Radioactive Contamination of Shrimp, Cloves, Shoes, and Zinc

Source of Hot Consumer Goods Unclear

By John LaForge

Editor's note: In the Fall* Quarterly*, our lead story was the nationwide recall of frozen shrimp over the discovery of radioactive cesium-137 in the shipping containers that brought the frozen shrimp from Indonesia to U.S. seaports. This follow-up is the second of three reports on the expanding scandal regarding the radioactive contamination of consumer goods including shrimp, imported cloves, shoe parts, and powdered zinc.

The widespread cesium-137 contamination which spread beyond an industrial area in Indonesia led to the radioactive contamination of strangely unrelated exported consumer goods including frozen shrimp, cloves, shoe parts, and concentrated zinc powder. The contaminated products were exported to the United States, the Netherlands, and possibly elsewhere.

The discovery of shipping containers contaminated with cesium-137 at several U.S. seaports last August led the U.S. Food and Drug Administration (FDA) to urge a recall of tons of frozen shrimp. Recalls were then ordered by Walmart, Kroger, and dozens of other grocers in as many as 29 states. At that time the source of the radioactivity was unknown and a matter of intense investigation.

Natural News reported September 29 that "millions of pounds of contaminated shrimp were sold at major retailers before recalls, exposing a systemic failure in food safety."

Cesium-137 is a dangerous, cancer-causing form of radioactive waste not found in nature. It is only produced inside operating nuclear reactors, or by nuclear weapon explosions, or in the processing of weapons-grade uranium and plutonium. If ingested, cesium tends to concentrate in soft tissue and muscles.

Laboratory testing has found that the contaminated shrimp in the United States contained an activity concentration of 68.48 becquerels per kilogram, or Bq/kg, well below the FDA's arbitrary permitted maximum of 1,200 Bq/kg in general foodstuffs.

The FDA's allowable level of cesium-137 in food is controversially 12 times higher than what's permitted in Japan. Today the U.S. cesium contamination limit of 1,200 Bq/kg compares to Japan's limit of 100 Bq/kg. The European Union allows even more than the U.S. max: 1,250 Bq/kg.

Investigations and decontamination

Last September investigators with Indonesia's hastily assembled "Cesium-137 Radiation Hazard Management Task Force" reported that the cesium contamination came from inside the sprawling Modern Cikande Industrial Estate (MCIE), a large scrap metal smelting and processing industrial area of Serang Regency in Banten Province, in western Java (southeast of Jakarta). The 270 factories there, in MCIE's 12 square miles, produce materials for construction and manufacturing and had reportedly made use of cesium-contaminated material imported from the Philippines.

The news service Asean Business Times reported October 3 that Indonesian inspectors found ten points with radionuclide radiation for cesium-137 "with high levels of exposure." Environment Minister Hanif Faisol Nurofiq said then, "We have declared PT Peter Metal Technology as the epicenter with a 5-km [3.1 mile] perimeter."

On October 15, Al Jazeera reported that the government's investigation found that cesium "contamination was spread through airborne dust from a smelting plant" and that authorities suspect it might "have been caused by scrap metal imports."

The Jakarta Globe reported November 12 that Bara Hasibuan, head of communications for the cesium task force, confirmed that the contamination was caused by airborne releases from PT Peter Metal Technology, or PT PMT, one of the steel smelters in the industrial zone.

"The Cs-137 contamination spread through the air from PT PMT's facility," Hasibuan said. Indonesia's Ministry of Industry identified a total of 24 factories in the MCIE that had been contaminated with the cesium-137.

Tempo news service in Indonesia reported that by November 17, some 22 of the factories and 13 junkyards in the MCIE had been "decontaminated," and that Rasio Ridho Sani, the chair of the Cs-137 Handling Task Force, said that decontamination efforts inside the MCIE were ongoing.

"Up to this point, 975 tons of Cs-137 contaminated material have been successfully moved. The material is currently stored temporarily at the PT PMT," Sani said. [Collecting tons of cesium-fallout-contaminated material in Indonesia is a tiny echo of the gigantic decontamination project conducted around the Fukushima-1 complex in Japan, where over 19-million metric tons of waste material have been collected in heavy bags.]

The decontamination arm of the government task force says it will "manage and store" the material "until the radioactive contamination naturally decays." The task force said the collected material would be stored at the PT Peter Metal Technology company site, one of the 24 facilities that was found contaminated.

The U.S. Food and Drug Admin. issued a recall of shrimp contaminated with cesium-137 but the radioactive trail extends further. Photo: FDA.

Regarding responsibility and accountability for the scandal, Al Jazeera reported that "Indonesian police … say [one] factory closed before the contamination case occurred and the owner is no longer in the country."

