Japan – The Fukushima No. 1 power plant's continued pollution of the Pacific is fueling growing domestic and international concern

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Fukushima spill snags reactor restart quest — Hosts appear split despite nation's inability to quickly solve water crisis

OSAKA — The Fukushima No. 1 power plant's continued pollution of the Pacific is fueling growing domestic and international concern about radiation hazards, clouding plans by utilities and the government to quickly restart a dozen reactors.

The Nuclear Regulation Authority's decision to raise the severity assessment of a tank leak Wednesday to level 3 ("gserious incident") on the International Nuclear and Radiological Event scale comes over a month after Tokyo Electric Power Co. admitted radioactive groundwater under crippled Fukushima No. 1 power plant is flowing to the Pacific Ocean, and six weeks after applications were filed to restart reactors in Hokkaido, Fukui, Ehime, Saga, and Fukui prefectures under new safety standards.

But there is something of an east-west divide among regional governments as to the wisdom of restarting the reactors. On Wednesday, Fukushima Gov. Yuhei Sato called on Prime Minister Shinzo Abe's government to declare a national state of emergency over the water leaks.

"Under the recognition that this is a declared national emergency, the government should respond in a concerted effort, and with a sense of urgency," Sato told Minister of Economy, Trade, and Industry Toshimitsu Motegi.

In Niigata Prefecture, home to Tepco's giant seven-reactor Kashiwazaki-Kariwa complex, plans to apply for restarting two of the reactors ran into problems even before the most recent water leak, when the governor signaled he was opposed.

"Now is not the time to talk about restarting the reactors, because the investigation into the causes of the Fukushima accident is not finished" Niigata Gov. Hirohiko Izumida warned last week.

In western Japan, the political rhetoric is different.

In Fukui Prefecture, which has 13 commercial reactors, the local townships hosting them, as well as Gov. Issei Nishikawa, are continuing to lobby hard to get them up and running again. Nishikawa has been especially critical of the way the NRA examined the prefecture's plants.

"For no logical reason, the NRA has delayed plant safety inspections" on the new safety standards, Nishikawa said.

The staunchly pro-nuclear Fukui governor has met with senior Abe administration officials twice since June. He called on the government to create a separate body to monitor the operations of the NRA and to make recommendations for improving its operations.

In a passage that came almost verbatim from previous statements by Kansai Electric Power Co., he also asked that a new body of experts be hired to come to a "fair and impartial" scientific conclusion about the fault lines under Fukui's reactors, which were judged active in the case of the Tsuruga plant's reactor 2.

In June, reactors 3 and 4 at Kepco's Oi power plant – currently the only two online in Japan – were allowed to continue operating until they have to halt for regular inspections in September, after the NRA said there were no immediate safety problems.

In Saga Prefecture, Kyushu Electric Power Co. is pushing to restart the reactors 3 and 4 at the Genkai power plant. But the Fukushima water leak has magnified the concerns of local fisherman, and about 20 members of a fisherman's union in neighboring Nagasaki Prefecture last week agreed to protest the effort.

Local opposition, however, isn't as strong as it is in other parts of the country, and there is speculation among anti-nuclear groups that the Genkai reactors will be the first restarted under the new safety guidelines.

In Ikata, Ehime Prefecture, where Shikoku Electric Power Co. officials are moving forward with plans to start the Ikata plantÅfs reactor 3, company officials went door to door earlier this week visiting homeowners and small businesses to explain the safety policy for the plant, also encountering little opposition.

But the questions of if, when and where reactors should be restarted is likely to rely not only on local politics, but also available personnel.

Earlier this month, the NRA took out a help-wanted ad in a utility industry newspaper, seeking 20 people with experience working in nuclear power to help judge whether reactors targeted for restarts meet its new safety standards, which took effect in July.

At present, about 80 people are employed in such work. The NRA wants the new employees to begin in October. Given the amount of work and the number of applications, doubts remain about whether even 100 additional inspectors would speed up the process.

