining for their future. http://aladar-mychernobyl.blogspot.com/ Returning to 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 inactions 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 You will find useful this information for the background of the Fukushima Daiichi plant recent events.

comment #1878 posted on 2011-08-12 18:10:16 by Micheal

Why can we not have a government controlled central waste disposal site from which we charge corporations for deposing nuclear waste on a one way rocket to the Sun? It would create jobs, research, in all parts of the country. Just do it.

comment #1865 posted on 2011-08-11 23:05:57 by

Why can't decay heat be harnessed and used as an energy source to safely power down/cool a nuclear reactor? I have been wondering about this since the incidents in Japan. It appeared that the Fukushima nuclear reactors survived the 5th largest recorded earthquake on earth quite well and initiated normal shutdown procedures. It was the fact that the tsunami later damaged the backup power system for cooling, which resulting in a cascade of failures and a meltdown in the reactors. I feel that nuclear energy is a clean source of power and that it can help solve our dependence on imported fossil fuels as well as provide no CO2 emissions. On the other hand, plants should be designed to withstand extreme events, even if they are of a low probability. In the Japan case, ancient stone markers warned of tsunami risk at levels above the Fukushima backup generators. As an engineer and a scientist, I hate getting information on important topics through normal news outlets that like to sensationalize and oversimplify stories. I understand that I am not a nuclear engineer so maybe this is a dumb question but I have dealt with lots of disasters including Katrina and know that failures of the power grid over an extended period could result in the loss of backup cooling due to diesel fuel running low and such. It seems something more robust and redundant should be used. It is my understanding that the typical reactor will produce between 5-7% of its rated output in decay heat due to the radioactive decay of fission byproducts after shutting down. I understand that the amount of heat generated depends on the length of time the fuel has been in use and undergoing fission so older fuel will have a larger decay heat. I understand the heat generation drops quite rapidly as the short lived isotopes decay but that longer lived isotopes continue to decay and generate heat so that cooling is needed for a very long time (5-10 years) after the spent fuel is removed from service. I looked up the operational rating of several nuclear power plants in the U.S. and most tend to range between 1000-1200 MW of power, which is quite a large number. When one of these shuts down, decay heat should be generated in an amount around 50 MW (or more)

immediately after shutdown based on the 5-7% heat of operation. 50 MW is an immense amount of power and I would think this would well exceed the rated output of even the largest (or a bank of) diesel generators. My question is why this tremendous amount of energy cannot be harnessed and used to generate power that could be used to safety shut down and cool a nuclear reactor. It seems there is plenty of heat to lead to a complete core meltdown and/or fire long after the primary fission reaction is shut down. Why can't this heat be used to generate power, whether it be electrical or mechanical, in order to run pumps and such to cool the reactor during shutdown? Why couldn't one of the steam turbines be run to generate power to run the pumps? If the main turbines are too large to run on such a reduced output, could a smaller turbine be used for backup purposes? How about running the pumps directly and mechanically without any electric generation via a turbine meant just for this purpose? I like to keep things simple as there is less to go wrong so a purely mechanical pump might be in order. How about a thermocouple system? I know that radioactive decay is used to power space probes in this manner and such but don't know how it would work on such a large application. Even if decay heat cannot produce enough power, can it not provide some power and reduce dependence of batteries or diesel? If nothing else, it could reduce the rate at which batteries or diesel are used up and buy time to solve the underlying problem. As decay heat drops, potential power generated from it also drops, but so would the cooling requirements. Pumps would not be able to be run at their maximum rating but is this a bad thing after most of the short lived isotopes have decayed? I am not an expert so maybe decay heat can remain dangerous even if it isn't enought to generate a meaningful amount of power. Is it like my electric stove. Sometimes I turn it off right before the food is done and let it cook with the residual heat. Eventually it cools off to where it can no longer cook but would still be dangerous to touch. I know this is very simple but is it a good comparison? If decay heat cannot effectively be used to shut down a nuclear reactor, why can't the reactor go down to an "idle" mode where it generates just enough power to run the emergency cooling systems? It could be run this way indefinitely and let some of the short-lived isotopes generated during full power operation decay over a period time before reducing power further or shutting down completely once enough short-lived isotopes have decayed. Why is this not done? All it takes is one unforeseen disaster to knock out external power at a nuclear plant and it seems this might be a solution or at least part of the solution to the decay heat issue. I have been reading about solar flares and their ability to fry large electrical transformers that are key to large parts of the power grid. I understand that we are entering a very active solar cycle and there is some concern one of these flares could knock out a large part of the grid for an extended period. What would happen to a nuclear plant in such a situation?

comment #1888 posted on 2011-08-14 01:00:14 by Amy Still in response to comment #1865

WASHINGTON, D.C. — August 11, 2011 — The U.S. Nuclear Regulatory Commission is legally required to slow down reactor licensing and relicensing in order to address major changes urged by the agency's own experts who have reviewed the Fukushima accident, according to 19 separate legal challenges filed today by a total of 25 public interest groups. The groups contend that under federal law, the NRC may not issue or renew a single reactor license until it has either strengthened regulations to protect the public from severe accident risks or until it has made a careful and detailed study of the environmental implications of not doing so. The groups are also pursuing a technical finding from high in the NRC that leads to upgraded safety standards. "What we've learned in the wake of Japan's nuclear disaster — and what NRC experts concluded — is that current regulations are fundamentally inadequate. They simply do not provide the level of safety required by laws including the National Environmental Policy Act and the Atomic Energy Act," said Phillip Musegaas, Hudson Program Director of Riverkeeper, Inc., which today filed a contention document related to the Indian Point reactor in New York State with the NRC. "The law requires regulators to take this information into account before issuing any licenses for reactors. Our filing today is intended to force them to do so."

comment #2076 posted on 2011-09-01 01:26:18 by Alex

I also agree, that US and other counties are using current technology, but I am not sure that we are very well protected after the Fukushima Daiichi plant recent events.

comment #1918 posted on 2011-08-17 15:40:43 by Alister Wm Macintyre in response to comment #1642

Each source of energy is limited, and many have dangerous side effects. Solar and Wind use technology whose construction is dependent on industrial commodities which the world is running out of, and of course need a volume of weather activity which is not universally available. Fossil fuels have carbon cycle implications for climate change and maybe ozone hole. Hydro-electric is great on rivers, until earthquake brings down damn, and people downstream inadequate time warning to get out of way of flood. Hydro-electric works for some coastal inlets ... get tide power coming and going, but better not mess with ocean going currents essential to other nation's climates.

comment #1919 posted on 2011-08-17 15:43:16 by Alister Wm Macintyre in response to comment #1637

We have world wide solutions through UN treaties with IAEA to develop and share best practices info on wide spectrum of nuclear power energy. Problems then are with any nations which do not choose to join the treaties.

comment #1916 posted on 2011-08-17 11:38:36 by Chris in response to comment #1878

People periodically bring up the idea of sending waste towards the sun. If you run the calculations, you will find that this method of disposal is simply not practical from a cost standpoint, unless we all want to pay a whole lot more for our electricity. First, there are the political ramifications and risks associated with a radioactive rocket that might blow up before getting out of Earth's atmosphere. Remember the Columbia disaster? Not sure anybody wants highly radioactive material raining down from the skies over land or sea. Second, the amount of energy (and hence, fuel) it would take to do this is very large. You have to realize that we are moving in orbit

around the sun. That means that any rocket we shoot into space is also moving in orbit around the sun. So shooting something to the sun is not as simple as putting a rocket into space and letting gravity take over. All you succeed in doing is putting that canister of waste in orbit around the sun as well. Orbital mechanics dictates that it takes a change in kinetic energy for a body to go from one orbit to another. To change to a closer orbit around the sun requires you to speed up the spacecraft. The closer you want the craft to get to the Sun's surface, the more and more kinetic energy you have to add to get there. The fuel it would take to do this is so enormous as to make this method of disposal simply impractical.

