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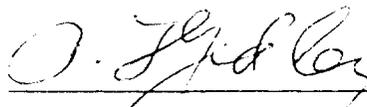
NEW BEDFORD  
OFFICE 76754

Editor:

Tonight's Standard-Times reports yet another study in the long litany of proposals for the PCB problem in New Bedford harbor. This latest is by Richard Turnbull of Geotechnical Engineers sponsored by the New England Governor's Conference. The news article indicates nothing new in the study and sadly it presents four disposal options which are technically unachievable or environmentally unacceptable (see attached).

Sincerely,

GIDLEY LABORATORIES

  
Philip C. Gidley  
President

PTG/plp

Attachment

A. INCINERATION OF PCB CONTAMINATED SEDIMENTS

A cited option by Turnbull is the incineration of 4.5 million cubic yards is estimated to cost \$450 million dollars. In addition to cost, the objections to this chemical option are:

1. No incineration plant of this capacity exists.
2. No technically feasible and environmentally safe process has been developed commercially to do the job.
3. Incineration, if feasible, would not remove the toxic metals which co-exist with PCBs in the harbor sediments.
4. Even if a chemically feasible process were developed, a multimillion dollar facility (capital cost) would be required and the energy operating costs would be astronomical.

B. BIODEGRADATION

1. PCBs are extraordinarily persistent and very resistant to biodegradation (many years).
2. Open process biodegradation and/or phase interface biodegradation are subject to phase transition and volatilization which is environmentally hazardous to humans or aquatic organisms.
3. Biochemical selected bacterial cultures, under laboratory conditions, may decompose certain PCBs but the process is not yet adequate for commercial use for large-scale contaminated sediments.

C. TRANSPORT AND BURIAL IN OUT-OF-STATE LANDFILLS

This option is not viable because:

1. Transportation costs in millions of dollars and disposal charges (fees) also in millions of dollars.
2. Environmental hazards of transport (spillage, accidents).
3. The existence of federally approved PCB landfills is no guarantee that the receiving State or the citizens of that State would permit such disposal at present.

D. OPEN OCEAN DUMPING

Turnbull states that "ocean disposal may turn out to be a feasible option" and that "adverse environmental effects associated with ocean dumping can be

D. OPEN OCEAN DUMPING (Continued)

minimized by capping with relatively uncontaminated materials." This conclusion is not only technically invalid, but is hydrogeochemically not achievable and presents a totally unacceptable risk to the fishing industry and the marine environment.

1. Ocean dump sites are not stable due to tides, ocean storms and currents and bottom erosion-resuspension of contaminated sediments is inevitable.
2. Barge delivery of dredged spoils to a specific ocean site is very difficult (even without ocean current dispersion problems). Especially due to the known association of PCBs and metals with fine clay particles and organic matter, the dumped spoils (in 50 feet or 100 feet or more depth in ocean water) never arrive directly (vertically) but are subject to considerable lateral movement (almost Brownian) of many feet or yards off-target.
3. As it would obviously take many days to deliver 4.5 million cubic yards, the dumped dredging would be additionally dispersed before so-called "capping" could commence.
4. The "capping" operation itself would be subject to similar off-target dispersion.
5. Even if feasible, the "capping" operation would require the additional cost of several million dollars of "uncontaminated material."
6. The total costs of ocean disposal are very considerable (of course increasing with distance); they may be estimated at \$4 to \$9 per cubic yard, hence:
  - a. Disposal of Spoils = \$18 to \$41 million
  - b. Cost of Capping Material = \$20 million
  - c. Barge Delivery of Capping = \$9 to \$20 million

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**DEPARTMENT OF ENVIRONMENT**  
**QUALITY ENGINEERING**

**YEE CHO**  
**ENVIRONMENTAL ENGINEER**  
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*3/6/85*

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