

Rulemaking1CEm Resource

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From: Greg Wilson [mailto:wildsailman@gmail.com]
Sent: Friday, December 20, 2013 5:02 PM
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Hello Secretary, U. S. Nuclear Regulatory Commission
Washington DC 20555-0001
ATTN: Rulemakings and Adjudications Staff

December 20, 2013

The theory that Spent Nuclear Fuel should be stored at the existing Nuclear Power Plants is a very dangerous theory. The information below is why I know that storing Spent Fuel at Nuclear Power Plants is a very reckless activity. Nuclear Power Plants were built in locations that are ideal for nuclear production of electricity. Recent discoveries of previously unknown fault lines and our improved understanding of Tectonic Plate Activity has changed the safety factor for storing spent fuel at Nuclear Power Plants. Each Nuclear Power Plant must have a separate topographical survey and access to a safe transportation corridor to the closest safe location for spent fuel to be stored in a safe accessible manor.

Due to Plate Tectonics a Permanent Indefinite Storage Site does not exist on the Planet. The probability of a transportation accident resulting in a major release of radioactive material is a major concern. Spent fuel has such a long radioactive life where it is dangerous to people makes it impossible to guarantee the safety of all life on Planet Earth for 250,000 years. For anyone to think there is a way to store spent fuel for 250,000 years is attempting to make an assumption that will never become reality. A solution for the Nuclear Spent Fuel problem must include a method to render spent fuel back into a harmless material in the near future. I have No Confidence in the theory that an indefinite storage solution will ever be a reality.

The San Andreas Fault is over 800 miles long stretching from Mexico to Alaska. The Pacific Plate is on the west side of the fault and the North American Plate is on the east side. The Pacific Plate is sliding North along the fault. Four Nuclear power Plants were built on or near the San Andreas Fault. Only one Nuclear Power Plant is operating now and it is in shut down mode today.

The movie "San Andreas Fault" is on the series "How The Earth Was Made" on The History Channel. This movie explains the fault line that all of the West Coast Nuclear Power Plants are built on. The San Andreas Fault runs right under the San Onofre Power Plant.

The movie explains how two bends in a dry river bed is evidence that the Pacific Plate is moving north at one inch per year as it slides against the North American Plate. The sliding occurs during earthquakes in a very dramatic manner.

The next quake is coming soon and it may be a huge earthquake, the narrator said Huge! The Pacific Plate moves one inch per year. The last San Andreas fault earthquake was 300 years ago. The Pacific Plate could slide 300 inches or 25 feet north. Whatever part of the plant that is on the Pacific Plate could move 25 feet north and away from the other half of the plant. Both parts of the plant will collapse during a very powerful earthquake and first responders may not be able to respond to the tragedy. Many of the bridges and roads may be destroyed.

Los Angeles could be devastated in the next San Andreas quake. Where the fault line runs in a straight line a shock wave is produced that spreads off the fault in a cone shape, just like a jet plane breaking the sound barrier and creating a sound wave. The cone shaped shock wave spreads the fault line shock wave out covering a much larger area as demonstrated during the Great 1906 San Francisco Earthquake. The prediction by the geologists in this movie is 99% that Southern California will have a major San Andreas earthquake in the next 30 years. The movie did not mention what will happen to the San Onofre Nuclear Power Plant or the spent fuel. A safe long term storage site that is near San Onofre should be found. Due east within ten miles of the nuclear plant would be a better location than keeping the spent nuclear fuel on the coast line and on the fault line.

Everyone must see this movie before a decision is made about what to do with the spent fuel rods and how they are stored. This is not the only movie that explains Plate Tectonics, and/or volcanoes that will destroy Nuclear Power Plants. There is not any one solution that can be applied to every Nuclear Power Plant.