comment #1917 posted on 2011-08-17 15:34:55 by Alister Wm Macintyre

I agree, with respect to current technology used by NASA, USAF, other nations. However, if you take a look at the mechanics of space elevators, the cost drops from current technology to microscopic cost by comparison, to get anything out of Earth gravity field. If the waste container is sent in a direction below the Earth orbit with the Sun, that means it will spiral closer and closer to the Sun, and fall into the Sun, unless it crashes into Venus or Mercury or other stuff in transit.

comment #1947 posted on 2011-08-21 15:53:13 by Steve

Yes there are better and cheaper ways to go about it. But maybe the government has some insight.

comment #1949 posted on 2011-08-21 16:31:17 by French Translation

Time and time again have we witnessed a global accident as a result of mother natures swift hand. When will we learn that if we can build it, then it can be destroyed. Nuclear included. Are we not just filling the foundations for total man made destruction of (our) planet..?

comment #1951 posted on 2011-08-22 08:08:14 by Babu Jobs

I agree, NASA, USAF, other countries are using current technology. However, if you take a look at the mechanics of lifts, the costs will fall from the current technology on the microscopic cost comparison, stems from the gravitational field of the Earth.

comment #2040 posted on 2011-08-29 08:50:24 by Moderator

this comment was moved by the moderator: My son is visiting Connecticut for the first time. I have just seen there are nuclear plants all around him. I cannot believe after Japans experience America still has Nuclear power plants operating. The public will have to band together to sue power companies for exposing us with poison then maybe they will shut them down. Question there are also 2 closed plants in CT are these also dangerous in other words are there still ponds that need to be kept cool??? Is so that is 4 surrounding my son at present. Thanks America!!

comment #2286 posted on 2011-09-19 21:18:39 by Mike Saunders the car insurance cheapest quote guy

The real problem here is that we have a much better alternative to these reactors (LFTR-Liquid Flouride Thorium Reactors) and are not pursuing it as we should be. We made a bad choice 40 years ago and are paying for it now... If we don't wake up the rest of the world (Russia, China, and India) are going to pass us by. LFTR's are much safer, cheaper, can be started and stopped easily, produce 1/30th the waste and what waste they do produce is radioactive for much less time, no proliferation danger, etc. A proven technology that we chose not to develop. For more info, see http://www.youtube.com/watch?v=WWUeBSoEnRk .

Post-Flood Recovery Begins At Fort Calhoun Nuclear Plant

posted on Fri, 02 Sep 2011 20:12:01 +0000

Water levels at the Fort Calhoun nuclear plant have finally dropped about two feet from their highest flood stage, prompting Omaha Public Power District officials to terminate the Unusual Event they declared on June 6, and setting the stage for post-flood recovery. The NRC today issued a Confirmatory Action Letter documenting actions that the officials have agreed to take prior to restarting the plant, located about 19 miles north of Omaha, Neb. The plant was shut down April 9 for a refueling outage, which was extended due to flooding along the Missouri River. As the floodwaters have receded, workers at the site have begun removing flood barriers and an elaborate elevated catwalk used create access from the flooded parking lot to key buildings. At a public meeting on July 27, OPPD officials discussed post flooding recovery actions and agreed not to restart the plant without NRC approval. Region IV Administrator Elmo E. Collins has said a series of comprehensive inspections will have to be performed before the agency clears the plant for restart.
Victor Dricks
Region IV Public Affairs Officer

Comments

comment #2101 posted on 2011-09-02 17:14:42 by hugh williams

good to see that nuclear plants are being run safely

comment #2102 posted on 2011-09-02 17:56:57 by Bob Connor

So how long will it take to start the place up again? I also note that Fort Calhoun is the smallest nuclear plant in America. I don't think any utility wants a plant known to be small. Which makes me wonder if Nebraska could live without it, after all, they have all this time in the summer when it is hot, but would Fort Calhoun be needed in cold weather? Also, is it possible to waterproof the switchyard so that it does not "short out" and sparks fly when the turn Fort Calhoun on? I do have to say that at least Fort Calhoun is one of the better-looking nuclear plants around. That AP1000, man, it's ugly!

comment #2104 posted on 2011-09-02 19:53:25 by Bill Sterling

Someone please tell me what is going to happen this winter when North Anna doesn't come on-line. Is anyone out there paying attention? Are there cogen solutions available?

comment #2114 posted on 2011-09-03 20:00:27 by Joao

A relief if you live nearby.

comment #2166 posted on 2011-09-08 04:03:45 by Cadouri Sam

Can we do this at every nuclear plant in America and then in the world? I think this example should be followed by all nuclear plants in the world to protect people first and then the environment. Thanks for this post encouraging not only for us

comment #2128 posted on 2011-09-05 08:40:52 by james @ loestrin24fecoupons.com

this is great to know but i hate those nuclear plants...

comment #2143 posted on 2011-09-06 07:28:45 by sikka kaamna greens

thank god... it gives me a lot of relief when i read this post.. thanks for sharing.

Closing Down a Unique NRC Facility

posted on Tue, 06 Sep 2011 13:00:37 +0000

As the NRC wraps up operations at its Las Vegas Hearing Facility, let’s take a look back at how the agency decided where to put the facility and how it was used. The NRC’s longstanding policy on hearings calls for them to be held near the proposed facility, when possible, and that the hearings be open to the public (except where classified or security-related information requires a closed session). When the NRC’s Atomic Safety and Licensing Board Panel (ASLBP) began working in 2000 on activities related to the proposed Yucca Mountain nuclear waste repository, it was obvious the agency should look for a location near Yucca Mountain, in southern Nevada. The NRC also had to account for several other factors: • Congress directed the NRC to take no more than four years to review an application to build and operate Yucca Mountain; • The potential for many parties and technical issues to be involved in any hearing on Yucca Mountain application; • Agency rules on leveraging information technology to conduct the Yucca Mountain hearings as efficiently as possible; and • Providing a secure, dedicated venue for those involved in what was anticipated to be the largest and most complex hearing in NRC history. Las Vegas was clearly the best choice to meet these needs, but the city’s existing federal and commercial facilities didn’t have available space. So, the NRC spent two years budgeting and planning a facility to conduct the hearings. The NRC worked through the General Services Administration to lease an appropriate building, at competitive rates, for the mandated three-to-four year Yucca Mountain review period, including options to extend the lease if necessary. The agency also heeded public calls for expanded access to the hearing by making the facility TV-friendly and adding videoconferencing and webcasting capabilities. Because of delays in the completion of the Department of Energy’s license application, the facility was finished and available well before that department submitted its formal Yucca Mountain license application in 2008. In addition to Yucca Mountain-related sessions, the NRC has used the Las Vegas facility to host regional-based outreach meetings and other agency activities. ASLB staff used the facility to support the board’s field hearings in other Western states, and the staff supported the Licensing Support Network, which made tens of millions of pages of technical documents available to the public Since the current federal budget process has closed out support for review of the Yucca Mountain application, the NRC is being financially responsible by terminating the facility’s lease. While the technology installed at the facility did provide an unprecedented level of public access into the agency’s activities, after six years of technological advances the computer equipment is fully depreciated. Any equipment that is still usable is being transferred to other NRC offices or other federal agencies, or is being donated to Las Vegas-area schools.
Scott Burnell
Public Affairs Officer

Comments

comment #2146 posted on 2011-09-06 10:37:21 by asparaguscutter

Spent fuel rods in salt mines,in ceramic beads in tunnels,in thorium reactors in the US? Would the NRC license the intra space transport of spent fuel rods to a distant resting place outside the Milky Way?

comment #2157 posted on 2011-09-07 11:05:05 by Moderator in response to comment #2146

