

Depleted Uranium Shuffle in the U.S.

WEST CONCORD, Massachusetts

Radioactive trash, including 322 tons of material and 3,200 barrels, has been hauled away from the Starmet site in West Concord, Massachusetts. Starmet Corporation, formerly known as Nuclear Metals, Inc., produced depleted uranium-tipped shells for the Department of Defense (DOD) for nearly thirty years. Between 1958 and 1985 the West Concord site was licensed to possess low-level radioactive substances, including beryllium and Depleted Uranium (DU). Four hundred thousand pounds of radioactive and toxic garbage were placed in unlined pits. The groundwater is contaminated at the site and the water is carrying the waste toward the Assabet River.

In total, the nearly six-month cleanup effort removed 1,599 drums of uranium tetrafluoride, 1,107 drums of a concrete and uranium mixture, 515 drums of other uranium waste, and 322 tons of uranium metal and other miscellaneous waste. Beryllium exists at unsafe levels at two locations. One is the old landfill area that is frequented by hikers and campers, allowing possible inhalation and ingestion.

Starmet supplied Alliant Techsystems, based in Minneapolis, with depleted uranium penetrators for insertion into munitions that Alliant in turn sold to the DOD.

The Nuclear Metals site was added to the National Priority List (NPL) in June of 2001 after Citizens Research and Environmental Watch, the Concord Board of Selectmen, concerned citizens and other organizations such as the Organization of the Assabet River, Sudbury Valley Trustees, and Concord River Environmental Stream Team demanded cleanup.

The radioactive waste from Starmet is one part of a nationwide radwaste shell game. The shipments of waste

went to Energy Solutions, Inc., in Clive, Utah, which was formerly known as Envirocare.

Five parties are being held responsible for the Nuclear Metals Superfund Site. Besides the Army, they include the U.S. Department of Energy, Whittaker Corp. (Simi Valley, California); Textron Inc. (Providence, RI) and MONY Life Insurance Co. (NY, NY).

Carolina Metals, Inc., a wholly owned subsidiary of an octopus that includes Starmet, is the world's only depleted uranium processing facility. — *Concord Journal*, April 13, 2006; *Boston Globe*, September 23, 2004; *Multinational Monitor*, Jan-Feb. 2003

COLONIE, New York

Soil has been polluted with depleted uranium and other toxic substances at a greater depth than clean up workers anticipated at the Central Avenue munitions site in Albany, New York. The Agency for Toxic Substances and Disease Registry stated that the dangerous toxins at the site can increase the risk of kidney disease and lung cancer.

National Lead Industries (NL) began contaminating the 11.2 acre area in 1958 when it received a license from the Atomic Energy Commission to produce uranium-238 (DU), thorium, and enriched uranium munitions, shields, ballast weights and armor. In addition, from 1966 to 1972, NL manufactured fuel from enriched uranium for experimental nuclear reactors. NL operated a chip burner to dispose of unused DU from 1958 to 1984.

Oak Ridge National Laboratory performed radiological surveys of 219 individual properties surrounding the former NL site. Of these, 56 vicinity properties were contaminated from airborne DU with concentrations exceeding 35 picocuries per gram. Fifty-three of 56 residential and business properties were cleaned up between 1984 and 1988 by

removing the top two inches of soil. Ground water beneath Albany is contaminated as well as surface water in Patroon creek downstream of NL.

The U.S. Department of Energy took control of the site in 1984 and since then 175,500 tons of contaminated dirt has been removed at a cost of more than \$165 million. The clean up project is expected to last for another two years.

New York State shut down the facility in 1984 when airborne releases of radioactive materials exceeded court-ordered standards set in 1980.

GORE, Oklahoma

Twelve hundred drums containing 1.5 million pounds of depleted uranium are stored in Gore at the Sequoyah Fuels Corporation (SFC) site. The U.S. House of Representatives has approved an amendment calling for DOD remediation of the facility. Sequoyah, under the authority of the NRC, produced uranium hexafluoride from yellowcake (a uranium oxide) and converted depleted uranium hexafluoride to uranium tetrafluoride. The facility converted DUF6 and DUF4 for use as anti-tank ammunition. Various phases of the operations produced a radioactive waste stream.

The 600-acre site is located about 75 miles southeast of Tulsa, Oklahoma. In 1986 one employee was killed when a cylinder containing UF6, an acid that kills almost immediately on contact, exploded after being overloaded and heated. Thirty-one additional workers were exposed and some showed evidence of short-term kidney damage. Kerr-McGee Corporation owned the facility until 1988 when it was sold to General Atomics. The NRC shut the factory down after an accident in a "digester" in 1992, which resulted in uranium and thorium contaminating the soil and groundwater.

There is surface, subsurface and groundwater contamination from uranium and thorium throughout the site, and uranium, thorium and radium is in three "lined" sludge ponds. There is also chemical contamination of arsenic, molybdenum and copper in the soils. Piping, vessels and building materials are contaminated with uranium in various chemical forms such as yellowcake, uranyl nitrate and uranium hexafluoride — in total, there is between five and 11 million cubic feet of radioactive waste. In 1997, low-level radioactive waste was disposed of by spraying it on 9,000 acres of company-owned grazing land.

