

'59 Reactor Meltdown in California Kept Secret

Study of Contamination at Rocket Lab Reveals Evidence of Cancer Link

Editors note: The Santa Susana Field Laboratory (SSFL) is a once-busy rocket and reactor test facility 30 miles north of downtown Los Angeles. SSFL continues to operate, serving as a research facility for the Boeing Co. The first commercial nuclear-power reactor inside the United States was built at SSFL. However, it also became home to the first meltdown of a power reactor in the U.S. on July 26, 1959. Nuclear research and most rocket testing has been halted.

Over 10 reactors operated at SSFL, as well as a plutonium fuel fabrication facility, a uranium carbide fuel fabrication facility, and reportedly the largest "Hot Lab" facility in the country at the time. A Hot Lab is used for robotically cutting up irradiated nuclear fuel. The Hot Lab suffered a number of fires involving radioactive releases. In 1957, a Hot Cell fire "got out of control and ... massive contamination" resulted. Another occurred in 1971, involving combustible primary reactor coolant contaminated with mixed fission products.

By Avi Rutschman, Simi Valley Acorn, October 13, 2006

The Santa Susana Field Laboratory Panel, an independent team of researchers and health experts, released a report in October 2006 concluding that toxins and radiation released from the Rocketdyne research facility near Simi Valley could be responsible for hundreds of cancers in the surrounding areas.

The Santa Susana Field Laboratory was built in 1948 by North American Aviation and consists of 2,850 acres in eastern Ventura County. Over the years, it has been used as a test site for experiments involving nuclear reactors, high-powered lasers and rockets.

The report was completed by experts in the fields of reactor accident analysis, atmospheric transport of contaminants, hydrology and geology. The study took five years to complete and was funded by the California Environmental Protection Agency.

"We want to thank the many legislatures that have attended meetings, provided funds and pressured public agencies into action," said Marie Mason, a community activist and longtime resident of the Santa Susana Knolls area in Simi Valley, who helped to form the advisory panel.

The panel originally formed 15 years ago [1991] after a 1959 nuclear [reactor] meltdown that occurred at the Santa Susana Field Laboratory was made public. Concerned about the possibility of facing adverse health affects due to the meltdown, area residents pressured legislators into funding a panel to study the impact of the incident.

"We were fearful of what our families and communities may have been exposed to," said Holly Huff, another community member who pushed for the formation of the panel.

The first study conducted by the panel was performed by UCLA researchers and focused on the adverse health effects the meltdown had on Rocketdyne employees. Completed in 1997, that report indicated workers did indeed suffer a higher rate of lymph system and lung cancers.

Boeing, the current owner of the Santa Susana Field Laboratory, has challenged the validity of the studies, calling into question the scientific methods used by researchers.

"We received a summary of the report [October 12], and we were not given an advance copy to look through and prepare with," said Blythe Jameson, a Boeing spokesperson.

"Based on our preliminary assessment," Jameson said, "we found that the report has significant flaws and that the

claims are baseless without scientific merit and a grave disservice to our employees and the community."

After the UCLA study concluded that laboratory workers had faced adverse health effects because of the meltdown, the panel was given federal and state funds to conduct another study of potential impacts on neighboring communities and their residents.

According to the panel, Boeing was unwilling to disclose a large amount of data concerning the accident and certain operations. This forced the researchers to base some of their studies on models of similar accidents.

"One simply does not know with confidence what accidents and releases have not been disclosed, nor what information about the ones we do know of also has not been revealed," the panel stated in its report.

After five years of research, the panel concluded that between 260 and 1,800 cancer cases were caused by the field laboratory's contamination of surrounding communities. The incident released levels of cesium-137 and iodine-131, radio-nucleotides that act as carcinogens, that surpass the amount of contaminants released during the [1979] Three Mile Island [partial meltdown]. The report also stated that the contaminants have escaped from the Boeing-owned laboratory through groundwater and surface runoff. Jameson said other scientific studies have contradicted those findings.

"There have been several reports done by federal and state agencies, most notably a preliminary site evaluation from the Agency for Toxic Substance and Disease Registry in 1999, in which they did not identify a public health hazard to surrounding communities," Jameson said. ...

