

## Rachel's Environment & Health News

### #24 - Waste Facilities Often Sited In Black And Hispanic Communities; 'Environmental Racism' Charge May 10, 1987

There are 1.4 million underground storage tanks containing petroleum products or other hazardous chemicals in the United States, says the EPA (U.S. Environmental Protection Agency) and about 20% of these (or 280,000 tanks) are leaking today, the agency estimates. The other 80%, of course, will leak some time in the future, since all human creations are subject to the ravages of time.

EPA has studied the tanks that are leaking today and has concluded that 60% leak because of corrosion, 25% because of improper installation and structural failure, 10% from loose fittings, and the remaining 5% because of spills and overfills.

To combat this clear and present danger to the nation's supply of clean water, the EPA in April issued proposed rules that all tank owners/operators will have to follow (after the rules are finalized, after a lengthy process of public hearings, rewriting and reissuance).

Under the proposed rules, owners or operators of underground storage tanks (USTs) will have to install leak detection systems and to demonstrate the financial ability to clean up any messes their tanks make.

The EPA's proposed regulations are particularly tough on 54,000 tanks (4% of the total) that contain any of 701 specific toxic chemicals listed in the Superfund law (CERCLA, the Comprehensive Environmental Response, Compensation and Liability Act). NEW tanks built to hold any of these 701 chemicals must be supplied with a "secondary containment" system aimed at preventing leaks into the general environment. A "secondary containment" system could be a second tank inside the first tank, or it could be a concrete tank built around the first tank, or it could be some kind of "impervious" plastic liner installed around the first tank. Leak detection systems will be required between the first tank and the secondary containment system. Existing tanks holding any of these 701 chemicals must, within 10 years, comply with the same requirements as new tanks. But the EPA has already announced that variances will be available at the end of ten years for those owners who demonstrate that their tank is protected against corrosion and equipped with an effective leak detector.

Editorial comment: The EPA's proposed regulations seem certain to contaminate the nation's underground water supplies. Even the "secondary containment" systems required for hazardous chemical tanks will not prevent environmental contamination though they will reduce the rate at which contamination occurs. or many of the same reasons that double-lined landfills will all eventually leak, double-lined underground storage tanks will all leak sooner or later. A double-lined tank will leak later, rather than sooner, meaning that our grandchildren will pick up the tab, not we. But leak they will.

However, the most glaring problem with the EPA's proposed regulations is its clear failure to keep gasoline out of the nation's water supply. Half the nation's underground storage tanks (700,000 of them) contain gasoline; every service station today has an underground gasoline tank, if not more than one. Gasoline is a rich mixture of toxic chemicals. For example, gasoline is 2% to 5% (or more) benzene, 6% to 8% toluene, 1% to 1.5% ethyl benzene, 2% to 5% xylene, and so on. Even the additives to gasoline are themselves often toxic, such as ethylene dibromide, which the government recently banned as a fumigant for much of the nation's grain supply because it is carcinogenic. No doubt the most famous additive is lead, which is now being phased out because of its toxicity to humans and other forms of life. Unfortunately, as lead is phased out, the benzene content of gasoline is being increased to keep the gasoline's octane rating up.

Benzene is a potent human carcinogen. The EPA has set a "criteria level" for benzene in drinking water, based on the agency's estimate of benzene's ability to cause cancer. The EPA estimates that one cancer would be caused among a million people if they drank water for a lifetime contaminated with 0.66 micrograms of benzene in each liter of water.

How much water could be contaminated up to the EPA's "criteria level" if a single gallon of benzene spilled from an underground tank? Knowing that benzene has a specific gravity of 0.879, using arithmetic we can figure out that five billion liters of water would be contaminated to the 0.66 microgram/liter level by spillage of a single gallon of benzene. Since most people drink two liters of water per day, or 730 liters of water in a year, we can see that a single gallon of benzene is sufficient to contaminate a water supply that 68.5 million people would drink in a year. That's how much water the people of Los Angeles County (all 7.9 million of them) would drink in a nine year period--and it could ALL be contaminated up to the EPA's "criteria level" for benzene by a single gallon of spilled benzene.

We estimate that, at any given moment, there are at least two billion gallons of gasoline stored underground in the U.S. and that about 100 million gallons of this is pure benzene.

The EPA is not requiring double-lined tanks for the nation's 700,000 gasoline tanks. It is, instead, requiring leak detection systems. Leak detection systems are devices that tell you it's time to lock the barn door because the horse left some time ago. The EPA's proposed underground storage tank regulations are a prescription for disaster.

EPA plans public hearings in late May and in June, in DC, in Dallas, and in San Francisco. For further information, contact Robin Woods, EPA; phone: (202) 382-4377.

--Peter Montague

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