

## **SUPPORTING DOCUMENT FOR HD 1077:**

### **AN ACT INCORPORATING THE PUBLIC HEALTH FUKUSHIMA LESSONS FOR NUCLEAR EMERGENCY PREPARATION (introduced by Rep. Ruth Balsler)**

#### **PREAMBLE:**

**Pilgrim Nuclear Power Station is scheduled to close permanently on May 31, 2019. Does this not vastly reduce the dangers of a radiological emergency after that point?**

No. The problem is that the spent fuel will remain in the spent fuel pool for years, where it could have disasters both accidental and deliberate. For example, if a power outage were to result in a loss of cooling water to the spent fuel pool, there could be a fire of the zirconium cladding of the fuel rods, exposing the brittle fuel, and spreading radioactive gases wherever the wind takes them. In case of an explosive attack, either by sabotage or actual missile attack, the entire pool could collapse, bringing the spent fuel rods into much closer proximity with each other. This could restart a nuclear fission reaction, but this time not contained by a reactor and containment structure. The result could be far worse than in Fukushima, because Pilgrim's spent fuel pool is packed 3 times as full as those in Fukushima. The Dept. of Homeland Security has warned that nuclear plants are vulnerable to hacking take-overs, and a Pentagon-ordered study warned of missile and air attack. Pilgrim has no anti-aircraft or anti-missile defenses. Security from land and water is insufficient. Public health and safety depend on preparing for an emergency before it happens.

#### **CONCERNING SECTION 1:**

**Why do we need real-time stationary and mobile radiological monitoring units for 20 miles around a nuclear power station, streamed to the web and accessible to the public?**

The insufficiency of its monitoring systems left Japan's public safety officials, as well as the public itself, blind in its emergency evacuation efforts. Some people were actually moved from areas of lower radioactivity to areas of higher radioactivity. Clearly, in emergency evacuations, real-time accurate information about the evacuation area is indispensable.

## **CONCERNING SECTION 2:**

### **What is the purpose of the potassium iodide (KI) pills?**

The American Thyroid Association recommends the distribution of KI pills within 10 miles of nuclear power stations, and pre-placement within 50 miles. The nuclear reaction inside the reactor produces radioactive iodine, which can lodge in the thyroid, and is especially dangerous to people under 40. After a few hours, the thyroid is "filled" and rejects additional iodine. Hence the KI pills must be taken just before the arrival of a radioactive plume, or immediately after, to "fill up" the thyroid, and prevent the uptake of radioactive iodine. In the event of a missile attack on the spent fuel pool, for example, if nuclear fission restarts, it will again produce radioactive iodine, so KI pills are needed until all spent fuel is in dry cask storage.

## **CONCERNING SECTION 3:**

### **Why do we need to expand the zone of planning for an emergency evacuation to 20 miles around nuclear power stations?**

The US-mandated minimum of 10 miles proved to be insufficient at Fukushima. Based on its Fukushima experience, Japan has expanded its zone to a 30 km radius (18.6 miles). The International Atomic Energy Agency (IAEA) now recommends 15 to 30 km (9.3 to 18.6 miles), depending on local conditions. The Nuclear Information and Research Service calls for a 25 mile emergency evacuation planning zone. And California, at its sole

operating plant, at Diablo Canyon, now requires 20 miles. The areas around Pilgrim and Seabrook both present a challenging dearth of major highways, and if emergency evacuation out to 20 miles is needed in a nuclear emergency, it's best to have a plan in place, instead of hastily planning during the panic and chaos of a disaster.

#### **CONCERNING SECTION 4:**

#### **What is the purpose of the information brochure to be sent out annually, in October?**

In a nuclear emergency, the public could be in panic and chaos, unless they have been informed ahead of time as to what to do and what not to do, as well as where to get public health and safety information. This brochure should go out once the college students have arrived at college, and before the winter sets in, when the exacerbating hazards of blackouts and driving bans tend to occur.

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