The test reactor was contained in a partial pool of liquid sodium and buffered from the surrounding environment by a layer of helium.

The reactor did not have a concrete containment shield, which would explain the high levels of radioactive material that were able to escape during the meltdown.

Dr. Jan Bayea, a physicist who specializes in modeling the movement of radiation through the air, came to the conclusion that between zero and 1,800 cancers, but most likely 260 cancers, were caused by the release of radioactive materials.

"We faced three major difficulties in this study because it was a complex site, not much information was released and we couldn't obtain any meteorological data from Boeing," Bayea said.

According to the panel, Boeing wouldn't release meteorological data from the time period of the 1959 incident, claiming that information is a trade secret.

Jameson insists that Boeing has not tried to hide anything.

"We've shared the meteorological data with the Agency for Toxic Substance and Disease Registry, that was then, in turn, turned over to various groups," Jameson said. "It's been shared with various other agencies, most recently at a Department of Energy meeting in May of 2005 where it was shared with the public."

Dr. William Bianchi, a soil physicist, discovered that Boeing's decision to not use a synthetic cap on the burn pit areas has led to additional contamination of groundwater at the site, according to the panel's report.

Boeing attempted to stop the recharge of groundwater with clay soil and with native vegetation, but neither method proved to make the area around the burn pits impermeable.

"The supposed impermeable clay material is not impermeable at all," the report states.

Minnesota Reactor Aging Badly

By Bonnie Urfer and John LaForge

MONTICELLO, Minn. — Xcel Energy has spent about \$10 million a year here, to keep its boiling water reactor online. Still, the 37-year-old machine has had a series of accidents.

February 20: The Nuclear Regulatory Commission was notified of the "collapse of cooling tower panels which resulted in a diversion" of secondary cooling water "overland to the discharge canal resulting in the washing of soil and gravel into the canal."

The diverted water eventually reached the Mississippi River. Jan Strasma, the NRC regional spokesperson in Chicago told Nukewatch that no follow-up river water sampling was required. After referring to it as "nonradioactive water," Strasma acknowledged to Nukewatch that the cooling water contains radioactive tritium, strontium-90 and iodine-131 — in amounts allowed under federal regulations.

Strasma said that the "forced draft" cooling panels allow water to cool before being returned to the Mississippi River. The panels had become heavily weighted down with ice and then broke off, Strasma said. He didn't know how many panels were broken or what they weighed. The diversion of cooling water lasted for "about half-a-day," he said.

Tim Donakowski of the Minnesota Health Department, Environmental Monitoring Office, said "a series of cooling tower panels collapsed," but did not know how many. Neither the Health Department nor the NRC was able to tell Nukewatch how much water was spilled into the discharge canal.

January 10: A 35,000-pound turbine control box (20 feet long, 6-foot wide and 6-foot tall) broke from its welds and fell off a steel I-beam inside the reactor building. The 16-ton box fell onto a large steam pipe which in turn caused the opening of four turbine control valves and a decrease in main steam line pressure. The crash forced an automatic reactor shut-down. Intense reactor vibrations over the course of 35 years and initial faulty welding have been blamed for the crash. The reactor had been operating at 90 percent power. Four companies operating reactors of similar design in New York, Massachusetts, Vermont and New Jersey were notified of the accident.

January 10: About 3,000 fish — smallmouth bass, blue gills, catfish, redhouse and black crappie — were killed in the Mississippi River as a result of the automatic shut-down, according to Nuclear Management Co., which operates the Monticello reactor for Exel Energy. Spokeswoman Arline Datu told the press, "Nonradioactive water used to cool the plant is normally discharged into the river creating warm spots. When the discharge stopped, the river water quickly cooled and the fish died of thermal shock. A planned shutdown typically kills around 100 fish." The utility was fined \$5,874, or \$1.95 per fish killed.

January 17: In spite of the Jan. 10 accident caused by the reactor's extreme vibrations, General Electric signed a \$100 million upgrade contract with Exel, to boost power output at Monticello. The contract expects GE to increase power to 120 percent of its originally licensed limit. Last year Xcel won a 20-year operating extension. Can the faulty equipment take it?

Dr. Ali Tabidian, chair of the Department of Geological Sciences at Cal State Northridge, discovered that perchlorate, a toxic substance found in rocket fuel, did end up in groundwater wells in Simi Valley as a result of surface water runoff.

