## SOME ANSWERS TO LINGERING QUESTIONS ABOUT FUKUSHIMA DAIICHI

IT'S ON THE EASTERN COAST OF JAPAN IN BETWEEN THE CITIES OF TOKYO \SENDAI

## FIRST OF ALL, IT'S PRONOUNCED KUSHEMA

POPULATION MILLION

SENDAL

TOKYO

IS CURRENTLY

THINK IT'S WORSE

BUT SOME

EXPERTS

SENDAI POPULATION \_\_\_ MILLION

EARTHQUAKE MARCH 11, 2011 **MAGNITUDE 9.0**  THE EARTHQUAKE INITIALLY KNOCKED OUT POWER TO THE COOLING SYSTEM, BACKUP DIESEL GENERATORS CAME ON-LINE WHICH WERE THEN KNOCKED OUT BY THE TSUNAMI

REACTOR ELECTRIC COOLING SYSTEM GENERATORS

**FUKUSHIMA** DAIICHI JAPAN

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50 MILE EVACUATION ZONE | POPULATION RECOMMENDED BY

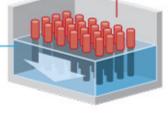
12 MILE EVACUATION POPUL NE MANDATED BY ANESE GOVERNMENT

> WHILE IT IS TRUE THAT SOME RADIATION HAS MADE ITS WAY AS FAR EAST AS LIFORNIA

EXPERTS INSIST THAT IT HAS BEEN SO DISPERSED AS TO NOT BE DANGEROUS TO HUMANS. REACTORS 1-4 HAVE ALL BEEN PARTIALLY OR TOTALLY DESTROYED BY EXPLOSIONS OR FIRE. ADDITIONALLY: **REACTOR 1** IS PRESUMED TO HAVE HAD A PARTIAL MELTDOWN, **REACTOR 2** IS PRESUMED TO HAVE HAD A PARTIAL MELTDOWN, **REACTOR 3** IS PRESUMED TO HAVE HAD A PARTIAL MELTDOWN, REACTOR 4 WAS OFFLINE FOR MAINTENANCE, BUT CONTAINED SPENT FUEL RODS WHICH MAY HAVE BEEN EXPOSED TO AIR. REACTORS 5 AND 6 ARE SHUT DOWN AND THE BUILDINGS DAMAGED BUT THERE IS CONCERN THAT THE ARE NOT SPENT FUEL RODS THEY CONTAIN MAY HAVE BEEN EXPOSED. ACTUALLY, ALL OF THE REACTORS STORED SPENT FUEL RODS

WHICH ARE RADIOACTIVE AND CONTAIN RESIDUAL HEAT. THEY NEED TO BE KEPT COOL CONSTANTLY

IF THE POOLS IN WHICH THEY ARE KEPT BECOME DEPLETED. THE SPENT FUEL RODS WILL BE



EXPOSED TO AIR. THIS CAN CAUSE THE RODS TO RELEASE

IN 1990, THE INTERNATIONAL ATOMIC ENERGY AGENCY INTRODUCED THE INTERNATIONAL NUCLEAR AND RADIOLOGICAL EVENT SCALE SO SEVERITY OF EVENTS CAN BE COMMUNICATED QUICKLY

THE **INES** SCALE MAJOR ACCIDENT CHERNOBY SERIOUS ACCIDENT FUKUSHIMA DAIICHI

RADIATION, OVERHEAT, AND CATCH FIRE.

ONE OF THE BY-PRODUCTS OF A NUCLEAR ACCIDENT SUCH AS THIS IS IODINE 137

IT IS DANGEROUS BECAUSE IT EMITS WAVES OVER SHORT RANGES THAT CAN CAUSE CANCER IN THE THYROID

WHICH ACCUMULATES IODINE. POTASSIUM IODIDE PILLS MAY

BE TAKEN TO SATURATE THE THYROID AND THUS



PROTECT IT FROM THE RADIOACTIVE IODINE.

ANOMALY

THE DESIGN OF FUKUSHIMA DAIICHI PREVENTS IT FROM REACHING THE LEVEL OF THE CHERNOBYL ACCIDENT, HOWEVER, A FINAL OPTION BEING CONSIDERED IS TO BURY THE ENTIRE PLANT UNDER SAND AND CONCRETE TO PREVENT A CATASTROPHIC RELEASE OF RADIATION, TABLET

WHICH WAS WHAT THEY FINALLY DID AT CHERNOBYL. SOURCES: NEW YORK TIMES, CNN, WIKIPEDIA, REUTERS | TABLETINFOGRAPHICS.COM