> The NRC will review any license application it receives. However, the Department of Energy considered outer space disposal back in the '70s and rejected it because the risk of the rocket blowing up and spreading radiation over a large area was considered too high.

comment #2147 posted on 2011-09-06 11:47:02 by Joseph King

> In September 2008, NRC accepted the DOE Yucca Mountain Waste Repository application for review. This started the 3-year schedule set by Congress to reach a decision on whether to approve construction of Yucca; however, this can extended by 1-year. The 3-year deadline is this month and it is obvious that the NRC will not make a decision this month. Has the NRC notified Congress that the NRC will extend the deadline by 1-year? On June 29, 2010, the NRC Atomic Safety and Licensing Board issued a decision that denied Department of Energy's motion to withdraw the Yucca application. On June 30, 2010, the Commission Order requested participants to file briefs. On August 10, 2010, NRC staff issued SECY-10-0102, "U.S. Department of Energy (High Level Waste Repository), Review of LBP-10-11, Docket No. 63-001-HLW," to the Commission for its review and vote. In August 2010, the Commission started casting votes. Chairman Jaczko voted in August 2010 but then withdrew his vote. The remaining Commissioners (except for Commissioner Apostolakis because he recused himself) voted by September 15, 2010. Chairman Jaczko finally voted on October 29, 2010, for SECY-10-0102, completing the Commissione's notational voting process on the Yucca matter; however, the Commission has still not held an affirmation vote on the matter. All these documents were once on the NRC website, but now have been removed. Why? Is it too embarassing to think the Commission is too incompetant or too political to make a decision on Yucca Mountain since June 2010? How long can the Commission be dilatory in this matter? Chairman Jaczko worked for Senator Harry Reid and Chairman Jaczko has not recused himself for conflict of interest and Commissioner Apostolakis recused himself because he reviewed a Yucca Mountain calculation. Why has Chairman Jaczko not recused himself from the Yucca Mountain matter?

comment #2213 posted on 2011-09-11 13:45:26 by Aging Nuke

> It seems presumptuous of the NRC to shutdown thee Las Vegas hearing support facility, the LSN, and remove accessible links from key Yucca Mountain Documents from the website. Last time I looked, there's an active DC Circuit Court case that could result in a mandamus order to resume the Yucca Mountain adjudicatory proceeding. The NRC presumption seems to be: 1) the Court won't tell us to do anything; 2) if the Court did tell us to resume the hearing, we'll claim we have no money. The first presumption is imprudent, since the NRC cannot predict with any certainty how the DC Circuit will rule. The second presumption seems to be a game of "Hide the Peanut." In this case, the "peanut" would be all the unspent appropriated Nuclear Waste Fund (NWF) dollars that the NRC has not spent, including its NWF carryover funds. Just where is all that money, anyway? NWF dollars are fenced, so they cannot be internally reprogrammed to other NRC programs. It's very hard to imagine how all the NRC's recent NWF appropriations could have been spent with the greatly reduced level of effort during the recent fiscal years. To name just one obvious example, the staff was funded to participate actively in a heavily contested licensing hearing, a proceeding that has been stalled for many months. It would be helpful, if the NRC could provide the public with a clear accounting of the expenditures and transfers of its NWF dollars over the last five fiscal years.

NRC, Dominion to Discuss Post-Earthquake Actions Taken at North Anna

posted on Wed, 07 Sep 2011 14:11:08 +0000

Following last month’s earthquake in Virginia, everyone’s interested in learning more about the quake’s effects on the nearby North Anna nuclear power plant. The plant’s operator, Dominion, has information to share, so the NRC’s ready to listen. NRC staff will meet with Dominion management from 1 – 5 p.m. on Thursday, Sept. 8, in the Commissioners’ Conference Room on the first floor of the NRC’s One White Flint North building, at 11555 Rockville Pike in Rockville, Md. Having a public meeting on such short notice is very unusual, but Dominion’s information on such a unique situation needs to be discussed in a formal, open setting as soon as possible. The NRC wants to make sure you have the opportunity to see what’s been learned, so the meeting will be available on the Live NRC Meeting page. Members of the public can attend the meeting by coming through security at the NRC’s One White Flint North entrance, at the corner of Rockville Pike and Marinelli Road in Rockville. The NRC is across the street from the White Flint Metro stop. Dominion is expected to discuss its latest analysis of ground motion at the North Anna site, which sits about 12 miles from the earthquake’s epicenter in Louisa, Va. The company is also expected to describe its next steps in determining whether the plant meets NRC requirements to restart. The two-reactor North Anna plant shut down safely following the quake, with both reactors operating as designed. Ongoing analysis by both the NRC and Dominion indicates the earthquake may have subjected the plant to more ground movement than specified in the plants’ designs. An NRC Augmented Inspection Team has been examining North Anna for the past week and the team plans to continue its work for another week. When the team completes its inspection, the NRC will hold a meeting near North Anna to discuss their preliminary results, and a final

report is expected by the middle of October.
Scott Burnell
Public Affairs Officer

Comments

comment #2167 posted on 2011-09-08 07:02:01 by David

The NRC is across the street from the White Flint Metro stop.

comment #2168 posted on 2011-09-08 09:45:43 by Moderator in response to comment #2158

All NRC webcasts are archived on the video page of the agency's website here: http://video.nrc.gov/ . The webcast for today's meeting is listed both on the video page and the Live NRC Meeting page here: http://www.nrc.gov/public-involve/public-meetings/webcast-live.html .

comment #2159 posted on 2011-09-07 12:33:15 by James Greenidge

Don't let anti-nukers hijack the hearing! DON'T shy mentioning Fukushima --as they WILL -- but slap them back reminding the public that this freakish "worst case scenerio" x3 resulted in zero deaths nor damage outside the facility, and any local health effect has been way less than from a normal coal plant on a NORMAL day -- so the mass evacuation there was largely an over-reaction too! Chemical plants and Bio-labs storing and experimenting with plague-class pathogens aren't demanded to have evacuation plans. Wonder why! James Greenidge

comment #2158 posted on 2011-09-07 12:17:23 by Sarah Alexander

Will the meeting be recorded and available to view after it has concluded, or will it only be available to watch it live? --Sarah Alexander Construction Inspector NRC/Region II/CCI/DCI/Branch 2

comment #2237 posted on 2011-09-13 09:28:37 by Moderator in response to comment #2230

Japanese authorities made the decision about how and when to issue evacuation orders around the Fukushima site. The U.S. State Department, with input from the NRC, also issued an evacuation order for U.S. citizens living within 50 miles of the plant. That "travel advisory" was later modified, and additional modifications are expected.

comment #2246 posted on 2011-09-14 07:33:56 by Suchmaschinenoptimierung

I would like to know what are the disadvantages while one-reactor is shutted down? What other security options can be taken while keeping reactor working?

comment #2250 posted on 2011-09-14 10:45:03 by Moderator in response to comment #2246

A reactor that is shutdown is a disadvantage to the power company that owns it. All security requirements and measures remain in place.

comment #2230 posted on 2011-09-13 03:28:48 by DLSL

Very interested to find out more about James Greenidge's comment above on evacuation plans. Frankly, I have never thought about that.

comment #2240 posted on 2011-09-13 11:17:12 by CleanItUp

Why can't people just wise up? Nuclear power is here to stay, so they could better utilize their time that they spend fighting it, by learning ways to make it better than it is today. Protesting and complaining is disruptive at best....the perfect example of wasted energy (pun intented)!

