unclear. Dr. Max Blumer of Woods Hole says all petroleum products and fractions—except certain highly pure materials—are toxic. Especially so are the aromatic hydrocarbons, which have been implicated as carcinogens. Oil companies had assumed the volatile aromatics evaporate from spilled oil quickly, but Dr. Blumer's analyses of weathered tar balls show this is not so (SN: 3/14, p. 263). Says Dr. Howard Sanders, also of Woods Hole: "There is no doubt the aromatics are highly lethal. But everything to do with the long-term effects of oil spills is still very superficial. We need to look at this very critically."

Analysis of the current Gulf Coast tar balls at the Federal Water Quality Administration laboratory in Athens, Ga., has been qualitative, aimed at identifying the sources rather than at assessing toxicity. Indications so far are that the balls found on the Louisiana coast are similar to the Chevron oil—which, incidentally, is high in lighter fractions, including the aromatics—but there is not even a tentative identification of the sources of the oil found in Florida and Texas.

Some samples of tar balls from near Pensacola, Fla., appear to contain remnants of the detergents used by oil companies to disperse oil into the water column, a practice frowned on by most ecologists because of the possible toxicity of the dispersants.

Under earlier law, FWQA could allow oil companies to use the dispersants if safety was involved; they were used in large quantities during the Louisiana spill when there was danger of fire.

But FWQA in the past has operated under a simple rule of thumb which said that when dispersants had to be used they could be used only in quantities that would create no more than a five-parts-per-million concentration in the first three feet of the water column. This was a gross approach since the companies often refused to tell FWQA what the chemical makeup of the detergents was. But under the water law signed by the President April 3, chemical composition will have to be revealed to FWQA. Standard toxicity tests will be required for all dispersants, although so far no tests for long-term ecological damage are being developed. □

ALCOHOLISM

A try at treatment

In 1945 a Georgia court declared that alcoholism is a disease and not a crime. Since that time numerous court decisions and major reports by a U.S. Crime Commission and the Federal Department of Health, Education, and Welfare have expressed similar opinions.

But even sympathetic law enforcement officials have been stymied in efforts to take the ruling seriously by the lack of treatment and rehabilitative facilities to handle alcoholics. In short, there has been no place for a drunk but jail.

An effort to stimulate some action toward providing rehabilitative facilities and attitudes is embodied in legislation now before the Senate, sponsored by Sens. Harold Hughes (D-Iowa), Jacob Javits (R-N.Y.) and Frank Moss (D-Utah).

The bill would provide health benefits for alcoholic Federal employees and emergency medical services for alcoholic Federal offenders before they are processed for any criminal actions.

Hearings on the bill were finished last week, and support appears to be widespread. But the bill's $75 million price tag will make implementation chancy.

Under the bill, parole boards would be required to take cognizance of the parolee's illness. This would be coupled with alcoholism treatment services in the Federal correctional institutions.

Recognizing that the alcoholics' problems with the law are only the tip of a complex iceberg that involves an estimated 9 million alcoholics in the United States, the legislation focuses on the preventive and rehabilitative aspects of the alcoholism problem.

It proposes the establishment of a model Federal program for the prevention and treatment of alcoholism among Federal employees, including members and veterans of the Armed Forces. A major part of the program will be aimed at keeping alcoholics in productive employment while they are being treated. The Federal model is expected to encourage similar programs on the state and local level and in industry.

Under the legislation, health and disability plans for Federal employees would cover alcoholism as they do other health problems. At present alcoholics often are not eligible because they are defined as behavior problems; in order for them to qualify for benefits, their physician must indicate that the illness is other than alcoholism to qualify them for treatment.

The bill also provides for public education on the causes and effects of, and treatment for, alcoholism. The education would be directed toward law enforcement officials, members of the judicial system, school children and parents. The educational material would reflect social, geographic and economic variables relating to alcohol abuse. □

OIL SPILL

Mop-up off Nova Scotia

No single method of attack on oil spills has yet proved adequate. Even when all possible methods are used there is sometimes serious damage before oil can be removed from ocean or shoreline environments (see p. 550). But a Canadian experience indicates that a concerted attack, using all possible resources, can eliminate the worst damage.

Dr. Patrick McTaggart-Cowan, executive director of the Science Council of Canada, took charge personally of cleanup efforts in Chedabucto Bay, Nova Scotia, after a tanker loaded with heavy bunker oil went aground there Feb. 4. That situation, he reports, is now under control.

The first problem was to remove 1.5 million gallons of viscous oil that was leaking from the sunken stern section. Valves were fitted to the hold of the ship and hoses attached. But the oil was so thick it would not flow, and it was necessary to pipe steam into the hull to heat and thin it. By April 11, the oil had been pumped out and transported by barge to storage installations in Halifax.

Removal of oil slicks from the surface of the bay—a possible source of damage to lobster and other fisheries—was accomplished by means of a terry-cloth conveyor installed on the front of a small scow. The terry cloth absorbed the oil, which was then squeezed out for collection.

Cleaning beaches required a grosser approach. Men working with bulldozers and shovels scooped off oil-soaked layers of sand. Wharves and jetties were cleaned by steam jets, and the oil that washed off into the sea was absorbed by floating peat moss that was then carted off.

McTaggart-Cowan's team is now looking for a nontoxic chemical to cleanse boulders and rocks; oil on the rocks around the bay resembles a ring on a bathtub.

The cleanup effort, which was carried on by Federal, oil company and armed services personnel, prevented severe damage to all fisheries, although there was probably some damage to the area's clam population. Beaches will be in shape for the summer tourist season; oil residues on rocks and elsewhere will gradually be cleaned by natural forces.

Cost estimates for the cleanup are not yet available. Canada does not have a law, such as that passed in the United States this year (SN: 4/11, p. 468), which assigns liability for cleanup to the perpetrator of a spill, and so far most of the expense at Chedabucto Bay has been borne by the Federal Government. □