

Oil technology more advanced

A 50-year gap exists between coal and petroleum technology.

Two TAMU researchers have just completed an assessment of the current state of coal technology. The study, titled "Key Organic Compounds for a U.S. National Energy Program," was conducted for the

American Petroleum Institute in Washington, D.C.

The study's proposed comprehensive program for detailed investigations of 135 key compounds would require expenditures in the range of \$8-10 million and a period of five to 10 years, Zwolinski said. An exploratory study is being initiated by the TAMU center.

"Our current knowledge regarding the chemical composition of coal and its liquefaction products as fractions is in about the state as our knowledge of the composition of petroleum or mineral oil some 50 years ago," said Zwolinski, TRC director and professor of chemistry at TAMU. "Thus, there is a great need for the coal industry to begin the same kind of intensive efforts in the area of chemical composition studies as the petroleum industry has carried out during the past 50 years."

"We know that coal is the fossilized remains of plants that stored solar energy in their cells millions of years ago," said Dr. Chao. "In the coal liquefaction reaction, coal reacts with hydrogen at high temperature and pressure to form asphaltene first, then slowly converts to oil."

While coal is a plant produced

product, petroleum is an animal product.

Therein lies the basic difficulty of drawing refining comparisons between the two energy sources, Chao said. Also, coals ranging from lignite to hard anthracite are complex solids composed of two or three-dimensional chemical networks of carbon, nitrogen, sulfur and oxygen atoms. This makes the problem more difficult than the processing of liquid mineral oils composed of relatively small molecules.

"Coal is by far the nation's most abundant source of energy to meet U.S. needs at current and projected rates of consumption for at least several hundred years," Zwolinski said.

"However, because of the availability of relatively cheap alternative

fuels such as petroleum and natural gas, and because of the availability of relatively cheap alternative fuels such as petroleum and natural gas, and because of restrictions imposed by air quality standards, safety regulations, surface environmental concerns and promising prospects of nuclear energy, the coal industry has not realistically asserted itself with regard to effective and progressive research and development programs in line with the current demand for its products."

Zwolinski cited figures indicating that coal production will nearly double by 1990.

"The growth of the coal industry in this country will depend to a great extent on how rapidly we can solve the problems of safety, health and environmental factors and equipment availability," Zwolinski said.

Brown named to sea grant council

L. F. Brown, Jr. associate director for research, Bureau of Economic Geology at the University of Texas at Austin, will serve on the TAMU Sea Grant Advisory Council.

Professor of geological sciences at UT, Brown has served on the Texas Land Use Committee, and the Interagency Council on Resources and Environment. He currently serves on the National Environmental Committee, American Association of Petroleum Geologists.

A graduate of Baylor University, Brown earned both a master of science and a doctorate in geology from the University of Wisconsin. He is the author of some 40 publications on Texas Upper Paleozoic stratigraphy and has made numerous contributions to various Texas mapping programs.

The TAMU Sea Grant Advisory Council is composed of 14 members from industry, government agencies and educational institutions who share a common interest in marine affairs. The council offers advice and direction to the Sea Grant College Program of applied research, education and advisory services projects.

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Teague admitted to hospital after stroke

Rep. Olin E. Teague, D-Tex., of College Station, suffered a small stroke and was admitted to Bethesda Naval Hospital on July 30.

Dr. Freeman Cary, attending physician of the Congress, stated that there had been an increase in the congressman's blood pressure associated with dizzy spells.

Cary said Teague's long work hours and the stress of his position during the past several months were contributing factors.

A member of Teague's staff yesterday said it is only a temporary setback and that "He's up in a chair and complaining about the food, although he is receiving good treatment."

The staff member said a secretary comes in daily and Teague still handles his correspondence and makes phone calls.



Congressman Olin E. Teague

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