comment #2268 posted on 2011-09-17 03:20:03 by distance mba in response to comment #2246

what kind of reactor it is nuclear or thermal?? ____----- Sara

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The NRC Joins YouTube

posted on Thu, 08 Sep 2011 15:01:48 +0000

The official NRC YouTube channel went live this morning at

www.youtube.com/NRCgov. The first posted videos feature NRC employees talking about their personal 9/11 experiences and the effects of that day on their lives. (You can also get there by going to the agency website at http://www.nrc.gov and clicking on the YouTube icon.) Look for future videos that include portions of important Commission meetings and information on the history and role of the NRC. YouTube joins Twitter and this blog as social media tools we're using to communicate with the public in new and meaningful ways. We hope the videos will enhance the public's understanding of the agency and its mission, and give a face to the people who work hard to protect people and the environment. We won't be taking comments on YouTube, but have created a special location on this blog for comments on videos. Happy viewing!
Eliot Brenner
Public Affairs Director

Comments

comment #2187 posted on 2011-09-09 11:58:24 by Austin Cushing

It should be interesting to see what the NRC is up to - I look forward to future videos.

comment #2179 posted on 2011-09-08 18:43:40 by Ken @ Cure Yeast Infection

You put together a very touching video about the events on 9/11. Your presentation makes this sad event more personal for the rest of the country. Thanks.

comment #2423 posted on 2011-10-01 02:00:06 by Agent Corona

It seems that YouTube is becoming a part of just about every area of social networking, training, and education. Good to see NRC on board. Cameron Corona, California

comment #2171 posted on 2011-09-08 12:04:39 by Moderator in response to comment #2170

Thank you! It's been corrected.

comment #2170 posted on 2011-09-08 11:10:05 by Ryan

:Correction: Broken link. Change to http://www.youtube.com/NRCgov

comment #2243 posted on 2011-09-13 14:06:42 by buy youtube views cheap

Nice idea for NRC to post videos on Youtube. Waiting to see what NRC have in store.

comment #2341 posted on 2011-09-26 11:00:07 by YouTube Converter

What a great idea for the NRC to have a YouTube channel. Will go check it out right now!

New Reactor Construction Experience Program -- Learning from the Past

posted on Fri, 09 Sep 2011 14:39:47 +0000

The NRC is currently reviewing several applications from the nuclear industry to build more than 20 new nuclear reactors. These new plants, so called Generation III+ reactors, include designs with an alphabet of acronyms. They include the Advanced Passive or AP-1000, the Advanced Boiling Water Reactor, or ABWR, the Advanced Pressurized Water Reactor, or APWR, the Economic Simplified Boiling Water Reactor, or ESBWR, and the Evolutionary Power Reactor, or EPR. Construction of these reactors cannot begin unless and until the NRC completes its technical reviews and the license application is approved. There are currently 104 operating reactors in the U.S. Many of them were constructed in the '70s and '80s. Both the industry and the NRC faced many challenges in building and licensing and regulating these reactors. One major challenge was ineffective control and management of the overall projects. In 1984, at the direction of Congress, the NRC studied the causes of major quality-related problems in the construction of some nuclear power plants. At the conclusion of the study, the NRC published NUREG-1055, "Improving Quality and the Assurance of Quality in the Design and Construction of Nuclear Power Plants," to document its findings and recommendations. Some examples of the recommendations include: the industry should put higher standards on their own actions, work harder to identify how and why quality problems occurred, and to enlist the help of third-party auditors to identify issues objectively and early. To improve NRC programs, the study suggested a stronger emphasis on team inspections and the role of resident inspectors, and better data and trending analysis to diagnose problems earlier in the process. In addition, the study recommended that higher attention and quality assurance measures should be placed on systems and structures that have the most impact on overall nuclear safety. To make sure we'd learned the lessons from past construction projects, the NRC created the Construction Experience Program in 2007. It has grown from one to four staff in the past four years. Its purpose is to review and evaluate problems at domestic and international construction projects, and to propose ways to enhance NRC technical reviews and inspection procedures. Since its inception, the program has evaluated more than 300 domestic and international operating and construction experience reports dating from the 1980s to present. As a result of these evaluations, the staff has published 10 information notices to share lessons learned and insights from the evaluations with internal and external NRC stakeholders and the public. These information notices raised the awareness of utilities about particular construction and

operational experiences to ensure they did not reoccur.
Omid Tabatabai
Senior Reactors Systems Engineer

Comments

comment #2239 posted on 2011-09-13 11:08:47 by Moderator in response to comment #2204

> The NRC has identified a new technical issue that we have to resolve before we can issue the final rule. We've asked GEH to provide the information we need to complete our review of this issue. Once we have enough information to proceed, the NRC will update the ESBWR web page with a revised projection for completing the rulemaking.

comment #2204 posted on 2011-09-10 14:44:53 by Pete Johnson

> You mentioned the ESBWR above. What is happening in its Design Certification process? The review schedule at http://www.nrc.gov/reactors/new-reactors/design-cert/esbwr/review-schedule.html, which was last updated on March 10, shows a target date for issuing the final rule this month, yet the schedule for all new DCDs/COLs at http://www.nrc.gov/reactors/new-reactors/new-licensing-files/new-rx-licensing-app-legend.pdf, which is dated September 8, says the schedule is under review. Is there a document in ADAMS explaining the holdup?

comment #2304 posted on 2011-09-22 23:17:17 by Michael

> I wish we'd stop building these. Look at all the damage that has been caused recently by nuclear energy. Let's go with clean, renewable energy sources instead like solar, wind and the like.

comment #2188 posted on 2011-09-09 12:08:25 by asparaguscutter

> Your excellent program could be enhaced by the inclusion of two logs,transparent to the public. One log,for each nuclear project listing ,by name and title, the resposible and accountable individual for each item cited in your program. The second log would list ,by name and title, the resposible and accountable individual in NRC for each item cited in your log. PVNGS has set an example by citing resposible individuals in its reports.

comment #2191 posted on 2011-09-09 14:47:04 by Moderator in response to comment #2190

> For information on the NRC's role in high-level waste disposal, please go here: http://www.nrc.gov/waste/hlw-disposal.html .

comment #2190 posted on 2011-09-09 13:19:46 by

> Have you solved the storage dilemna associated with nuclear power, if your solution is to store it in Oregon and Washington think again. How about store it where it is used. We store ours you store yours. Or perhaps your back yard would work, I would like to hear your thoughts on this very real very long term problem.

comment #2215 posted on 2011-09-11 14:17:52 by Aging Nuke

> In addition to NUREG - 1055 mentioned by Mr. Tabatabai in his post and is a very useful reference, there is another document that would be worth reading, which is a case study of a construction project that suffered from a wide variety of problems. The additional reference is NUREG-0969, Report of the NRC Evaluation of the Quality of Construction at the Zimmer Nuclear Power Station. The Zimmer project had suffered from a number of problems early-on: inadequate QC, an inexperienced Constructor, an Architect Engineer with very limited presence on-site, a work environment that fostered disgruntled employees who became whistle blowers, and poor control of design and construction interfaces. NUREG-0969 describes the problems and the project's many efforts to recover. During the 1980s, the NRC conducted a number of major team inspections at construction sites, which were called Construction Appraisal Teams or CAT teams, which used a multi-disciplined approach that focused. As I recall, there were on the order of 15 CAT inspections. There was at least one NRC Inspection Procedure (IP), which gave instructions to CAT teams on the conduct of these inspections. Both the CAT reports and the IP were placed in the Public Document Room (PDR). NUREG - 1055, which Mr. Tabatabai mentioned, is posted on the NUREG section of the NRC website. NUREG - 0969 on Zimmer is not. Because of their age, I suspect that the CAT reports are not accessible through ADAMS, but being ADAMS-challenged, I have not checked. These older reports may be available either in hard copy in the NRC warehouse or on Microfiche at the Public Document Room (PDR) in One White Flint North. If enough of us who have an interest in reactor construction, request copies, perhaps the PDR staff would scan these documents and make them available through ADAMS.

