

From: NGO member
Sent: 12 July 2013
To: Peer review team
Subject: Re: Final products of Taiwan stress tests peer review

With remarks of NGO in color

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Thank you for your message and for informing us about the expectations of the NGOs.

Let me try to clarify the two key issues raised in your last message:

The stress tests are not intended to replace the "normal", continuous safety assessment and management process, but aim at providing an overall picture of the safety status of a NPP with regard to impact from extreme external events that is sufficient to understand and highlight the corresponding key strengths and weaknesses of a plant. On the basis of the peer-reviewed results, the national regulator can then develop an action plan for further concrete plant-specific measures and actions for improvements. Whether or not these improvements are considered to be sufficient in order to be acceptable according to safety regulation remains in the full responsibility of the national regulator and is not part of the stress tests or peer review.

AGREE: The national regulator shall take full responsibility, the responsibility is not transferable.

BUT: Can you prevent the AEC and other Taiwanese government agencies mispresent your review as "Safety-Seal" for the NPPs?

This "broad picture of the safety status of a NPP" is generated by a third party in the course of an independent assessment, i.e. by a peer review team. – You are asking about the added value of a peer review. – Let me respond with a perhaps naïve, but most effective example from my personal experience: Long time ago, when I was studying Physics, my favorite course was Quantum Physics. I liked it (and still very much do) because of its striking difference to normal perception, thinking and experience, for the beauty of its mathematics and philosophical implications, etc. – However, I also liked this course for the very particular way how it was taught to us students: In all other courses we had to follow a set of lectures, make exercises and finally examinations. In Quantum Physics, however, we had to follow also lectures, also make exercises, but have then our own subjective solutions to the "objective" exercises cross-examined and criticized by other students(!) in the course of meetings attended by the Professor and all other students. We were then given marks on this basis, and only if the discrepancies between the original work of a student and the alternative solutions proposed by a "peer-student" were too large, a formal examination had to be made. I found this "peer review" approach the most informative way of learning throughout all my University years.

AGREE: i like quantum physics too and I study molecular biology in graduate school tried to use topology for cell membrane modeling. Mathematics is an utopia world and fully art. All these studies are based upon fact, truth, repeatability, and reproducibility to make them "science" or it would be just a "philosophy" level theory or hypothesis.

When I worked with quality society, there is long time argument about "quality" as "science and profession" or just "technics and skill". Quality practitioner is "technician" rather than scientist or profession as physician nor accountant... Why? Because there is no enough body of knowledge to determine quality practitioner as profession but ASQ strived for years to set up the professionalism. ISO 9000 certification brought up tremendous social attention to business and public but "sale certification" becomes nightmare to the quality society because if the organization satisfied all requirements of ISO

9000 then the organization MUST satisfied its customers and stakeholders, the organization can not be failed theoretically. Right?

But there are more than 1 million ISO 9000 certificates around the world and 50% of the business of business carried certificates failed. The certification process failed the whole ISO 9000 system automatically. Why? Because the organizations and registrars (certification body) are making false statement as role play.

I used to be the Master Trainer for the auditor of automotive certification body of the IATF and Big 3 (Chrysler, Ford, and GM), I was too shame to continue my career, although pay was good and respectable, because I could not see value of my work for better quality and safety, cars still went wrong killed drivers, passengers and failed certification process was one of major root-causes -- if the auditors followed the rule, the mistakes shall be prevented and cars would remain safe as it designed. I did not train or certified that auditors but I still part of the murder, then I had to quit. If you like to check my background information, you may ask VDA-QMD people in 2001-2006, they were my competitor.

I do see similarities to our exercise here. Whenever there is an independent look on "something" given by somebody who has no stake in the business related to this "something" (i.e. neither wants to push for it or wants to block it), but gives his opinion on the strengths and weaknesses of the given approach, then there is a tremendous potential to learn and thus to further improve. – Learning by all parties involved, with – in the case of the stress tests – a final common goal: to increase safety – which, indeed, always has to be a continuous process (like in quality management), and no stress test and no safety assessment will ever be the final and definite response and solution, but an important snapshot of the situation at a given time under given conditions.

In summary, we aim at producing "a list" of well-founded observations on key strengths and weaknesses of NPPs against the type of hazards described, taking into account a broad spectrum of views, and submit it as recommendation to the national regulator for further consideration. The peer review team includes experts in the different scientific/technical domains related to the type of reactors used in Taiwan, so I think we have a good basis to analyze in an objective way all information received and develop the type of deliverable mentioned.

DISAGREE: Please define "well-founded observations". If the observation is based upon false evidences and statements the whole system corrupted and there is no way to have any observations. Measurement in the quantum physics is the interference of the observation, this is a cause of uncertainty. When your peer review starts, the NPPs and the AEC change. For the legitimate process of the national report it should be better review by the Legislative Yuan, if you still pay basic respect to Taiwanese Parliament and we, NGOs, will perdure legislators to request the AEC postpone the peer review after the legislators review and we wish you also respect our lawmakers jurisdiction if they request.

So, I do think that such an exercise produces added value, and the results of the EU Stress Tests are a very good example as they identified a number of relevant areas for further improvements in some NPPs while giving at the same time credit to particular strengths in others (or the same). On this consistent and verifiable basis, corresponding actions for further improvements have been and are still developed by the national regulators. This provides a basis for objective discussion on whether or not the actions taken/envisaged are sufficient or not; - but this is strictly a national discussion and decision-making process. To illustrate what I mean, I attach for your further reference the EC Communication on the outcome of the stress tests and the more technical report from ENSREG.

DISAGREE: We can look "value-add" in two ways - tangible and intangible. The major outputs of the pressure test is safer NPPs, I would not argue with any on with intangibles in terms of improvement of morale, diligence, careens, consensus..... But for the "tangibles" I will look scientific and engineer data and evidences, such as specifications, engineering and design change verification and validation, experiment data, test reports, effectiveness of training.... according to defense in-depth and mistake proofing (fool play).... These are all lack of evidence in the NPP and national reports. If you still stick on

the national report paper works, the peer review would in "looking fish from tree top" as Chinese saying. And how can you tell where is "strength" or where is "weakness"? This is inevitable responsibility for the peer review team and reviewing system.

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