



Re: Putting fuel in dry storage boxes at the San Onofre nuclear plant site
 Leonegrant
 to:
 Manuel.Camargo@sce.com
 07/30/2014 07:53 PM
 Cc:
 "David G. Victor"
 Hide Details
 From: Leonegrant <leonegrant@gmail.com>
 To: "Manuel.Camargo@sce.com" <Manuel.Camargo@sce.com>,
 Cc: "David G. Victor" <david.victor@ucsd.edu>
 History: This message has been replied to.

Yes. You have my permission to share my concerns and comments.

Also, thanks for the link.

Sent from my iPhone
 Leone cell 818-601-3627

On Jul 30, 2014, at 5:10 PM, Manuel.Camargo@sce.com wrote:

Dear Leone,

Please copy and paste the following URL into a browser to navigate to the area on the [SONGScommunity.com](http://www.songscommunity.com) website that includes a position paper on the tsunami hazard analysis and protection at San Onofre. It's the last of three position papers that make up one PDF on the site.

http://www.songscommunity.com/docs/SCE_PositionPapersISFSI_Canning_Tsunami.pdf

Also, we'd like to confirm that we have your permission to share your note to Chairman Victor with the membership of the CEP. Please confirm.

Best regards,

Manuel

Manuel C. Camargo Jr.

Principal Manager, Decommissioning
 San Onofre Nuclear Generating Station
 O 626.302.7902 (PAX 27902) - M 213.361.3661
manuel.camargo@sce.com

<mime-attachment.gif>
www.SONGScommunity.com

From: "David G. Victor" <david.victor@ucsd.edu>
 To: Leone Grant <leonegrant@gmail.com>,

Cc: "Manuel.Camargo@sce.com" <Manuel.Camargo@sce.com>
 Date: 07/29/2014 07:43 AM
 Subject: Re: Putting fuel in dry storage boxes at the San Onofre nuclear plant site

Dear Leone (if I may),

thanks for your thoughtful note and your concerns. With you permission I will share your note with the full CEP, as I do on a regular basis with other notes that members of the community send.

In the last couple weeks we have posted a summary from Edison on the tsunami risks for the bluff area (known as the "ISFSI") where the spent fuel assemblies are located. I copy Manuel Camargo at Edison who will keep a copy of our exchange on file (and share it with the CEP with your OK). Manuel can also point you to that tsunami summary. These are important issues for us in the community to focus on, and my sense is that the tsunami (and earthquake) protections in the casks are far beyond any plausible scenario for those hazards here in southern California. The situation for spent fuel storage here at SONGS is completely unlike the hazards at Fukushima. It would be ideal to get the fuel out of here completely, but as you note that problem will require a substantial policy shift and competence at the federal level that, so far, is lacking.

I will explore whether there is additional information about anchoring, but at our last CEP meeting we reported on seismic risks. These concrete bunkers are extremely heavy and have a low center of gravity—exactly the opposite of a school desk—and thus they are completely stable on the pad from gravity alone. A few years ago there was a massive earthquake on the east coast that affected a few nuclear plants that had a different design cask—concrete, but vertical and unbolted—and most of them didn't move at all. If I recall correctly, one or two shifted a tiny amount (an inch or so). I will check, but partial pre-fabrication has become the norm for many engineering projects and the experience so far has been that it actually leads to more robust products—because fabrication can be done under controlled conditions with much more extensive monitoring.

Having spent a lot of time looking at these options, I am convinced that the absolute safest place for the fuel (assuming it must be on site) is in casks. There are lots of designs of casks—each with merits and demerits—but the ones approved by the NRC are exceptionally safe.

In the next few weeks I will be posting an exchange of letters and a detailed summary of the safety of these casks in which the spent fuel is stored. Look for that as it will have a summary of issues raised by the CEP and some members of the community related to your note. This will, hopefully, offer more insight into what the technical literature says.

all best

David

From: Leone Grant <leonegrant@gmail.com>
Date: Monday, July 28, 2014 at 9:04 PM
To: "David G. Victor" <david.victor@ucsd.edu>
Subject: Putting fuel in dry storage boxes at the San Onofre nuclear plant site

Dear Professor Victor:

As an occasional visitor to the beach next to the nuclear plant, my husband and I appreciate the thoughtful input being provided to Edison by the Citizens Engagement Panel (CEP). I enjoyed reading their website; it is quite informative. We hope that the CEP's work will help the shutdown nuclear plant select the safest technology for storing the deadly nuclear fuel that, thanks to the paralysis at our federal government level, most likely will remain with us for many decades. As a local resident and beach goer, our main interest is to ensure that Edison makes the storage facility as invisible from the beach as possible and absolutely safe if, God forbid, we were to be hit with the "Big" one.

I am quite concerned to learn that large concrete condominiums in which Edison has been storing fuel (that we can see from the beach) are not even anchored to the concrete slab. I am told in Japan, even the school children's desks are bolted to the ground.

Why doesn't Edison secure these big boxy fuel storage houses to a solid foundation? To save money?

My husband, who is an engineer, thinks these unanchored boxy condos will slide without control under a strong earthquake. That concerns us no end.

I have also learned that these condos are assembled from pre-fabricated concrete panels; they are not poured in place which would make them much stronger.

Another concern I have relates to the risk of tsunami. After reading up on storage technology, I have come to realize that the fuel is cooled in these condos by air entering the units near the bottom and rising up the units by the chimney action. That is how the heat from the fuel is removed by the ventilation air. I wonder what would happen if the flood water submerged the air ducts and blocked the ventilation air from entering the big box. Wouldn't the fuel begin to overheat? I imagine that would be very dangerous.

I checked around and learned that PG&E up north at Diablo Canyon is bolting their casks to the foundation. Their Humboldt Bay plant has gone a step further and put its fuel in underground vaults. Why has Edison chosen a cheap route?

I request that you and the CEP factor my concerns in your deliberations.

Thank you for your time.

Leone Grant Kammarmeyer