What's All the Buzz About Safety Culture?

posted on Tue, 13 Sep 2011 13:24:22 +0000

Chances are that if you follow local and world-wide events you have heard references to how an organization's safety culture played a role in what happened. So, what is "safety culture?" There are various definitions of safety culture. Most of these focus on the idea that when an

organization's activities could have serious consequences, it should develop and maintain its programs, practices, and procedures with a safety-first focus. In the medical world, for example, before beginning surgery, many hospitals have what's called a "five minute time out." During the "time out," everyone from the surgeons to the technical staff stops to ensure the right people are present, the right equipment is present, the right patient is on the table, and that everyone understands their role. This is a good example of safety culture at work. The higher the stakes, the more important it is for individuals and organizations to understand that they should engage in their activities with a strong safety-first focus. And the materials that the NRC regulates put our activities into that "high stakes" category. We recently issued a Safety Culture Policy Statement that reiterates the NRC's expectation that anyone with a role in NRC-regulated activities will establish and maintain a positive safety culture that takes into account the safety and security significance of their activities. In the statement, we define nuclear safety culture as "the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment." The policy statement was developed in collaboration with leaders in the nuclear industry who are responsible for a positive safety culture as well as organizations and members of the public interested in the safe and secure use of nuclear materials. While the policy statement is not a regulation, it supports the effective implementation of the NRC's regulations. Chairman Jaczko spoke about the importance of safety culture in a 2010 speech at the Annual CEO Conference of the Institute of Nuclear Power Operations. In that speech, he said: "In order to ensure that the NRC's safety rules are followed, you can't simply focus on qualifications and training. Those are essential, of course [but you also] need employees who have a safety focus and the dedication to consistently apply their skills to follow NRC requirements." This message underscores the importance the NRC places on ensuring the development and maintenance of a positive safety culture in the activities we regulate. Look for more information in the future about the importance of a positive safety culture on what the NRC does. Feel free to post comments to this post with your thoughts, suggestions and questions related to safety culture.
Maria Schwartz
Office of Enforcement

Comments

comment #2262 posted on 2011-09-16 00:41:09 by Chris Goulart

> One thing to keep in mind... Rules and regulations rarely drive culture. Culture is the shared beliefs, values, and traditions that employees and contractors have regarding safety performance at an organization. These items are almost always tied together in a historical context and are very organic in nature. When leaders prioritize safety, beyond the required minimums of training and policies, then organizational safety culture tends to improve. The clearest example of a solid safety culture is when safety is seamlessly integrated into the fabric of the workplace. Safe companies don't "do safety" and the do the job, they just work safely. Chris Goulart RCI Safety Safety Culture Evaluations and Organizational Safety Performance

comment #2261 posted on 2011-09-15 19:22:06 by dramiscal

> I have to agree w/ Mr. Saparito here. We're heading into 2012 and this is just a policy statement at this point? I'm in many surgeries throughout my workday and know the importance of the "time out". I hope the gravity of the situation is realized here.

comment #2263 posted on 2011-09-16 07:45:20 by Telephone Answering Service

> To develop a safety culture, organizations should integrate their written safety programs into daily operating procedures that influence employee behavior. An organization that successfully develops a safety culture can expect to realize immediate and tangible results in reducing workplace accidents and their associated costs.

comment #2393 posted on 2011-09-29 02:43:54 by John Duxx

> It was my experience that "Safety Culture" was just a buzzword without any management focus on seeking what it seemed to imply. If you encountered a technical or administrative hurdle while producing an engineering product, your annual review would note "failure to meet schedule"; but not "demonstrating safety culture". Hearing "Safety Culture" at every meeting becomes meaningless when there are no metrics for its application. I have been retired/disabled for 8 years now and even after these years simply seeing the phrase in the topic title made me upset.

comment #2264 posted on 2011-09-16 09:07:35 by Caribbean Jobs in response to comment #2236

> I totally agree Thomas. This policy statement needs to be translated to action

comment #2449 posted on 2011-10-03 15:54:31 by Marcos - Adiestramiento Canino

> The most important thing is to guarantee the safety of people working in each activity ... good post to learn about the regulations.

comment #2238 posted on 2011-09-13 09:49:16 by Aladar Stolmar

> we define nuclear safety culture as "the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment." Very hard to understand the behaviors of NRC regarding the governing process in the severe nuclear accidents of the fiery zirconium-steam reaction, namely the denial of this process in the TMI-2, Chernobyl-4 and Fukushima Daiichi 1, 2 and 3 reactors and in the Paks 2 refueling pond washing vessel

accident. Is this the leading by example? Safety culture or unsafe practice? How many more severe accidents You need for accepting the fiery zirc-water reaction as key process and when will the NRC require hard vents for Hydrogen release and sufficiently strong (or inert gas filled) containments to prevent their loss in the event of fiery zirconium-steam reaction in the core?

comment #2236 posted on 2011-09-13 09:28:20 by Thomas Saporito

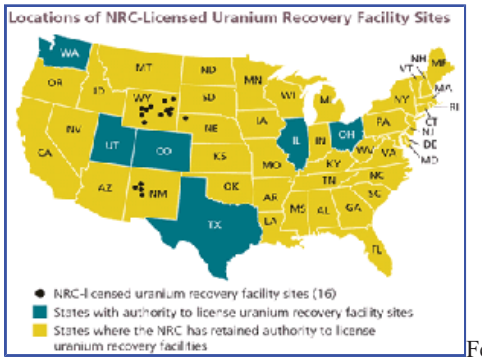
If the NRC was truly serious about protecting public health via a good safety culture at some 104-commercial nuclear plants in the USA, then the agency would make "safety culture" a RULE and not simply a policy statement!!! Thomas Saporito Senior Consultant Saprodani Associates

comment #2300 posted on 2011-09-22 12:41:32 by Stephen Nuchia

TMI, Fukushima and many non-nuclear incidents and accidents - the BP Texas City explosion and Deepwater Horizon are both cases in point -- share a common element that is connected to safety culture but isn't exactly culture. A contributing factor in all of these incidents was the operators failure to recognize that their mental model of the process state had diverged significantly from the actual state. I have an idea for a repurposing of some COTS technology to specifically address this failure mode. Are there any innovation grant programs for safety systems that I could pitch it to?

Uranium "Recovery" and the NRC

posted on Wed, 14 Sep 2011 14:51:05 +0000

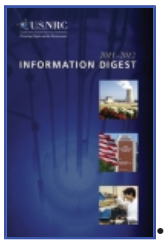


Federal laws and regulations on mining were established during the industrial boom of the late 1800s. Many decades later, when uranium became a prized commodity for fuel for nuclear power plants, NRC was given regulatory authority over the nuclear fuel cycle. But this was rather like fitting a square peg into a round hole, and the regulatory map for what we call “uranium recovery” can be as confusing as mining companies’ claim stakes on the mother lode. Basically, NRC’s regulatory authority begins when uranium’s physical and chemical properties are altered, the first step in the production of nuclear fuel. So we do not regulate uranium mines – conventional shaft or shallow pit mines – which simply remove rock from the ground. These are regulated by the Office of Surface Mining, the U.S. Department of the Interior, and the individual states where the mines are located. However, the NRC does license and regulate the uranium mill that is typically associated with a mine, because this is where the ore is treated to produce uranium oxide, or “yellowcake.” The NRC does license and regulate “in situ leach” recovery, in which the uranium ore is chemically altered underground before being pumped to the surface for further processing. In the ISR uranium extraction process, wells are drilled into rock formations containing uranium ore. Water, usually fortified with oxygen and sodium bicarbonate, is injected down the wells to mobilize the uranium in the rock so that it dissolves in the ground water. In situ facilities are commonly called “mines,” but the NRC does not use that term because we do not have jurisdiction over conventional uranium mines. So if we seem to be particular about our language, we’re not being bureaucratic – well, yes we are, actually, because we like to be precise. Is this confusing enough? Wait, there’s more! NRC works with other federal and state agencies to regulate uranium recovery, and some states (such as Texas and Colorado) have licensing authority through their agreements with the NRC. There are also the issues of uranium tails and legacy contamination from the Cold War uranium boom. To try to sort these out in a way that is easy to understand, we’ve posted a new Fact Sheet on Uranium Recovery on the NRC website.
David McIntyre
Office of Public Affairs

