

## MEMORANDUM

TO: Regional Environmental Engineers, Deputy Regional Environmental Engineers

FROM: William F. Cass, Director, Division of Hazardous Waste [Signed]  
Thomas McMahon, Director, Division of Water Pollution Control[Signed]

DATE: January 4, 1984

SUBJECT: Policy on Redundancy Requirements for Sludge Disposal

### Background

The Construction Grants program requires that a wastewater treatment facility project include a feasible, environmentally sound solution for sludge disposition over its design life, which is defined as 20 years. In some cases, however, if it is not possible to identify a feasible 20-year solution, the Construction Grants program may accept a sludge disposition solution of less than 20 years duration.

Though a reliable sludge disposition solution is critical to the continuing operation of a wastewater treatment facility, it is recognized that the extent of reliability will vary depending upon the circumstances of individual facilities. In order to compensate for this variability and thereby assure that new or upgraded wastewater treatment facilities will be able to dispose of their sludge over their design life, the division of Water Pollution Control and the Division of Hazardous Waste have developed the following policy on redundancy requirements for sludge disposal.

### Policy

1. Landfilling
  - a. Sludge-Only Landfills – Generally no backup facility will be required for sludge-only landfills which have adequate capacity to accommodate sludge during the design life of a wastewater treatment facility. If the landfill capacity is not sufficient for 20 years, the treatment facility shall be required to have an approved back-up disposal solution method in place six months prior to the closure of the primary landfill. Such a backup may be either a long-term solution or an interim one pending development of a long-term resolution.
  - b. Co-Disposal at a Solid Waste Landfill – By its nature, co-disposal affords a wastewater treatment facility less control over the long term viability of its disposal solution than does a sludge-only landfill; however, the need for a back-up disposal alternative can also be anticipated several years prior to closure of a solid waste facility. As a result, the Department requires that a facility depending

upon co-disposal will have to have: 1) a 2 to 5 year back-up sludge-only landfill site available for development and 2) a facility design approved by the Department and ready for construction, if necessary.

- c. Sludge Ash Landfill – In order to assure that disposal is possible on a continuous basis, even in the case of incinerator shut down, a sludge ash landfill will be sized, whenever feasible, to accommodate sludge ash generated over the design life of the facility plus an additional 30% back-up capacity for disposal of sludge in the event of incinerator breakdown.

## 2 Composting

Composting is a sludge treatment process rather than a disposal method. Since the compost produced by the process is stabilized, storable, and easy to handle and is a useful soil conditioner, a disposal solution is not generally required for compost. An identifiable end use, however, is necessary to assure that the composted sludge does not become a disposal problem.

- a. In order to provide redundancy in the case of composting process failure, a composting facility plan shall include provision for a disposition alternative capable of accommodating about six months sludge production. The redundancy capacity required is limited to about a half year's duration because it is estimated that replacement equipment or repairs can be made within that period of time and that this is also sufficient lead time for developing an alternative in case the compost market is inadequate to meet supply generated. Some of the alternatives which can be considered for backup are disposal at another wastewater treatment facility, landfilling, or storage.

In order to assure that sludge compost is of consistent and useable quality and therefore will not create a disposal problem, DEQE shall examine the quality of the sludge prior to approving composting facilities. In some instances, especially where there is industrial input to the sewerage system, it may be necessary to require a pilot project to resolve any uncertainties about the quality of compost.

- b. Composting proposals shall be accompanied by an identification of potential users as well as an application use to be employed in case the compost fails to meet criteria for Type I or Type II suitability. Such an alternative may be landspreading at a dedicated site, like a closed landfill or roadside embankment, or disposal at an approved disposal site.

## 3. Disposal at Another Wastewater Treatment Facility

- a. If sludge is taken to another wastewater treatment facility for disposal, the generating plant should have a contract for long-term disposal with the

receiving plant. If such a contract is not feasible, the generating facility also shall have a second back-up disposal alternative to assure that there is a long-term method of disposal available to the plant.

- b. If the plant accepting the sludge employs incineration, back-up disposal is necessary in case the incinerator becomes non-operational. Redundancy may be a commitment by the receiving wastewater treatment plant to accept sludge for disposal in its landfill during periods of incinerator shutdown or a commitment by an approved landfill to accept sludge for short-term disposal during periods of incinerator shutdown.

#### 4. Land Application

- a. If sludge is land applied to a site which is owned or under the control of a wastewater treatment facility and which has a lifetime loading capacity for the design life of the plant, there is no need for disposal redundancy (other than normal winter storage or disposal requirements).
- b. Land application on sites not owned or under control of the wastewater treatment facilities does not provide assurance of long-term disposition. As a result, plants employing land application on such sites shall have a back-up disposal which can be implemented within six months. Such plans can be either interim or long-term solutions. Alternatives can include alternative land application sites or commitments from other wastewater treatment plants or landfills to accept sludge for disposal at some time in the future.

#### Implementation

The Division of Water pollution Control is responsible for approving sludge management plans developed in conjunction with facility plans; however, DWPC will not offer a Step 3 Construction Grant prior to the review and approval of the method of sludge disposal by the Regional Engineer of Jurisdiction. Lead responsibility in the regions for the sludge program was assigned to the Deputy Regional Engineer for Air and Hazardous Waste Programs in August, 1982 (memo from Bill Cass to REE's, August 12, 1982); however, since the sludge program may involve water, solid waste, and air programs, close cooperation with staff of these programs may be necessary for many projects, under the direction of the Regional Environmental Engineer.