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Enewetak's Nuclear C

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Star-Bulletin Writer

ENEWETAK, MARSHALL ISLANDS.—Slithering through shallow waters over a dirty yellow coral, the moray eel tried to hide under a rock. Then it escaped our interest, slithering back into the turquoise blue waters of the bomb crater.

The eel looked healthy.

But 19 years ago a fireball with a sun-like intensity blew the hole in the reef that now is the peaceful home of the frightened eel.

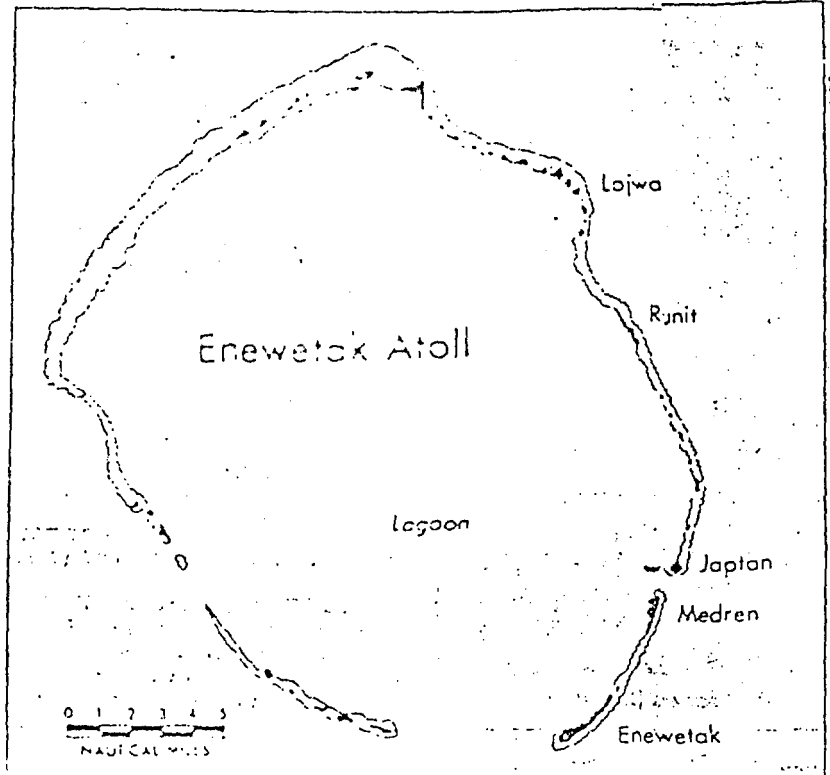
The moray lives to be 100, they say.

But the people issue is, how healthy is Enewetak Atoll today for people; for 450 Marshallese islanders returning home from exile after a 30-year forced displacement and 43 nuclear tests later?

THE EEL RARELY sees people because the crater is located on Runit, a long, thin part of Enewetak whose soil was contaminated by a shower of plutonium-237 that made it an inhospitable land for humans.

So the eel, and the white ferry terns in the scaevola brush have had the island to themselves since the Enewetak Proving Ground shut down for keeps in 1958, ending a decade of keeping the Cold War warm.

The Energy Research and Development Administration (ERDA), the new name for the AEC, has conducted environmental surveys in recent years, sampling the soil, the water table, the brush, the reef life to determine how "hot," how changed, how worthless this islet may be.



TRANQUIL LAGOON AGAIN—Islands of the atoll where things are changing back.

Last week the Army gave newsmen a field trip to Enewetak where soldiers from the Schofield Barracks have launched a \$20 million cleanup effort expected to take two years; some say five.

BEFORE GOING ashore at Runit we placed a double gauze mask over our faces, put rubbers over our shoes and wore a sensitivity badge. When the trip ended we were monitored by instruments that can detect

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Cleanup Will Go Slowly

mise, as jokesters suggested, how much we "glowed." We didn't.

We had motored down a grassy path, the brush snapping the sides of our truck. On our left was the long groove of an immense trench dug out from a concrete blockhouse so that instruments inside its slit openings, built like a pillbox for men, could have a clear view down the trench and into the eye of the white storm at ground zero.

These instruments would convert the story of the blast, told in milliseconds to jumping, erratic lines on a graph, then photographed remotely, then recovered in a harrowing James Bond chase.

A HELICOPTER lands near the blockhouse, the man in the strange suit, as if a visitor from another galaxy, dashes through a concrete maze, through thick "dogged" doors to the photo plates. Then he slaps them into a lead satchel, undressed, dressed in a new protective suit that is waiting for him, back through the maze to the helicopter for the dash to nearby Parr Parry Island (now called Medren) for a bath and a bath for the helicopter, all in practiced minutes and before fallout could totally fog any film, even in such an inhuman dungeon.