Comments

Facts, Facts and more Facts

posted on Fri, 16 Sep 2011 14:19:46 +0000



• The NRC administers approximately 3,000 nuclear material licenses a year. • In 2010, the NRC spent 6,055 inspection hours at operating nuclear reactors, with at least two NRC resident inspectors located at each plant site. • NRC has bilateral programs of assistance or cooperation with 40 countries. • The NRC examines transport-related safety during approximately 1,000 safety inspections of fuel, reactor and materials licensees annually. • 29 nuclear power reactors are permanently shut down or in the decommissioning process. These facts and far more can be found in the new 2011–2012 Information Digest, just posted on our website. The digest is a very important tool that gives the public valuable insight to the NRC, serves as a great reference for the public and the media, and uses graphics, charts and tables to help illustrate concepts. You can find the Information Digest online and the NRC has partnered with data.gov to provide some of the information in the appendices as interactive data sets. Additionally, one can find copies of photographs, graphics and tables in the NRC photo gallery to help tell the story!
Ivonne Couret
Public Affairs Officer

Comments

comment #2308 posted on 2011-09-23 18:58:10 by Bill R.

I would have never guessed that 3,000 nuclear material licenses are administred a year. Thanks a lot for the update and information.

comment #2340 posted on 2011-09-26 10:59:40 by cotswold accommodation

You never see what goes on the background, 6,055 inspection hours must be very stressful!

The NRC Celebrates the Open Government Partnership

posted on Tue, 20 Sep 2011 15:24:43 +0000

President Obama's Open Government Initiative has spurred many agencies, including the NRC, to increase transparency, participation, and collaboration, especially through the use of new web-based technologies. We've been pleased to take an active role in this initiative with the NRC Approach to Open Government. Today, the President signs the Open Government Partnership (OGP) declaration. OGP is an effort to improve governments around the world by promoting transparency, empowering citizens, fighting corruption, and harnessing new technologies to strengthen governance. Today, as part of OGP's formal launch, we're reiterating our commitment to these objectives and underscoring our accomplishments to date. As far back as 1977, when we first issued our "Principles of Good Regulation," the NRC has placed a high value on openness in the regulatory process. But the recent spirit of Open Government has brought about a variety of new efforts, including the following examples: • Social Media: In January, as part of our flagship Open Government initiative, we launched this public blog. Since it was established, the blog has had over 127,000 views and proved especially useful in enabling quick public communications during and after the events at the nuclear facilities in Fukushima, Japan, and during the recent east coast earthquake and hurricanes. More recently, we've expanded our social media presence with a Twitter feed (@NRCgov) and You-Tube channel (NRCgov) to offer even more ways to interact with and inform the public, and raise awareness about our agency and its mission. • Public Website: In April, we deployed the latest redesign of our public website, which features a modern look-and-feel, streamlined navigation, and rich features and functionality to make it quicker and easier for you to find the information you want. Since its launch, the site's score on the American Customer Satisfaction Index has increased from 72 to 74, with steady increases in the areas of content, look-and-feel, navigation, and online transparency. • Data.gov: Since January, the NRC has added 4 new datasets to Data.gov: Nuclear Power Plant Inspection Reports, Status of NRC Regulated Complex Materials Sites Currently Undergoing Decommissioning, Significant Enforcement Actions, and Reactor Materials Embrittlement. To date, this brings the total number of datasets published since April 2010 to 26, significantly more than the 17 identified in our original Open Government Plan. Check our Open Government page for a complete list of the NRC's High-Value Datasets. But our work on Open Government is not done. We're continuing to add new datasets, including one on nuclear plant performance indicators to be published soon. We're also working on a way to help smart phone users get quick access to our information when they attend an NRC meeting or other event. (More on this in an upcoming blog post). Most importantly, we plan to hold a public meeting this fall to solicit stakeholder feedback and suggestions for the next version of our Open Government Plan to be published in the spring of 2012. We want your input, so look for more information soon via our Public Meeting Notice page and this blog about how you can participate.
Francine F. Goldberg
Co-Chair, Open Government Advisory Group

Comments

comment #2391 posted on 2011-09-28 23:12:14 by Marcia | Fotografo bodas

It is important that the government keep all its citizens aware of the latest news and so do not strengthen the rumors that cause so much damage to the country

comment #2506 posted on 2011-10-07 01:09:19 by Jack Glenman

The government does a great job at keeping us updated on any dangers so I feel safe with the big boys watching over us, Thanks bless america!

comment #2295 posted on 2011-09-21 19:10:13 by Used Office Furniture San Diego

With everything that has gone on, it is good to see that the NRC is getting into social media to communicate. Keep up the good work and we look forward to more.

comment #2296 posted on 2011-09-21 20:11:44 by Used Office Furniture San Diego

Thank you. I have definitely noticed that we are getting a steady flow of information regarding San Onofre. After everything that has happened, it is good to know that the NRC is doing all it can to keep the safety requirements updated.

comment #2322 posted on 2011-09-24 23:51:47 by Panneer in response to comment #2295

I too appreciate it.... :D

comment #2370 posted on 2011-09-27 05:58:36 by Data Centre Space

This can only be good for everyone. Offical relevant information kills rumours stone dead, so this is a win win situation for all conerned.

Are We Seeing Clearly?

posted on Thu, 22 Sep 2011 13:29:53 +0000

The lens of the eye is one of the more sensitive tissues in the body to radiation, especially related to forming cataracts. The current NRC dose limit for the eye is 15 rem in a year, which is lower than the limits for other single organs. (The unit “rem” is used to measure the amount of radiation you get from a source – 0.1 rem is the average amount each of us gets each year from naturally occurring radiation.) Now, the International Commission on Radiological Protection (ICRP) has found that the eye is more sensitive than previously thought. Based on this, the ICRP has recommended a new lower dose limit for the lens of the eye. The new recommendation is two rem a year, averaged over the course of five years, with no single year exceeding five rem. Copies of the ICRP statement are available on the NRC website. While the best current evidence is that no one in the U.S. has been receiving exposure to the lens of the eye at levels close to our current limits, some people working with radiation are getting exposures at, or slightly above, the new international recommendations. We at NRC have been talking with licensees and other stakeholders for the past two years about possible changes to our radiation protection regulations as part of a process to ask for early input related to radiation protection rulemaking. These new international recommendations for limits to the lens of the eye are yet another issue that we need to consider. To continue talking with stakeholders, we published a notice soliciting stakeholder input in the Federal Register on August 31, 2011. The notice gives background on the issue, and asks questions about the different ways in which a change might be written, and the kinds of impacts that might occur if a change was made. The Federal Register notice can also be accessed from the the NRC website at: http://www.nrc.gov/about-nrc/regulatory/rulemaking/potential-rulemaking/opt-revise.html We welcome comments from all of those interested in the issue. Comments are due by October 31, 2011. The notice describes different ways in which comments can be sent to us. Based on the comments received, we will be preparing a paper for Commission consideration that will include options for how the agency may proceed. So, please let us know – what should we do to see clearly?
Donald A. Cool, Ph.D.
Senior Advisor, Radiation Safety and International Liaison

Comments

comment #2318 posted on 2011-09-24 11:16:09 by Scottsdale Homes

The new dose limit recommendation appears to be much lower than the before. It will be interesting to see if those people working with radiation are able to keep their exposure below the new dose limit. I think it is excellent that this new recommendation is being taking seriously and steps being made to keep our eyes safe.

comment #2389 posted on 2011-09-28 15:25:52 by africansafari5

The new regulation is in place but how are you going to ensure that the people working in radiation follow the rule?

comment #2379 posted on 2011-09-27 18:17:17 by Faiz Ahamed

Ok, I know that the human eye lens adjusts its focal length depending on the object distance to obtain a sharp image on the retina because the image distance has to remain constant. What I am not able to understand is how do the ciliary muscles and the suspensory ligaments contract in order change the shape of the lens. What exactly is the mechanism by which muscles and the ligaments work?

comment #2378 posted on 2011-09-27 16:29:27 by Bruce Behrhorst

ICRP dose threshold limit lower -OK. How quickly does safety equipment change to reflect new OSHA safety equipment compliance with new dose limits.

