FAIREWINDSASSOCIATES

Update on Fukushima Daiichi

[March 23rd, 2011]

I'm Arnie Gundersen of Fairewinds Associates. I wanted to talk to you today abc releases that are coming from the Fukushima nuclear reactor complex.

First off I want to take a look at the slide that's up right now. It's the same one tha previous presentation, but we're going to look at a different spot. You see th structures around the nuclear reactors? They sort of look like transmission tower not. They're called "stacks." Like a smokestack, except it's not smoke that goe radioactive gasses. They're there for a purpose. They were there because enginee you could vent the nuclear radiation after an accident up a stack and get better disp words, it was designed to throw the radiation high up into the air so it would disper not working, and the reason that they're not working is two-fold. First, [there are] are required to push the air up those stacks. Well, fans require electricity, and there at Fukushima right now, so for the entire first eleven days of the nuclear accide have not worked. There's a second problem, too: those stacks were designed to su containment buildings. And, you know, as the picture shows, there's not much buil air out of. So, because the walls had exploded, there's no air to be drawn throug

the stacks. So, even if the stacks were working, with the buildings failed, ther release up those stacks. That's not good.

What does it mean? Well, when engineers design an accident calculation, they a fuel fails at a rate of about one percent (1%). At Fukushima, they believe that percent (70%) of the fuel has failed. They also assume only one reactor fails. At Fu got three reactors and the spent fuel pools, so there's as many as seven or eigl involved. The other thing is that they assume that the nuclear reactor containmen half a percent (0.5%) per day. At least on unit two most experts believe the breached, which means it's clearly leaking more than half a percent per day. A fin when they assume an accident calculation: they assume that those gasses get pu those stacks. That's not happening either. So, what's happening instead is called release."

The next slide is from a video that's been on the web. It's of a helicopter or airpla plant. I've chosen to take a look at second thirty-seven on the video. It's only a or though. It's kind of devastating. If you look at second thirty-seven, there's smoke o out the side of the building. It's not going up, it's actually rolling down. That's called effect." You'll see it on a snowy day where the snow blows across the roof. It does the air, it rolls, it tumbles down the side of the building. What that has the net ef Fukushima is causing the radiation to lie near the ground.

There's evidence in the environment that that's occurring. It's pretty clear to m immediately outside the plan will be contaminated for a long, long time, and I wo people returning to their homes anytime soon. But, even out at the thirty and forty twenty or thirty miles out, we're beginning to see significant contamination which y if the stacks were working. What's my source? My source is the IAEA, the Inter Energy Association, Agency, rather, excuse me. Their data from yesterday shows out as far as thirty and forty kilometers are seeing a background radiation of abou six-hundred (1,600) times what normal background is. That's coming from a cloud o hanging over the land right now. Those gasses are xenon and krypton and they' gasses." If you remember your high-school chemistry, they're way on the right-h periodic chart. They don't react with anything, but they do emit gamma rays, which cloud exposure that everyone is exposed to. By the way, they also decay to oth strontium, so that even when they're gone, they leave daughter products behind tha on the soil.

The other thing the IAEA found is surface contamination, and that's particularly surface contamination is zero-point-nine Megabecqerels (0.9 MBq) per square m know what a square meter is, it's roughly three feet by three feet, a little bit Megabecquerel is a million disintegrations every second. So, what the IAEA has de the ground is contaminated with some beta isotopes and some gamma iso contaminated with radioactive material to the tune of nine hundred thous disintegrations per second. This isn't on the plant site – this is thirty or forty kilomete

In comparison, and it's not an exact comparison but it's pretty good, at Chery considered [it] a "hot spot" if the beta contamination exceeded five hundred thou disintegrations every second, or zero-point-five Megabecquerels (0.5 MBq) per sq this is on the same realm as what a radioactive hot spot was considered at, by Cherynobyl. It's a serious concern and it's not going to go away soon. These reacto to leak for a long time.

I will keep you informed. That's it for today. Thank you.

Fairewinds Energy Associates Inc.
http://www.fairewinds.com

Website by: Polaris Mediaworks