According to the report, Tabidian said that perchlorate migrated off the laboratory site through surface water runoff, traveled into the Arroyo Simi, then entered the groundwater and wells near the Arroyo.

The study says perchlorate has been discovered in a number of wells surrounding the area.

Boeing has challenged this claim, stating that the perchlorate could have come from Chilean fertilizer, fireworks or road flares.

According to the report, Tabidian feels these are unjustifiable claims because if they were true, perchlorate would be detectable in wells throughout Simi Valley rather than only in the areas surrounding the Arroyo. "Perchlorate is very soluble and travels almost as fast as water. It's a warning, the leading edge of contaminate plume," said Dan Hirsch, co-chair of the panel and a lecturer on nuclear policy at UC Santa Cruz.

Despite their findings, the panel did not recommend an epidemiological study of surrounding communities because of a lack of data provided by Boeing and the high migration of residents into the area throughout the years.

"Doing a health study at this point would be a big gamble; it would be wiser to search for a fingerprint of the contamination release," Bayea said.

"This has been 17 years of unwanted frustration, and in those years our innocence has been lost," Mason said.

The report commissioned by the Santa Susana Field Laboratory Panel can be read online at www.ssflpanel.org.

"There is no evidence of contamination as a result of our current or past operations that has adversely impacted the surrounding communities. We will continue to move forward with the cleanup of the site in a safe and effective manner," Jameson said.

Los Angeles City officials want to require developers to test soil and groundwater for contamination before building within a two-mile radius of the Santa Susana Field Lab and any proposed development must be accompanied by testing.

U.S. Sub and Oil Tanker Collide in Persian Gulf

The nuclear-powered and potentially nuclear-armed submarine *USS Newport News* collided with a Japanese oil tanker near the busy shipping lanes of the Straits of Hormuz January 8.

The bow of the *Newport News* hit the stern of the oil tanker *Mogamikawa* as the vessels were passing just outside the Straits, causing minor damage to the tanker, Japan's Foreign Ministry said. The tanker was able to continue to a nearby port in the United Arab Emirates.

Commander Kevin Aandahl of the U.S. Navy's Fifth Fleet in Bahrain confirmed that there had been a crash and said there were no injuries. The Navy said the sub's nuclear propulsion reactor was undamaged. Damage to the *Newport News* and the tanker was light, and there was no resulting spill of oil or leak of radiation, according to officials from the U.S. Navy, Japan and the United Arab Emirates.

The Los Angeles Class *Newport News* is able to carry nuclear warheads onboard, but normally they are not carried. It is powered by a single 26-megawatt nuclear reactor. The sub is currently part of the aircraft carrier *USS Eisenhower* strike group which is now with a U.S.-led multinational task force patrolling the Persian Gulf.

Bob Aldridge, director of the Pacific Life Research Center and a former missile design engineer for Lockheed, told Nukewatch March 2 the fast-attack submarine could indeed have had nuclear warheads onboard. "Yes, on Cruise missiles. They keep the option open, without confirming or denying anything. I suspected they were doing that for years," Aldridge said. — *Bellona* (Oslo, Norway), Jan. 9, 2007

Israel's Open (H-bomb) Secret Confirmed

Israel's prime minister Ehud Olmert and U.S. Secretary of Defense Robert Gates both seemed to acknowledge Israel's nuclear arsenal in public statements made late last year. On Dec. 10, Olmert, speaking about Iran on TV news in Germany, asked, "are [they] aspiring to have nuclear weapons, as America, France, Israel, Russia?"

For decades, Israel has refused to say that it has nuclear weapons, even after it imprisoned Mordechai Vanunu, a weapons lab whistle-blower, for 18 years for informing *The Times* of London of his own work on the arsenal.

Testifying in his Senate confirmation hearings, Secretary Gates said about Iran, "They are surrounded by powers with nuclear weapons: Pakistan to the east, the Russians to the north, the Israelis to the west and us in the Persian Gulf."

The reference to the Persian Gulf appears to confirm the presence of nuclear-armed Cruise missiles on U.S. subs currently attached to aircraft carrier battle groups in the Gulf.