The Diablo Canyon Nuclear Power Plant is near two faults. The plant is built over the Hosgri Fault and is near the San Andreas Fault. The plant is built to withstand the expected earthquakes and the spent fuel is stored near by. That could be hazardous at times in the short term, but for long term storage the spent fuel should be moved a short distance to the east of the San Andreas Fault. The Pacific Plate is sliding north along the San Andreas Fault. No one can predict what will happen to the spent fuel in the distance future. The Hosgri Fault was an unknown fault until it had an earthquake. Diablo Canyon should be shutdown, mothballed and decommissioned.

No one can safely predict what changes the California Coastline will experience over the next 250,000 years. The west coast could be hit by an Hawaiian tsunami. The movie "Hawaiian

Tsunami" exposes the fact that the Hawaiian Islands crumble apart due to iron mixed in with the lava erupting out of the volcano. The iron rusts causing the volcano dome to fall apart creating massive tsunamis. At least one tsunami has flooded the Los Angeles Basin in California. Large tsunamis from several different fault lines have hit the West Coast without warning and a Fukushima type of event or meltdown could happen to any spent fuel stored along the Pacific Coast.

The active volcano named Cumbre Vieja is on the Isle de La Palma in the Canary Islands west of Africa in the Atlantic Ocean. During a previous eruption of Cumbre Vieja 10 miles of the western flank of the island slid several yards to the west. A large portion of the island is ready to slide into the Atlantic Ocean. The assumption can be made that Cumbre Vieja also has iron mixed in the lava that comprises the lava rock on the island. When the large part of the island falls into the Atlantic Ocean a large 1,000 foot tall massive tsunami moving at 1,000 miles per hour will hammer all of the surrounding continents in the Atlantic. Western Europe, The British Isles, the Irish Sea, Ireland and West Africa will be hit in three hours with devastating results. All nuclear power plants and spent fuel must be moved off the Atlantic Ocean including the facilities Europe and the British Isles and the Irish Sea.

The East Coast of the United States, The Caribbean Islands, Puerto Rico, Cuba, and South America will be hit in five hours by a 600 foot tall tsunami traveling at 600 miles per hour. Million of Americans will die and 26 Nuclear Power Plants will be destroyed. The spent fuel containers at every Atlantic nuclear power plant will be destroyed and the spent fuel will be washed away and scattered across the land. All of the spent fuel must be moved away from the Atlantic Ocean and to a Long Term Storage on high ground. The Long Term Storage must be at the closest possible site for the Nuclear Power Plant that it supports. If two Nuclear Power Plants are close to each other a common Long Term Storage site could be used. The Long Term Storage sites must be built on a raised ground at least 1,000 feet in elevation. This same strategy could increase the safety during hurricanes with their 20 foot plus tall storm surge wave and the 12 foot high surf zone. Hurricanes are getting bigger and stronger due to global warming and they are having a greater impact on northern coastlines.

Turkey Point, St. Lucie, and the closed Crystal River Nuclear Power Plants in Florida are a completely different scenario from the Nuclear Power Plants in the other 47 states and their spent fuel must be dealt with in a different manner. South Florida is all flat land with an aquifer under the swamp. High ground is north of Lake Okeechobee which contains densely populated areas. A central Long Term Storage site must be found north of Lake Okeechobee in a location that is 1,000 feet high and inland from I-95. The spent fuel should be transported up The Florida Turnpike to somewhere around Sebring or north up Hwy 27. I-95 goes through downtown Miami and has increased traffic and more accidents which makes the Turnpike the preferred route. North Florida or south Georgia would be less populated but the long distance would rule that area out. Both South Florida Nuclear Power Plants have been lucky to not have had a hurricane storm surge hit them yet.

Crystal River will need a separate inland on high ground Long Term Storage site in that area to reduce the travel distance. Crystal River is not in the range of the Cumbre Vieja tsunami but an asteroid strike in the Gulf of Mexico or a methane gas bubble could cause a devastating tsunami that will destroy the short term storage at the power plant.