Public information? There's an app for that!

posted on Tue, 27 Sep 2011 14:48:56 +0000

Have you ever come across an image like the one to the left? Matrix barcodes like this have begun appearing on ads you see every day. This particular example is of a Quick Response (or QR) code, which contains information you can access using a smart phone and free barcode reader "app," (short for application). The barcode reader app uses the phone's built-in camera to "see" the code. When it is recognized, the app will show you the decoded message as text, open a web browser to the specified URL, or prompt you to enter a new contact into your phone, depending on the information contained within the barcode. If you have such an app, go ahead and scan this code, which will route you through a government website to the NRC's public website. An NRC Region III inspector, Jason Draper, suggested that the agency consider using this technology by incorporating QR codes into some of its brochures and public meeting signage. Region III is now working with the NRC Office of Information Services to launch a pilot program using QR codes. The pilot will run through mid-December 2011. The results of the pilot effort will be analyzed to determine whether this initiative should be recommended for full implementation across the agency. There are many potential uses. At job fairs, prospective employees could scan a QR code with their phone and be linked directly to the USA Jobs posting to obtain position information in real time. Public meeting attendees could be linked to the NRC public website or directly to a relevant NRC document with more information on the meeting topic. Similarly, posters used during end-of-cycle "Open Houses" could contain links to agency web pages with additional information for variety of technical topics. Using QR codes at the NRC's annual Regulatory Information Conference could enhance communications with the public and the international community, and further demonstrate its efforts to conduct business in an open and transparent manner.
Jared K. Heck
Regional Counsel & Government Liaison Team Leader
NRC Region III

Comments

comment #2392 posted on 2011-09-28 23:29:03 by Tom best hardwood floor vacuum

I am still do not quite understand how QR code really work, any website or example i can reference to it?

comment #2395 posted on 2011-09-29 06:13:23 by Marco

So this is like a "captcha" for phones, right? I belived that this kind of images is like a CRC check

comment #2373 posted on 2011-09-27 11:14:23 by Clyde H Stagner

The described APP certainly has merit for specific purposes which are specifically controlled by the APP human generator.For transparency,publish openly for the public to see,read,and understand.Not everyone in the US has Apps and not everyone in the US can afford APPS.

comment #2470 posted on 2011-10-04 16:09:47 by Kirk Pacheco

I was just reading a QR code article the other day. They're a very convenient way to convey information to anyone with a smart phone!

comment #2386 posted on 2011-09-28 10:19:23 by Nick Peskoe

With the increased use of smart phone technology, QR codes are definitely the future of advertising. It's good to see someone in the public sector thinking about ways to incorporate them in different ways. I think the job fair idea is a good one...

Federal Employee Viewpoint Survey Results - NRC's ranks #1!

posted on Thu, 29 Sep 2011 15:05:00 +0000

I've always been proud to be an NRC employee. The agency works hard to create an environment that supports employee development, engagement, and overall job satisfaction. So, I was happy, although not surprised, to hear the results of the annual Federal Employee Viewpoint survey. Once again, the NRC ranked #1 in the four key areas developed by the U.S. Office of Personnel Management (OPM). You are probably wondering what this survey is and what it means, so let me explain. OPM administers an annual Federal Employee Viewpoint Survey to all full-time federal employees. This survey was administered for the first time in 2002 and then repeated in 2004, 2006, 2008, 2010, and most recently in April/May of 2011. The survey is used to assess employee satisfaction with leadership, policies, and practices. Survey results provide valuable insight into the challenges agency leaders face in making sure the federal government has an effective civilian workforce. The NRC's uses the input to provide senior leaders with information to evaluate the success of ongoing efforts, and to design and implement new initiatives that will improve employee satisfaction. Past survey feedback has contributed to agency-wide improvements such as the "Let's Talk!" Performance Management Training, financial seminars, and the NRC Internal Career Fair, just to name a few. The Partnership for Public Service uses the results of the annual Federal Employee Viewpoint Survey to rank their Best Places to Work in the Federal Government. As you know for the last several year's the NRC has been ranked #1 and we are anxiously awaiting the 2011 rankings, so stay tuned… For more information go to governmentwide results.
Miriam Cohen,
Director, Office of Human Resources

Comments

Under the magnifying glass: Davis-Besse's Reactor Vessel Head Replacement

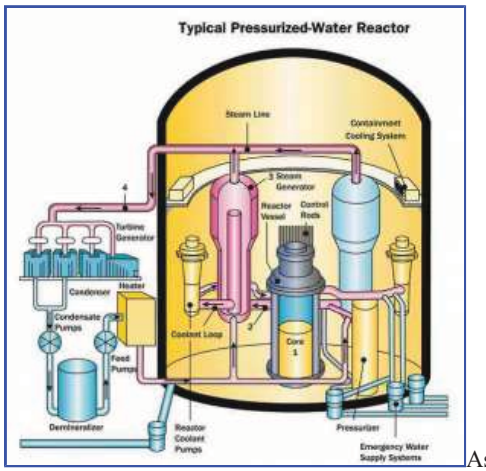
posted on Mon, 03 Oct 2011 16:42:07 +0000


Davis-Besse is getting a brand new reactor vessel head this fall -- its third since 2002. And we're going to invest more than 400 inspection hours to make sure the replacement is done right, and safely, for the workers and the public. New reactor heads have been installed at 36 out of 69 pressurized water reactors in the U.S. This head replacement, however, is a major milestone because of the history at Davis-Besse. This is the location where, in 2002, a football-sized cavity was discovered in the reactor vessel head. Because of corrosion found on the head, only a thin stainless steel liner remained between the reactor and the containment building. The NRC responded to this event by completely overhauling its regulations to require more rigorous examinations of reactor vessel heads. The damaged head was replaced with a similar head manufactured for another plant that never started operating. It went into service in 2004, after the NRC allowed Davis-Besse to restart. The replacement was a temporary measure. (A brand new head made from a different metal that is much less susceptible to corrosion was originally supposed to be installed in 2014.) However, the first replacement head developed several small cracks in an unexpectedly short period of time. The cracks were discovered during NRC-required inspections in 2010. Unlike the degradation found in 2002, these cracks did not challenge the overall integrity of the head and demonstrated that the NRC's new inspection program worked to identify cracks before they could result in significant head degradation or leakage. The cracks in the replacement head were repaired. But the NRC and the plant's owner, FirstEnergy, had extensive discussions about how long the repaired head could remain in service given the uncertainties associated with the unexpected cracking. As a result, FirstEnergy decided to replace the reactor vessel head in October 2011. This brings us to this brand new reactor vessel head manufactured in France from an alloy that is much less susceptible to corrosion than the two previous heads. The process to install this new head began this week after the reactor shut down on October 1. The NRC will be there every step of the way. In fact, our reviews started in July, when we began out inspections to verify that the new reactor vessel head was made in accordance with our standards and requirements. NRC resident inspectors at the plant and specialists in metallurgy, health physics, security, and other areas from the NRC Region III Office in Lisle, Ill., are reviewing calculations, procedures and work plans and will directly observe the most significant activities associated with head replacement and post-installation testing. The results of these inspection activities will be documented in the Resident Inspector Quarterly Inspection Report. Tomorrow, I'll outline describe how the 180-ton head is actually replaced – no small feat – and how the NRC will conduct its inspections.
Viktoria Mitlyng
Sr. Public Affairs Officer
NRC Region III