Eric Johnston, *Japan Times* Staff Writer, August 29, 2013
http://www.japantimes.co.jp/news/2013/08/29/national/fukushima-spill-snags-reactor-restart-quest/#.UiPtiX9jbRY

Oi reactor checks to temporarily halt nuclear power generation

TSURUGA, FUKUI PREF. — The nation's only two fully operational nuclear reactors will be suspended for routine maintenance checks this month, shutting down all atomic power generation for only the second time in recent memory.

The nation's 50 commercial reactors were taken offline after the Fukushima disaster debunked the nuclear safety myth promoted by the government for decades. This month's checks will halt all atomic power generation in Japan for the first time in about 14 months, when Kansai Electric Power Co.'s Oi plant in Fukui Prefecture restarted its No. 3 and No. 4 reactors.

Since reactors by law must undergo periodic inspections every 13 months, unit 3 will be suspended Monday and unit 4 on Sept. 15.

It is not known how long the checks will take.

Kyodo News, September 1, 2013
http://www.japantimes.co.jp/news/2013/09/01/national/oi-reactor-checks-to-temporarily-halt-nuclear-power-generation/#.UiQGjX9jbRY

Japan official vows help in resolving nuke crisis

IWAKI, Japan (AP) — Japan's industry minister pledged urgent government action Monday to curb leaks of radioactive water from the crippled Fukushima Dai-Ichi nuclear plant.

Toshimitsu Motegi told reporters that lax maintenance by the plant's operator was largely to blame for the series of leaks from storage tanks at the plant, which was damaged by a massive earthquake and tsunami in 2011.

"The urgency of the situation is very high," Motegi said. "From here on the government will take charge."

The leaks have shaken confidence in the reliability of about 1,000 tanks that are crucial for storing water that has been pumped into three damaged reactors to keep their radioactive fuel cool.

At least five of the tanks at the plant on Japan's northeastern coast have leaked.

Last week, the plant's operator, Tokyo Electric Power Co., said 300 tons (300,000 liters, 80,000 gallons) of highly contaminated water had flowed from one tank, in the worst leak so far. Most of the water is thought to have seeped into the ground, but some may have entered the sea through a rainwater gutter, it said.

The tanks contain nearly 300,000 tons (300 million liters, 80 million gallons) of partially treated radioactive water.

Motegi, who toured the plant on Monday, said inspections of the tanks would be doubled to four times a day. “Water control is a very important issue. We have to prevent contaminated water from reaching the sea,” he said.

TEPCO President Naomi Hirose, who accompanied Motegi, apologized for the leaks. He said the company is setting up a new taskforce to better deal with the problem of radioactive water and will step up efforts to assess the extent of underground water contamination and prevent leakage into the sea.

TEPCO plans to build more tanks to store another 800,000 tons of water, which combined with plans to pump out uncontaminated underground water should prevent the situation from becoming dire for another three to four years.

“But we cannot keep making tanks endlessly,” Hirose said.

The chief of Japan’s nuclear watchdog, Toyoshi Fuketa, who inspected the plant last Friday, also criticized the plant’s management of the tanks, some of which have hoses running directly on the ground.

TEPCO spokesman Noriyuki Imaizumi said Saturday that a two-person team has been inspecting the 1,000 tanks during twice-daily “patrols,” which regulators have criticized as just a walk. He acknowledged that the workers usually did not carry dosimeters to measure radioactivity, and did not keep full inspection records unless there were notable irregularities such as major rust spots or leaks.

Chief Cabinet Secretary Yoshihide Suga said the recent major leak was “extremely regrettable,” though he said it arose “largely because of sloppy valve operation and patrols,” apparently trying to calm deepening fears of additional leaks.

“Our position is to do everything we can to help resolve the problem as quickly as possible,” he said.

Motegi is expected to compile a support plan, and the ruling coalition will set up a taskforce to handle the water problem, Suga said.

As the crisis drags on, costs are mounting.

TEPCO’s stock price plunged nearly 6.9 percent on Monday following the release over the weekend of further details of the crisis.

Fishermen working from a port in the nearby city of Iwaki had hoped to resume test catches next month after sampling showed a decline in radioactivity over the past two years. But those plans were scrapped, and fisheries operations in Fukushima remained suspended indefinitely, after news of the latest leak from the plant.