At the end of this trench was a crater called Cactus. Its water 20 feet deep, had fish, and on the bumpy grass hills above the crater walls was a field of orange flags on poles, a mad golf course in which each flag represented a shaft sunk by scientists to determine the depth of penetration of radiation into the soil.

Around LaCrosse, code name for a second, larger crater, iron stanchions that once held acres of instrumentation equipment, were bent with great violence, as if a truck had backed over a parking meter.

ARMY CAPT. Charles Day, a Defense Nuclear Agency radiation specialist with degrees in physics, held his Geiger counter to one grotesquely twisted steel bar that had melted under impact. The needle shot to the right. The piece was "hot" with cobalt-60. This and other "contaminated" metal will be buried under a cement cap over Cactus.

Radioactive junk left over from the tests on many northern islets of Eniwetok, exposed Bikini, for years by non-Marshallese, will be transported by truck aboard boats to Cactus, thrown into the water, to which will be added contaminated soil mixed with cement to form a strange slip. The Army estimates the concrete cap built atop this pile will create an elliptical hill 20 feet high.

One reason the cleanup time and costs are uncertain is that several ground zero sites on Runit were used several times. Day said that after a shot the damage would be bulldozed and another shot prepared at the same place. There was haste. Both the U.S. and U.S.S.R., both testing were buffeted by an outraged world in the late 1950s.

"THE PURPOSE OF the cleanup is to reduce the amount of radioactivity to acceptable levels to enable people to resume living here," Day said. The exception is Runit.

Roger Ray, a 25-year veteran of the AEC and the test series, is an adviser on the environmental aspects of the cleanup. He said, "It makes sense to leave this island (Runit) alone, and let nature take its course rather than try to remove the island."

(That did happen in the case of "Mike," code name for America's first hydrogen bomb. Placed on little Elugelap, Elugelap disappeared on Oct. 31, 1952. Mike wasn't really a weapon. It was too big for either airplane or rocket.)

"From a radiological standpoint, Eniwetok can never be returned to the way it was found," Ray went on.

"But there's a difference between a soldier working here a short time, and Marshallese living here a lifetime," he said.

The cumulative effects of radiation is the worry.

TO SHAPE A cleanup plan ERDA, working for several years with scientists of different specialties at the University of Washington and the Lawrence Livermore Laboratory studied each island in the atoll with

a plan which could certify each islet for future land use.

Even helicopters were used to monitor radiation levels at the test sites in addition to extensive field work, even on Runit, where men wearing only shorts, checked subsurface soil.

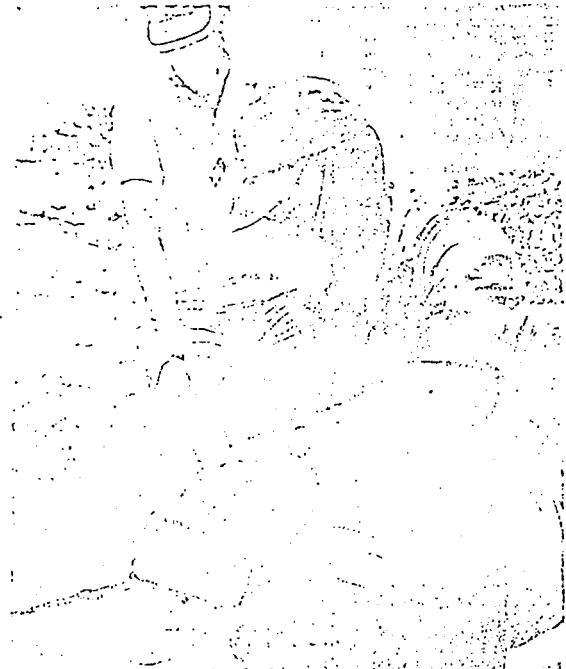
These findings, Ray said, showed that of some 40 islets in the atoll that stretches 21 miles in length, which is over the horizon to the naked eye, and 17 miles wide, 12 are considered nonradioactive, 10 contain no debris from the tests and 22 are suitable for habitation, through some are not worth it.

Later the monitoring equipment and techniques will be used on Bikini.

ERDA made a movie in the Marshallese language about its work at Runit to show the returnees why the island is to remain off-limits.

"IF YOU LIVED on an island in the south lagoon you would be as safe as you would be in most U.S. cities," said Ray. "On the northern islands the danger factor would increase by three or four for the average person over a long period, above what is acceptable."

Ray, a man with humanitarian qualities, which may appear at odds with his AEC background, is popular with the returnees.



HOT METAL—Twisted steel is checked for radiation by a specialist, Army Capt. Charles Day. Reporter Nelson in background keeps his distance. —Army Photo by M. Sgt. Jerry Shepherd.