Comments

How the Davis-Besse Reactor Head Replacement Will Be Reviewed

posted on Tue, 04 Oct 2011 15:04:09 +0000

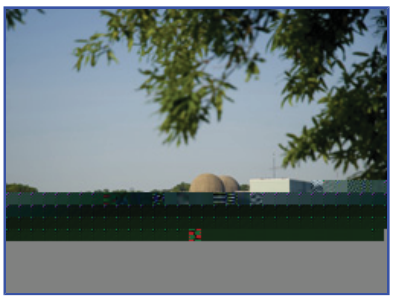


As I wrote on yesterday's post, installing a 180-ton reactor head at the Davis-Besse plant in Ohio is no small feat for the power company that owns the plant and for the NRC, which is monitoring and verifying the safety of the installation. First, NRC inspectors are reviewing the calculations necessary to make sure that a 180-ton reactor head can be moved safely to the reactor building, that the cranes are qualified to bear this tonnage and that the floor in the area of containment where the head will stand before being placed on the reactor vessel can withstand such weight. To get the old head out and the new head into containment, a hole will be cut in the containment and shield buildings after all the fuel is removed from the reactor. NRC inspectors will be observing major steps of this operation to make sure that structural and safety issues are properly handled. A runway system and transfer cart will be installed through this opening and cranes positioned to transfer the heads. NRC inspectors will monitor the actual transport of the old head out and the new head into containment. NRC inspectors will review radiological controls to make sure workers and the public are safe as the old head is transported from containment to a special storage facility on plant property. They will verify that appropriate security measures are taken throughout the entire process. Inspectors will verify that the shield building, which is designed to protect the containment building against potentially damaging flying debris, is properly restored. In addition, they will closely monitor post-installation tests to verify that the plant can operate safely when it is returned to service. The coolant system will be tested for leaks; the control rod drive mechanisms will be tested to make sure they can drop into the core to shut down the reactor within a specified amount of time; a pressure test will be performed to verify the containment building does not leak and x-rays taken to test the welds that close the opening. Inspectors will verify that the shield building, which is designed to protect the containment building against external hazards, is properly restored so it can perform this function after the opening is closed. After NRC inspectors are satisfied that the reactor can be returned to service safely and the plant resumes operations, the reactor vessel will be subject to the NRC head inspection regime in place. The NRC will continue to review inspection results to ensure the continued safe operation of the Davis-Besse plant.
Viktoria Mitlyng
Sr. Public Affairs Officer
Region III

Comments

How Long Will the NRC Keep North Anna Shut Down?

posted on Thu, 06 Oct 2011 19:32:07 +0000



The short answer is: The North Anna nuclear power plant in Virginia will remain shut down until the NRC is satisfied the plant's operator, Dominion, has proven the plant's two reactors can operate safely. The NRC's been examining both the plant itself and Dominion's response to the Aug. 23 quake ever since the event itself – one of the agency's resident inspectors was in the plant's control room when the quake hit. We supplemented our residents with an Augmented Inspection Team the following week, and that team discussed its preliminary findings Oct. 3 at the plant. The team concluded North Anna shut down safely after the quake, despite the plant having faced stronger shaking than what was anticipated during its licensing. The team examined Dominion's work and conducted its own inspections, all of which showed only minimal damage to a few of the plant's systems. Another group of agency experts from the agency's headquarters and Region II office in Atlanta will continue the North Anna inspection effort next week. In order to most effectively review the information on North Anna, the NRC's Office of Nuclear Reactor Regulation has set aside headquarters staff to focus on the issue of plant restart. The NRC met with Dominion Sept. 8 (see the meeting's webcast), where the company laid out its rationale for restart and the NRC staff asked questions in several technical areas related to restart safety. Dominion started to answer those questions with information on Sept. 17 and 27, but there's more work to do. In particular, the NRC wants to ensure Dominion has done an extensive set of inspections – a lesson learned from experience at a Japanese reactor damaged by a 2007 earthquake. The NRC also wants to ensure Dominion has appropriate plans for monitoring the plant during and after restart. Once all the NRC inspections are done, the staff's questions are properly answered and we're satisfied it's safe for the plant to restart, the NRC will write up a safety evaluation documenting why it's appropriate for North Anna to restart. The agency expects this entire process will continue past Oct. 21, when the Commissioners will hold a public meeting to discuss the North Anna situation.
Scott Burnell

Public Affairs Officer

Comments

comment #2522 posted on 2011-10-07 10:55:36 by Moderator in response to comment #2495

> North Anna is built to a Westinghouse design, therefore the GE control rod issue does not apply there. All GE-design plants in the U.S. have already compensated for the condition GE described and their control rod systems will work properly if an earthquake occurs.

comment #2513 posted on 2011-10-07 02:47:12 by Aladar Stolmar

> Only lessons learned in 2007? Would not it be time to consider the sudden ignition and firestorm in the core of the zirconium-steam reaction? Or there is still a question that this is the key process, causing the final state of nuclear reactor fuel in the TMI-2 reactor accident, Chernobyl-4 reactor accident, Paks-2 washing vessel incident and in the Fukushima Daiichi 1, 2, 3 reactor accidents?

comment #2521 posted on 2011-10-07 10:55:05 by Moderator in response to comment #2497

> Since North Anna is the first operating U.S. nuclear power plant to experience stronger shaking than what was anticipated during its licensing, the NRC is ensuring Dominion's actions are appropriate. The "first of its kind" factor, combined with the experience of a Japanese reactor requiring extensive inspections to determine its earthquake damage in 2007, calls for a proper examination of North Anna to ensure the plant is safe to operate.

comment #2519 posted on 2011-10-07 09:21:48 by transfertsuper8

> Did you prepare really versus natural accidents such as Fukushima Tsunami ? For exampl, how long would it resist a major earthquake ?

comment #2520 posted on 2011-10-07 10:54:32 by Moderator in response to comment #2498

> North Anna is the first operating U.S. nuclear power plant to experience stronger shaking than what was anticipated during its licensing. In 1986 the Perry plant in Ohio exceeded its "design basis earthquake" while under construction but was found acceptable for operation before its license was issued. In 1979 the Summer plant in South Carolina exceeded its operating basis earthquake (half of the design basis) while under construction but was found acceptable for operation before its license was issued.

comment #2495 posted on 2011-10-06 16:17:12 by Nancy

> In response to this article that warns that there could be a shift in the alignment of the shaft used for control rods inserted to shut down a reactor in an emergency such as the earthquake North Anna experienced what is the NRCs solution for this problem? http://www.nj.com/business/index.ssf/2011/10/ge_warns_nuclear_reactors_coul.html

comment #2496 posted on 2011-10-06 16:36:18 by Sarah Alexander

> Is there a publically available transcript or archived video of the AIT public exit meeting held on October 3?

comment #2497 posted on 2011-10-06 17:03:04 by Jim Greenidge

> Excessively P.R. Picky or stalling and stroking nuke frets and misgivings? Really, how long would've feds taken to get a similiarly "damaged" oil or gas facility back on line? Didn't Diablo Canyon jump back on the grid while other conventional plants were still picking themselves up after their last quake? James Greenidge Queens NY

comment #2498 posted on 2011-10-06 18:23:22 by Joffan (@Joffan7)

> Is this the first instance of a US nuclear power reactor experiencing a quake of greater intensity than its design basis? If not, when was the previous occasion?