

The Waste Disposal Research Need

DISCUSSIONS about establishing a high technology computer or electronics industry between Norman and Stillwater could bring a potentially high income development to the state.

However, little notice seems to have been taken of the fact that very strong acids are used in the manufacturing processes for washing out lead, copper and alloy residues. These wastes must be disposed of somehow.

The spent acids are neutralized but solvents containing metal residues have penetrated the soils down to the water table, ruining ground water in Silicon Valley, CA., for domestic, agricultural, and industrial uses.

So says Dr. Ralph Harkins, director of the Land Treatment Research & Development Project being established 10 miles west of Ada by the Environmental Research Institute of East Central University. It is being built on 110 acres owned by ECU Foundation and will utilize scientific services of EPA's nearby Kerr Laboratory.

"There is no industry that does not produce its quota of hazardous waste," Harkins says, "but for certain biodegradable organic wastes, land treatment is less costly than alternatives, and is not land-depleting." An objective of the EPA-authorized project is to field test means of land treatments.

A previous environmental research project conducted by East Central dealt with salt water intrusion in secondary recovery oil wells, in cooperation with the Osage Tribal Authority.

Another led to the development of a system for retrieval of information on waste research through the ECU library system. A large amount of research material published on this subject has been abstracted and data put into computers, where it is accessible to users at the library or by telecommunications.

The Land Treatment project will determine potentials for use of biological organisms to make such wastes as sludges from oil refineries and manure from cattle feed lots

more readily biodegradable.

A method of on-site treatment of creosote wastes from wood preserving plants is needed. Harkins estimates between 700 and 2,000 creosote pits ranging in size from a city block to 20 acres are situated in Eastern Oklahoma and Western Arkansas.

Yet another hazardous waste needing disposal study is polychlorinated biphenyl (PCB). It has been banned but PCB wastes have been found in dumps after 15 years and its breakdown time is unknown. PCB has been used in plastics, electric transformers, hydraulics, color photography and manufactured products.

The ECU project was begun in July 1982 and Harkins says it is considerably behind schedule because of time required to obtain construction and operation permits from the State Department of Health. Construction is now about half done and he hopes to get it operating in time to show useful results before the project's initial 5-year authorization expires. S