



The failing in Romania of a dike that held toxic waste water from gold-extracting operations heightens concern about unstable tailings dams, two of which (located in Poland and Estonia) are described. Views from the ancient Greeks and the historically early Catholic Church on abortion and the status of the human embryo are discussed. And evidence relating to a hypothesis about the etiology of HIV-associated dementia is examined, and it is noted that "our knowledge of HIV-related events occurring within the brain during the pre-AIDS stage is greatly overshadowed by our knowledge and thinking about the post-AIDS brain."

### Physical Hazards of Tailings Dams

In his News Focus article "Wildlife deaths are a grim wake-up call in eastern Europe" (10 Mar., p. 1737), Robert Koenig discusses the effects on wildlife of chemical contamination resulting from breaks in tailings dams. The Tisza River incident in Romania and Hungary illustrates one type of damage caused by uncontrolled release of wastes from mining and milling. Unstable tailings dams, which contain solids in addition to waste water, present physical as well as chemical hazards to humans and the environment.

Such situations exist at many mining sites. Two examples at former uranium mining and processing sites are at Kowary, Poland, and Sillamäe, Estonia. At Kowary, a

shore. It now contains about 12 million tons of uranium and rare earth metal tailings mixed with oil shale ash. Wave erosion had been destabilizing the dam, so in 1997 a breakwater was constructed to protect it (1). Should the dam break, the solids would enter the sea immediately and then migrate to other coastal areas with the currents of the Gulf of Finland. It could take years for the insoluble fraction of the contaminants (uranium, thorium, various heavy metals, nitrates, etc.) to settle to the bottom and the soluble fraction to disperse over the Gulf. The potential for the toxic compounds entering the food chain has not been assessed, but could be a threat for decades. In addition, the pond is adjacent to the former site of a harbor. Redevelopment of the harbor is being considered for economic improvement of the region. Release of the tailings would make redevel-

opment of the harbor much more difficult, perhaps impossible.

The European Union (E.U.), through its Phare program (which facilitates financial and technical co-operation between the E.U. and the countries of central and eastern Europe), has funded work leading to remediation of these two tailings

ponds. For the pond at Sillamäe, Norway, Sweden, Finland, Denmark, and Estonia have also contributed funds for remediation. The German government is remediating similar sites in eastern Germany. Both chemical and physical hazards of mining wastes need to be considered in avoiding future disasters.

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Tailings dam at Sillamäe, Estonia, on the shore of the Gulf of Finland.

tailings dam in a mountain valley formed a pond with a surface area of 1.3 hectares containing more than 250,000 metric tons of mining and processing wastes. The Jedlica River is eroding the foot of the dam. The river is the source of water for Kowary, which is downstream of the dam (1).

At Sillamäe, a tailings pond was constructed on the shore of the Gulf of Finland in the late 1940s within 50 meters of the

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### References

1. C. K. Rofer and T. Kaasik, Eds., *Turning a Problem into a Resource: Remediation and Waste Management at the Sillamäe Site, Estonia* (NATO Science Series, Kluwer, Dordrecht, Netherlands, 2000).

### Historical Views on the Human Embryo

In her Viewpoint "Europe confronts the embryonic stem cell research challenge" (special issue on Stem Cell Research and Ethics, 25 Feb., p. 1425), Noëlle Lenoir is mistaken in saying that "[t]he Catholic Church did not immediately condemn abortion" at its founding, and that "[i]t was only in the 13th century that abortion was condemned by the [Catholic] Church."

The earliest written condemnation of abortion within the Catholic Church is in the *Didache*. Although the extant version is from the second century, this catechism was in use long before. One precept is "you shall not kill the child by corruption or destruction, nor kill it at birth" (1). The first clause refers to life within the womb. Clement of Alexandria expressed a similar view in the second century: "those women who conceal sexual wantonness by taking stimulating drugs to bring on abortion wholly lose their own humanity along with the fetus" (2). Athenagoras, Tertullian, Minucius Felix, Hippolytus, Cyprian, Basil the Great, John Chrysostom, Ambrose, and Jerome—prominent Christian figures from the second through fifth centuries—affirmed the same view (3). Saint Augustine, contrary to Lenoir's implication that he believed abortion acceptable because the fetus had no sensation, speaks of abortion as an "obvious cruelty" used to "snuff out and destroy within the viscera the fetus that has been conceived" (4).

Lenoir's description of the ancient Greek view on abortion does not mention the Hippocratic Oath, which set the standard for medicine in the ancient world. It states, "I will neither give a deadly drug to anybody if asked for it, nor will I make a suggestion to this effect. Similarly I will not give to a woman an abortive remedy" (5).

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### References

1. *Didache*, ii:2.
2. *Pedagogus*, ii; 10:96.
3. G. Grisez, *Abortion: The Myths, the Realities, the Arguments* (Corpus Books, New York, 1972), pp. 137-150.
4. *De Nuptiis et Concupiscentia*, i:15.