

**PMNorthAnna3COLPEmails Resource**

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**From:** Steve Tracton [s.tracton@hotmail.com]  
**Sent:** Friday, March 18, 2011 1:45 PM  
**To:** Dozier, Tamsen; skmarsala@deq.virginia.gov  
**Subject:** FW: Comment, North Anna proposed third nuclear reactor  
**Attachments:** Concerns\_ThirdReactor.doc

**FYI: see attached, comments sent to Ellie Irons (OEIR)**

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*Steve Tracton*  
*379 N St., SW*  
*Washington, DC 20024*  
*[s.tracton@hotmail.com](mailto:s.tracton@hotmail.com)*  
*202 330-1090*

**Hearing Identifier:** NorthAnna3\_Public\_EX  
**Email Number:** 943

**Mail Envelope Properties** (SNT120-W30A7040823A2D4C85F95BAE3B00)

**Subject:** FW: Comment, North Anna proposed third nuclear reactor  
**Sent Date:** 3/18/2011 1:44:32 PM  
**Received Date:** 3/18/2011 1:44:37 PM  
**From:** Steve Tracton

**Created By:** s.tracton@hotmail.com

**Recipients:**

"Dozier, Tamsen" <Tamsen.Dozier@nrc.gov>

Tracking Status: None

"skmarsala@deq.virginia.gov" <skmarsala@deq.virginia.gov>

Tracking Status: None

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MESSAGE	176	3/18/2011 1:44:37 PM
Concerns_ThirdReactor.doc	33350	

**Options**

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**Sensitivity:** Normal

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March 17, 2011

To: Ellie Irons  
OEIR Manager

I am writing as a concerned citizen and home owner along the shores of Lake Anna about the proposed addition of a third nuclear reactor at the North Anna nuclear power plant. My principal concern relates to reactor safety, specifically avoiding the sort of near or actual core meltdowns as in Japan as a consequence of failure in backup systems when external power is lost - and looking at issues from a perspective which I suspect have not been considered and, perhaps, never even thought of as a serious threat.

First, be assured I am qualified to address issues described below. I am a PhD meteorologist (MIT, 1972), recently retired from Federal Government service with expertise and experience in atmospheric, ocean, and space sciences. Post retirement I remain active in several capacities, including writing for the online version of the Washington Post (WAP0).

One major subject which I have been addressing for WAP0 readers is the increasing solar activity (disturbances such as solar flares, coronal mass ejections of charged particles) as the sun ramps up from the recent minimum to and through the next maximum in the approximate 11 year solar cycle over the next few years (see links below). As I've written and documented in a series of posts on "space weather", intense solar storms could damage the electric power grids over much of the U.S. beyond repair for several months to years. Moreover, the consequences could be devastating for commerce, transportation, agriculture and food stocks, fuel and water supplies, human health and medical facilities, national security, and daily life in general.

We know now that the disaster with the Japanese reactors was loss of external power necessary to run the cooling system followed soon thereafter by loss of the backup diesel generators and battery power.

Nuclear power plants must shut down when external electric power is lost. I guess it is safe to assume the Lake Anna facility has backup diesels and battery power to run the cooling system and the plant's vital command and control system operative should there be a complete loss of external power.

The nub of the issue is whether the diesels' onsite fuel supply and batteries would last long enough to keep the reactors under control given that resupply would be a challenging proposition given the societal and infrastructure disruptions caused by effects of a possible catastrophic solar storm. Even if after shut down the reactors are the types with a self contained capability to drive the cooling pumps with residual steam power, that will not (I believe) support keeping water flowing to the cooling pools containing the spent fuel rods. The actual Achilles Heel, in fact, may turn out to be the required backup battery power for running the control systems for monitoring system status and controlling various pumps, valves, etc, since it's my understanding that only 8 hours of backup battery power is required.

The above, of course, applies to the existing reactors, but adding a third only increases the chances for a disaster.

Make no mistake, the scenario concerning the effects of solar storms on the nation's power grid is not science fiction, but hard science based reality. Unfortunately, only recently has it received attention by government officials and agencies, including FEMA and the NRC. Indeed, I know that President Obama has been briefed on the threat and urgency to address it. But, it's far too little and too late to

institute fixes for any meaningful efforts to mitigate the threat to the power grid this time around in the solar cycle. And, it is far from clear what, if much at all, can or would be done to completely protect the national power grid decades ahead as the Sun continues to do its thing (Smart Grid, as now envisioned, is not sufficient).

Bottom Line: It is recognized that even now a disastrous nuclear accident is highly improbable, **whatever the cause**. But, it is possible and it is imperative to further minimize the risks to every extent possible and at whatever cost, given the dire consequences should it occur. In this I totally concur with the concerns and recommendations by the Friends of Lake Anna (FOLA). So, I independently request that OEIR “OBJECTS” to the granting of a Consistency Certification at this time, until all the environmental concerns expressed herein as well as those identified by FOLA and others have been reasonably addressed and satisfied with the public’s consideration. addressed

P.S. I want to add that, although I’m sure this has been brought up before, perhaps the most immediate safety concern I have is the apparent lack of security at the dam. It would not take much by a terrorist or demented individual to blow up the dam which would drain the lake. Then what – no water, no cooling, etc.???

LINKS:

[http://www.washingtonpost.com/blogs/capital-weather-gang/post/are-nuclear-reactors-vulnerable-to-solar-storms/2011/03/16/ABeCTae\\_blog.html](http://www.washingtonpost.com/blogs/capital-weather-gang/post/are-nuclear-reactors-vulnerable-to-solar-storms/2011/03/16/ABeCTae_blog.html)

[http://voices.washingtonpost.com/capitalweathergang/2011/03/space\\_weather\\_what\\_you\\_need\\_to.html](http://voices.washingtonpost.com/capitalweathergang/2011/03/space_weather_what_you_need_to.html)

[http://voices.washingtonpost.com/capitalweathergang/2009/04/do\\_solar\\_storms\\_threaten\\_civil.html](http://voices.washingtonpost.com/capitalweathergang/2009/04/do_solar_storms_threaten_civil.html)

Regards,

M. Steven Tracton  
379 N St., SW  
Washington, DC 20024  
Tel: 202 330-1090