It remains unclear what the environmental impact from the contamination will be on sea life, but the frustrations of those who rely on the fisheries industry for their livelihood is evident.

“The operators (of the plant) are reacting too late every time in whatever they do,” said Fumio Suzuki, whose boat has been part of the sampling trips since the 2011 disaster.

“People in the fishing business have no choice but to give up. There are many (fishermen) who have mostly given up already,” Suzuki added.

Still, fisherman and researchers continue to survey the sea life.

Sampling results from over 170 types of fish showed 40 percent of fish with signs of contamination.

Nobuyuki Hatta, director of the Fukushima Prefecture Fisheries Research Center, said the trend had been positive before the latest leaks, with fewer fish found exceeding radiation limits.

Associated Press, August 27, 2013
http://mainichi.jp/english/english/newsselect/news/20130827p2g00m0dm078000c.html

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Oi reactor halt Sept. 15 to see all plants idled

TSURUGA, FUKUI PREF. — Two reactors will go offline for routine checks on Sept. 15, the first time the nation will be without electricity generated by nuclear power in more than a year, government sources said.

It will be the second time that all of the nation’s 50 commercial reactors are offline at the same time since the 2011 Fukushima No. 1 plant disaster started, sparking public fears about the safety of nuclear power.

The two reactors currently online are units 3 and 4 at Kansai Electric Power Co.’s Oi plant in Fukui Prefecture. The utility has reported to the Nuclear Regulation Authority that the checks for reactor 3 unit will start Sept. 2, and plans to report that checks for unit 4 unit will commence Sept. 15.

Nuclear reactors are required to undergo inspections every 13 months. Utilities have to file applications with authorities a month ahead of time.

Last year, Japan was without nuclear power for the first time in more than 40 years amid the Fukushima nuclear crisis, triggered by a huge earthquake and tsunami on March 11, 2011.

After about two months, the government allowed the restart of the two reactors at the Oi plant to address possible power shortages in the summer in western Japan.

No other reactors have been brought back online since, but Japan is now moving closer to restarting some units as procedures to check their safety based on a set of new regulations commenced in July.

The safety evaluation of the reactors, however, may take around six months, meaning Japan will see nuclear power generation drop to zero again after the two Oi plant reactors are taken offline.

Before the nuclear crisis, nuclear power supplied around 30 percent of Japan’fs total electricity.

Kyodo News, August 13, 2013
http://www.japantimes.co.jp/news/2013/08/13/national/oi-reactor-halt-sept-15-to-see-all-plants-idled/#.Ug1leX9jbRY

LDP panel to recommend freezing construction of new nuclear plants

A Liberal Democratic Party (LDP) subcommittee probing the Fukushima nuclear disaster is set to recommend that Japan freeze construction of any new nuclear power plants until it decides how to deal with its spent nuclear fuel.

The subcommittee, part of the LDP's strategic research council on resources and energy, included the suggestion in a proposal it plans to submit to Prime Minister Shinzo Abe this month. The proposal, which also calls to shut down nuclear power plants whose operation is not financially viable, is likely to cause a stir within the Abe administration.

A subcommittee member pointed out that Japan had no final disposal site for the highly radioactive spent nuclear fuel that nuclear plants generate.

"It is not possible for the government to fulfill its responsibility to provide an explanation to the public if it builds new nuclear plants when there is still no final disposal site for spent nuclear fuel — which is like having an 'apartment with no toilet,'" the member said.

The subcommittee was formed after the outbreak of the ongoing crisis at the Fukushima No. 1 nuclear plant operated by Tokyo Electric Power Co. (TEPCO). Its proposal expresses reservations about the way TEPCO has struggled to handle the disaster, with contaminated water escaping into the sea. It makes a wide range of proposals, from those governing the handling of contaminated water to the nation's future nuclear power policy.

At its outset, the proposal points out that high radiation levels at the Fukushima plant have hindered inspections of the reactors and associated buildings, and asks the government to further probe the cause of the nuclear disaster.

