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Indian Point: The Next Fukushima?

By VICTOR GILINSKY

Santa Monica, Calif.

NINE months after an earthquake and tsunami destroyed the Fukushima Daiichi nuclear power plant in Japan and set off the world's worst radiation crisis since Chernobyl, the Japanese government finally announced on Friday that the plant's reactors had been stabilized.

But federal regulators have yet to absorb the lessons from this crisis. The owners of the Indian Point nuclear plant in Westchester County, 25 miles north of New York City, are asking the Nuclear Regulatory Commission to extend their operating licenses for 20 years. Gov. Andrew M. Cuomo strongly opposes those renewals.

However unlikely, the possibility of a major meltdown at a plant in the United States can't be dismissed. And yet Gregory B. Jaczko, the chairman of the Nuclear Regulatory Commission, [told Bloomberg last week](#) that there would be enough time for millions of people in the region to get away "because nuclear accidents do develop slowly, they do develop over time, and we saw that at Fukushima."

But even if that were true, many might never be able to return. Some 160,000 Japanese are still displaced because the radioactive contamination — in an area far less populated and less dense than the New York area — was so intense and far-reaching. The Nuclear Regulatory Commission's cost-benefit analyses for Indian Point and other nuclear plants in the United States do not factor in these possibilities. The consequences of land contamination should be weighed in any decision to re-license the plant's two reactors, which are up for renewal in 2013 and 2015.

The reason the contamination is so long-lasting is that Cesium 137, the most dangerous isotope released in a severe accident, has a half-life of 30 years. A contaminated area — one that was, say, four times above the maximum permissible post-accident radiation level for human habitation — would stay above that level for nearly a human lifetime.

The standard for a mandatory evacuation at Fukushima was set at about 20 times the maximum radiation level allowed for normal operation. That is not a life-threatening level, but it is high enough that the International Commission on Radiation Protection warns against year-round human habitation.

Hundreds of square miles around Chernobyl, site of a meltdown in 1986, are still off-limits. The Japanese evacuated a comparable area northwest of the Fukushima site. It's not practical to decontaminate an area that large, and few people are going to want to live there even if they are allowed to.

Dr. Jaczko said it was unlikely that a nuclear accident would require prompt action beyond “more than a few miles.” That might be correct in terms of avoiding immediate health effects from radiation (though after Fukushima, he advised United States citizens in Japan to stay at least 50 miles away from the reactors). But his remark does not begin to capture the human and economic devastation in Japan. At Fukushima, some areas more than 25 miles from the reactors were contaminated beyond the mandatory evacuation level.

The lack of attention to possible land contamination is a major gap in the American system of nuclear safety regulation. After Fukushima, it should be the main safety concern — and one that is not addressed by evacuation, no matter how efficient.

A severe accident at Indian Point, whose two reactors opened in 1974 and 1976, is a remote but real possibility. We’ve had two severe accidents with large releases of radioactivity in the past. The Chernobyl accident was dismissed in Western countries on the grounds that it was the product of Soviet sloppiness and “couldn’t happen here.” But the Fukushima accident involved reactors built to American designs.

The essential characteristic of this technology is that the reactor’s uranium fuel — about 100 tons in a typical plant — melts quickly without cooling water. The containment structures surrounding the reactors — even the formidable-looking domes at Indian Point — were not designed to hold melted fuel because safety regulators 40 years ago considered a meltdown impossible.

They were wrong, and we now know that radioactive material in the melted fuel can escape to contaminate a very large area for decades or more. It doesn’t make sense to allow such a threat to persist a half-hour’s drive from our nation’s largest city.

Victor Gilinsky, an energy consultant, was a member of the Nuclear Regulatory Commission from 1975 to 1984.