VIEQUES, Puerto Rico

Three years after it left its bombing range in Vieques, the Navy has not cleaned up its mess of depleted uranium, mercury and napalm. In fact, the Environmental Protection Agency's first plan of action is to explode missiles and other ordnance that have accumulated over the past 50 years. The Navy is blowing up the weapons, and they state it is cheaper and faster than moving them to another location. The explosion process may take up to eight years to complete, and it will increase the amount of contamination present on the island. The U.S. Navy claims that no clean up can take place until all weapons have been destroyed. Vieques has the highest cancer rate of all 78 municipalities in Puerto Rico.

— *Miami Herald*, May 6, 2006

Nothing Divine About It

Divine Strake, a bomb compiled of 700 tons of ammonium nitrate and fuel oil has been postponed indefinitely. The bomb was scheduled to detonate 30-feet underground at the Nevada Test Site. The bomb, 50 times larger than the military's biggest conventional weapon according to the *Salt Lake Tribune*, and 280 times the size of the Oklahoma City bomb, met with fierce resistance in Nevada. Hundreds of people converged on the Nevada Test Site on May 27, and 30 people were arrested in an attempt to stop the blast. Carrie Dann, a Shoshone grandmother who has fought for the land much of her life, crossed the line in one of the day's more emotional events. Peggy Maze Johnson of Citizen Alert, an environmental justice organization, said it brought tears to her eyes watching Dann cross the line.



On May 27, thirty people crossed the line in opposition to Divine Strake at the Nevada Test Site.

Representative Jim Matheson (D-Utah) wanted a test of surface soils to determine if any radioactive materials exist at the test site prior to the blast. Federal officials had been trying to waylay concerns by promising a helicopter

would fly in the area of the test and monitor air quality for radiation. The DOE thinks after-the-fact monitoring offers some kind of comfort, when in fact there is no taking back any radiation that becomes airborne.

Divine Strake is not a one-time experiment. Officials at Sandia National Laboratories in New Mexico are preparing for another test of this weapon where the bomb will be slammed into a huge concrete barrier to determine its power. The U.S. Air Force has been given \$4.5 million to study how to deploy a nuclear earth penetrator — bunker buster — from a B-2 bomber.

The latest postponement came May 26 when the NNSA agreed to do more research and provide further information on radiation that exists in the desert soil as a result of nuclear bomb testing.

Hanford's \$11 Billion Clean Up

By Bonnie Urfer

HANFORD, Washington — One hundred and seventy-seven tanks are sunk 55 feet into the earth at the Department of Energy's (DOE) Hanford Site in eastern Washington state. All were filled with liquid radioactive waste from plutonium separation procedures more than 50 years ago. At least 67 of them have leaked. State and federal regulators say the tanks are not leaking now but admit they have no system for detecting seepage. Clean up and removal of the radioactive waste has already cost taxpayers \$11 billion in what started with a \$4.3 billion price tag. At least a million gallons of deadly waste has escaped from the containers, which are all 30 years past their life expectancy. The redesigned double-walled tanks in use are already approaching their lifespan of 25-50 years.

In recent years, all the liquid that can be pumped out of 149 of the single-shell tanks has been transferred to double-shell tanks — none of which is known to have leaked (yet). This still leaves thirty million gallons of sludge, a chunky substance called "salt cake," which can't easily be removed from the bottom of the tanks. Only four of the 177 tanks have been completely emptied.

More Contamination on the Way

Bechtel, the operator of Hanford, and the DOE plan to "vitrify" (turn liquid radioactive waste into glass logs) the radioactive liquid sitting in its old and corroding tanks at Hanford. The process, also called "glassification," is not expected to begin until 2017 when the glassification complex will be completed. Currently, sections of the facility are being built without a blueprint.

A 42-foot deep hole with a seven-foot thick liner has been prepared at Hanford to handle low-level vitrified waste. The site may expand to 26 acres.

Six current and former Bechtel employees have blown the whistle on Bechtel's poor quality design and construction process for glassification by providing hundreds of pages of internal documents. According to the whistle-blowers, the DOE and Bechtel discouraged employees from reporting problems. The DOE cited and fined Bechtel \$198,000 in March 2006 for two dozen safety and quality problems. Meanwhile Bechtel blames the DOE for all its troubles.

A Bechtel national quality-control official said "dumb luck" was instrumental in discovering flawed welds on a new 8,000-gallon tank built to contain radioactive liquids. In January 2004, a subcontractor uncovered weld problems on tank nozzles. The tank is the first of 60 to be constructed. The first tank was installed in 2003, and Bechtel received an award of \$15 million for completing the project. Once operations begin, the tank will be in a sealed and inaccessible "black cell." Poor quality and design make the situation critical, because any major leaks risk contamination that could shut down the facility and disrupt operations for years.

Last year, Energy Department officials discovered their computer models for Hanford underestimated the risks posed by earthquakes. Since then, construction has slowed as engineers redesign the facility to stronger seismic standards.

Cuts by Congress last year reduced contract workers at the Hanford site from 1,700 to just 375 today. Area residents hope that funding for Hanford's cleanup will increase.

The U.S. drive for nuclear dominance during the Cold War continues to endanger countless citizens through Hanford operations. The worst part is that we're on the road to repeat those horrors with a renewed Cold War and nuclear weapons production. — *Seattle Post-Intelligencer*, May 1 & 2, 2006; *Seattle Times*, May 1, 2006