The tsunami following the March 2011 Great East Japan earthquake has been cited as the direct cause of the nuclear disaster, but the subcommittee's proposal says that the effects of the temblor on the nuclear disaster should be further investigated, with specialists on commercial reactors becoming involved in the nuclear regulation agency.

Regarding nuclear policy, the proposal says the construction of new reactors should be frozen, and that operations of reactors that are too expensive to manage due to the high costs of tsunami countermeasures should be halted.

Mainichi Shimbun, August 16, 2013
http://mainichi.jp/english/english/newsselect/news/20130816p2a00m0na015000c.html

Stricter nuclear plant safety standards to force decommissioning of reactors

The enforcement of stricter nuclear power safety standards in the wake of the Fukushima nuclear disaster has made it realistic that many reactors across the country must be decommissioned sooner or later.

Besides the No. 1 to 4 reactors at the disaster-hit Fukushima No. 1 Nuclear Power Plant, only three commercial nuclear reactors are currently undergoing procedures for decommissioning and dismantling. The three are the Tokai plant with an output of 166,000 kilowatts run by Japan Atomic Power Co. (JAPC), and the No. 1 and 2 reactors at Chubu Electric Power Co.'s Hamaoka plant with outputs of 540,000 and 840,000 kilowatts, respectively.

JAPC estimates that it will cost a total of 88.5 billion yen to decommission and dismantle its Tokai power station, while Chubu Electric Power foresees it will cost a combined 84.1 billion yen to decommission Hamaoka plant's No. 1 and 2 reactors, with the goal of completing the process by fiscal 2036.

However, the NRA enforced new safety standards in July this year to prevent catastrophic accidents involving nuclear plants, similar to that at the Fukushima No. 1 plant. Moreover, the government set the upper limit of the period of operation of each nuclear reactor at 40 years in principle.

The NRA's new safety standards stipulate that the most advanced safety measures must be implemented for existing reactors, requiring larger-scale remodeling for older reactors. Of the 50 commercial reactors across the country, 17, or about 30 percent, have been in operation for more than 30 years. Their operators will be forced to choose between drastically remodeling or decommissioning such aging reactors sooner or later.

It costs a huge amount of money to decommission and dismantle nuclear reactors. In 2007, the Economy, Trade and Industry Ministry estimated that it costs roughly 65.9 billion yen to decommission a boiling-water nuclear reactor like those at the crippled Fukushima plant and 59.7 billion yen to dismantle a pressurized-water reactor like many of those in western Japan. Moreover, the ministry estimated that 3 trillion yen would be needed to decommission all the reactors throughout the country.

Such being the case, the ministry is considering revising the system to use electricity charges to sufficiently cover costs of decommissioning nuclear reactors in anticipation that a large number of such reactors must be decommissioned at the same time under the stricter safety regulations.

In the meantime, the estimated expenses of decommissioning the crippled No. 1 to 4 reactors at the Fukushima No. 1 plant have been only snowballing. Plant operator Tokyo Electric Power Co. (TEPCO) has so far invested 957.9 billion yen on such efforts. However, there are no prospects for developing a method of treating radioactive water accumulating on the premises of the power station in the foreseeable future, and it will cost the utility a massive amount of money to develop new technology to recover and store melted nuclear fuel.

To cope with the challenge, the national government set up the International Research Institute for Nuclear Decommissioning (IRID) comprised of 17 nuclear plant operators including TEPCO earlier this month in an effort to shorten the time required to decommission a reactor, which currently takes up to 40 years.

Hajimu Yamana, president of the IRID, underscored the need to learn from overseas technology for decommissioning nuclear reactors.

“We can’t tackle the challenge of decommissioning the Fukushima reactors without learning from the Three Mile Island and Chernobyl nuclear disasters as well as from Britain, which has broad experiences in decommissioning nuclear reactors,” Yamana, also professor at Kyoto University Research Reactor Institute, told a news conference on Aug. 1.

Mainichi Shimbun, August 19, 2013
http://mainichi.jp/english/english/newsselect/news/20130819p2a00m0na012000c.html