

Last updated : 2:47:12 AM | Home | ePaper



Breaking News

Search

GO

Archive

July 5, 2011

GO

[CITY](#) | [NATION](#) | [BUSINESS](#) | [WORLD](#) | [VIVACITY](#) | [AVENUES](#) | [SPORTS](#) | [COLUMNIST](#) | [TAROT](#) | [EDITOR'S MAIL](#)
[STATE EDITIONS](#) | [Bhopal](#) | [Bhubaneswar](#) | [Ranchi](#) | [Kochi](#) | [Lucknow](#) | [Chandigarh](#) | [Dehradun](#)
[SUNDAY PIONEER](#) | [Agenda](#) | [Foray](#)
[EDITS](#) | Tuesday, July 5, 2011 | [Email](#) | [Print](#) | [★★★★☆](#) | [Back](#)

Recipe for disaster

July 04, 2011 11:50:17 PM

Sandhya Jain

As the world abandons nuclear power plants India persists with acquiring technology for nuclear energy. Are we prepared for the consequences?

New Delhi's determination in pursuing access to enrichment and reprocessing technology with the Nuclear Suppliers' Group, after receiving a 'clean waiver' in September 2008, is disturbing because it shows we are probably the only major world capital that is not reassessing atomic energy after the Fukushima tragedy.

This is doubly distressing as South Block must be aware of the strategic silence the nuclear energy industry has managed in mainstream media everywhere regarding serious problems in at least three nuclear power sites in America at the present moment. Indeed, experts feel the nuclear energy industry's recurrent disasters have virtually become an annual event. While Chernobyl and Fukushima could not be concealed, the British successfully blacked out Sellafield where the first nuclear leak occurred in 1957.

Now, danger is brewing at Nebraska and Los Alamos in the US, while Fukushima's escalating crisis is being downsized. Two whales caught 650 km away from the melting reactors have shown intense radiation, and plutonium — just one pound evenly distributed to every person on Earth could kill all — has been found dangerously far from the site.

At Fukushima, five nuclear reactors are burning over three months after the crisis began (the reactor at Chernobyl burnt for 10 days); and plutonium, strontium, cesium, uranium and other nuclear materials are being released into the atmosphere. A newly installed water treatment system at Fukushima #1, designed to remove radiation from the colossal amounts of water at the plant, had to be shut down. Workers need to enter Fukushima #2 to inject nitrogen into the reactor to prevent a hydrogen blast; they can't enter because of excessive humidity.

At Los Alamos, a massive wildfire is threatening the US national laboratory that hosted its atomic bomb programme and still contains stored radioactive material. So far, no one knows how much there is, how gravely it is endangered, how much (if any) has been overwhelmed by flames, and the potential for radioactive fallout.

At Nebraska, on June 6 the Missouri river flooded at least two reactors at Fort Calhoun Nuclear Facility near Omaha city. Yet, there is ominous silence about the impact of flooded cores and fuel cooling ponds on the Missouri and Mississippi rivers, and the eco-system up to the Gulf of Mexico which is still reeling from BP's toxic oil spill. A 16 feet wide and eight feet high rubber floodwall has been punctured, but the company claims the "same level of protection is in place". How?

There is silence about whether flood waters will continue to rise at the plant; if the operators can protect the reactors; and, what happens if they can't. Fort Calhoun is cooling its reactors and spent fuel pools with back-up diesel generators. The buildings are designed to withstand flooding of 1,014 feet; the waters have reached 1,006 feet and were still rising at the time of writing. On June 7, a fire broke out in an electrical switchgear room and cut off power to a pump that cools the pool where spent fuel rods are stored for about 90 minutes. The plant stores 840 tonnes of highly radioactive spent fuel rods at ground level, open to the sky. An expert said if the Missouri river pours in there, Fukushima will look like an X-ray.

The floods could also endanger the Cooper Nuclear Facility at Brownville in Nebraska. On June 20, Cooper declared a "Notification of Unusual Event" because Missouri river's level reached a dangerous 42.5 feet. Cooper can't discharge sludge into Missouri river due to flooding, and has "overtopped" its sludge pond. Yet, the US Nuclear Regulatory Commission says there's no cause for panic (read: there are no evacuation plans).

The US Nuclear Regulatory Commission's constant collusion with the nuclear industry to lower safety standards regarding 'acceptable radiation damage to reactors' is the most disquieting aspect of the crisis. Three Senators are now demanding a Congressional probe into the safety of America's aging nuclear power plants. The Associated Press correspondent Jeff Donn has revealed that radioactive tritium has leaked from 48 of 65 American commercial nuclear power sites and entered groundwater from corroded, buried piping; 37 leaks exceeded the federal drinking water standard.

Many nuclear power plants have underground piping, which is rarely inspected properly. Much of this is corroding, causing radioactive leaks and spills of tritium and other radionuclides at several sites. But when certain parts or systems of American nuclear plants come close to violating standards, either the Government or the industry undertakes 'research' and both conclude that standards can be lowered! The excuse is, "the standards were overly conservative". Thus, failing parts and systems are allowed to conform to diluted standards. And when the systems and parts still do not conform, the regulators issue waivers or amendments or special exceptions and let the nuclear plants keep operating.

A serious issue pertains to the integrity of the cooling systems. Some of the underground piping carries water to cool the reactors. In a Fukushima-type of crisis there is a desperate need to cool the reactors, because radiation produces immense heat. There is equally the danger of other radioactive materials like strontium or cesium leaking. At Indian Point, 25 miles north of New York city, the nuclear plant had many radioactive leaks from the spent fuel pools. Even Mr Gregory Jaczko, chairman of the US Nuclear Regulatory Commission, has hinted at the need to revisit the security of spent fuel pools.

Another issue is embrittlement of the steel containers around the reactors, which can cause them to shatter suddenly. The American Government and regulators, finding reactors approaching or even violating the embrittlement standard, instead of demanding repairing (a process called annealing) or outright replacement, are compromising on the standard and letting the vessels become even more brittle (and disaster-prone). This is post-Fukushima.

In a classic case, Entergy, which owns a reactor in Vermont, is suing the State for its decision to shut down the reactor on March 21, 2012, after it spewed tritium into groundwater and the Connecticut river from underground pipes whose existence the company had denied. A cooling tower also collapsed. But the Nuclear Regulatory Commission extended the reactor's licence and asked the federal Justice Department to intervene on behalf of the utility.

Are these the standards the UPA Government will import to India along with the nuclear energy plants it is doggedly pursuing with multiple foreign entities, all hailing from countries whose own people are beginning to have serious reservations about the viability and desirability of nuclear energy?

[Email](#) | [Print](#) | Rate: 1 2 3 4 5

[Post Comment](#)

COMMENTS BOARD ::

© CMYK Printech Ltd. All Rights Reserved. Reproduction in whole or in part without written permission is prohibited.