All spent fuel and associated waste must be moved away from all coast lines world wide. Russia has lost two unmanned nuclear power lighthouses into the Arctic Ocean. The land under the lighthouses was washed away by storms. Predicting earthquakes, volcanoes, landslides, asteroids, comets, methane gas bubbles will always cause tsunamis that will destroy coastlines. Long Term Storage at a nuclear power plant of spent fuel and/or nuclear waste should never be an option. I have zero confidence in storing any spent fuel on any coastline in the world. The oceans must be respected as the source of all life on Mother Earth.

The Yellowstone National Park in Wyoming has a Super Volcano growing under the park. The Super Volcano erupts every 700,000 years. The last eruption was about 640,000 years ago and left a very large caldera. The hot ash debris field covers most of the center of the North American Continent from Southern Canada on the north to Northern Mexico on the south. The ash covered from Southern California on the west to around The Mississippi River on the east. According to Jamie Farrell of the University of Utah the magma chamber is 55 miles long by 18 miles wide and runs from depths from 3 to 9 miles deep. The chamber is full of molten lava that can erupt at any time. The lake floor in the caldera is bulging and could be a sign that the super volcano is going to erupt soon.

No one can predict when or even if the Yellowstone Volcano will erupt but the warning time is very short and there will not be any time to develop a plan to deal with total destruction in the middle of the country. All of the Nuclear Power Plants in that region must be shut down and moth balled as fast as possible. All nuclear material must be transported out of the predicted ash cloud area. Internal combustion engines have a very hard time running with volcanic ash in the air. The back up diesel for the nuclear power plants will not run very well as the air filters will clog up. The workers that survive the eruption working at the power plants must be evacuated to a safe part of the country. The ash cloud could last for decades and it may be centuries before the region is repopulated. The eruption of the Yellowstone Super Volcano will be a planet wide near extinction event. Add in the radioactive nuclear debris to the volcano event and it will be a complete worldwide extinction event.

The Tunguska Event in Siberia, Russia happened at 7:14 AM on June 30, 1908 has been determined to be a small asteroid air burst blast. The asteroid exploded thousands of feet in the sky and leveled 770 square miles of forest and trees. It had the same energy as 10 to 15 Megatons of TNT or 1,000 times greater than the Atomic Bomb dropped on Hiroshima. 30 years passed before the outside world found out about the event and it took much longer before any scientists were able to visit the area. Both Tunguska and Hiroshima have standing structures at the blast center confirming that Tunguska was an air blast. Russia had a small air blast asteroid last winter that was caught on many Russian dashboard video cameras. The entire town suffered damage mainly from glass getting blasted into people's faces. All of the windows in the city were blown out. An asteroid the size of Tunguska exploding over a nuclear power plant would destroy the reactor core and all of the spent fuel storage containers. All Long Term Storage Containers must be stored underground to protect them from asteroid air blasts. A direct hit on any spent fuel storage by an asteroid will be a major radiation release event.

Many more Nuclear Power Plants are located over unknown fault lines and which may not be revealed for centuries. No one can predict the future and no one can positively predict what humans will be doing in 10,000 years or in 100,000 years. No one can build a secure shelter for a very destructive nuclear material that will last the length of time it takes for uranium or plutonium to become safe in the environment. The radioactive material must be rendered into a low radioactive safe material. Every effort must be made to advance making Radioactive Material a low level radioactive material and safe for all life on the planet. I do not have any confidence in the ability of any nuclear scientist to be able to make nuclear material safe. The NRC and the Nuclear Industry must stop making any more enriched uranium material for nuclear power on the planet. That includes weapon grade nuclear material. The Military Channel on the Cable Networks has shown about the new US Military Laser Weapon Systems. The Military can shoot down missiles making ICBMs obsolete. Nuclear Weapons are not the threat that they were decades ago and will destroy the nation that launches them. The NRC has many years of work to do mothballing the nuclear power industry.

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