Contaminated cloves, shoe soles, powdered zinc

A wide area was evidently contaminated with the cesium-137, presumably dispersed from the smoke stacks of the metal smelting machinery.

Well after the August shrimp recall, ABC News reported on October 15 that cesium-137 was found in cloves that were shipped to California in September. The U.S. FDA then halted all imports of spices processed by the PT Natural Java Spice clove plantation.

According to Tempo news, Hasibuan said in a written statement Nov. 13 that the cesium task force is "moving quickly to localize this contamination so that it does not spread to other areas." This hollow assurance was made after the cesium-137 plume had reportedly moved at least five kilometers [3.1 miles] beyond the PT PMT site, and contaminated the clove plantation and a shoe manufacturing factory.

The Indonesian news agency Antara said November 12 that Dutch customs officials found cesium-137 contamination in imported sneakers from Indonesia a month prior to the August recall of the frozen shrimp in the United States.

Tempo news service, reported November 13 that Hasibuan wrote in a statement to the press, "We received further information that the shoe soles exported to the U.S. were found to be contaminated with Cs-137."

Hasibuan said the shoe soles were produced by the company PT Bahari Makmur Sejahtera (BMS), based in Cikande about five kilometers outside Cikande's MCIE industrial zone, indicating that the dispersal of the cesium went well beyond the industrial metal smelting complex.

Health risks and evacuation

On November 13 Tempo news service in Jakarta reported the United States had returned to Indonesia two shipping containers filled with the cesium-contaminated shoe soles.

The dangerous dispersal of the cesium forced the Serang Regency Government to evacuate at least 91 people from a village in the vicinity of the industrial estate in order to conduct decontamination. According to several news agencies, the head of the task force's Mitigation and Cs-137 Contamination Management Division, Rasio Ridho Sani, said October 27 that "during the decontamination process, residents are at risk of exposure to airborne radioactive dust." The federal Ministry of Health reported that 15 individuals tested positive for exposure to cancer-causing radioactive cesium October 16.

On October 3, Asean Business Times reported that government authorities had examined over 1,500 local people and workers and found nine were exposed, according to Hasibuan, the investigation spokesperson. The exposed persons were said to be being "treated."

Philippine exports to Indonesia

The broadening cesium contamination scandal now includes shoe parts exported to the United States and the Netherlands, and concentrated zinc powder imported from the Philippines.

The MCIE scrap metal smelting complex evidently imported highly contaminated metal scrap or waste from the Philippines, although the source of that hot scrap is still unknown. Now, according to importation documents, several containers of contaminated concentrated zinc powder also originated from the Philippines.

Antara reported September 22, that Indonesia's Nuclear Energy Regulatory Agency had "prevented the entry" of nine shipping containers filled with concentrated powdered zinc also contaminated with cesium-137. News reports said that monitors at the port of Tanjung Priok triggered alarms on five of the containers after they detected radioactivity up to 210 times background levels.

Zinc powder is used heavily in the galvanizing of steel, making it rustproof. Its use in coating steel would make zinc a commonly imported material at the MCIE. Beyond rustproofing, zinc powder is used in batteries, paint, sunscreen, rubber, cement, chemicals, as even in calamine lotion, baby powder, anti-dandruff shampoo, and diaper rash ointment.

On October 19, Tempo news service reported a larger number of containers, noting that, "Philippine authorities will investigate the source of a shipment of 14 containers of zinc concentrate powder, commonly used for battery powder from the Philippines to Indonesia, after the powder was found to be contaminated with … cesium-137."

Later in October, the Philippines was looking at certain steel processing facilities that allegedly supplied the zinc powder to the Chinese exporter, Zannwann International Trading, which has offices in the Philippines' Bulacan province, and which shipped the hot zinc to Indonesia.

Early in the investigation, Indonesia's Minister of Science and Technology Renato Solidum, Jr. gave the press a version of the standard industry assertion, saying, "This is likely an isolated contamination case without widespread danger to the public."

Minister Solidum's reassurance recalls the famed undersea explorer Jacque Cousteau who said in 1998, "A common denominator, in every single nuclear accident, is that before the specialists even know what has happened, they rush to the media saying, 'There's no danger to the public.' They do this before they themselves know what has happened."

— Sources: ABC News, Al Jazeera English, the American Nuclear Society, Antara (Indonesia's national news agency), Asean Business Times, Asia News, CBRNe World (in the UK), CBS News, *Consumer Reports, Food Safety, The Guardian, Jakarta Globe, Jakarta Post*, NaturalNews.com, Reuters, and Tempo Media English [in the UK]