

CITY OF CAMBRIDGE
DEPARTMENT OF HEALTH AND HOSPITALS

1493 CAMBRIDGE STREET, CAMBRIDGE, MASSACHUSETTS 02139

Melvin H. Chalfen, M.D.
Commissioner

Robert W. Healy
City Manager
City Hall
Cambridge, Massachusetts 02139

March 23, 1993

Council Order #42, 3/7/94
Low Level Radioactive Waste
Management.

Dear Mr. Healy;

I have attached a letter from Carol C. Amick, Executive Director of the Massachusetts Low-Level Radioactive Waste Management Board.

The scheduled closing of the Barnwell, South Carolina radioactive waste site has initiated several of the steps in the Board's Management Plan. The Plan is extensive and has been developed over the past three years in a process which has included multiple public meetings and public participation. The Plan has examined local, state, regional and national needs and provisions for management of low-level radioactive waste (LLRW).

Generators of low-level radioactive waste are licensed by the U.S. Nuclear Regulatory Commission (NRC), or registered by the Massachusetts Department of Labor and Industries, or both. These generators have been notified by the Board over the past 2 years and more that on-site storage of LLRW will be a necessity when the out of state facilities close and until additional storage capacity is available.

Storage of LLRW on-site is a recognized method of LLRW management. The methods for safe storage on-site have been developed in regulations and communicated by the Board to the licensees. In addition the majority of such sites in the state have been visited by the Board Executive Director or staff.

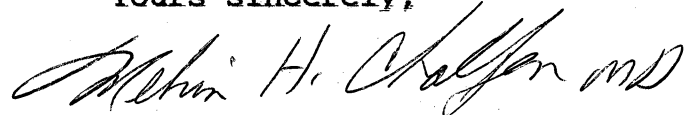
The Board is providing generators with technical assistance to guarantee that plans and procedures are completed in time to ensure that on-site storage will occur in a manner protective of the public's health and safety and the environment.*

March 23, 1994.

At this time the Board also:**

- will continue efforts for continued access to existing LLRW disposal sites,
- will continue efforts for access to other states and regions that are developing LLRW facility capacity,
- will pursue aggressively an ongoing program to reduce the source and volumes of LLRW in Massachusetts,
- will initiate a site selection process as provided in state law for a low-level radioactive waste management facility.

Yours sincerely,



Melvin H. Chalfen, M.D.
Commissioner, Health and
Hospitals.

MHC

cc:Carol C. Amick

*Massachusetts Low-Level Radioactive Waste Management Board
1992 Annual Report to the Commonwealth.

**Massachusetts Low-Level Radioactive Waste Management Board
Minutes, February 16, 1994
Motions Adopted by Low-Level Radioactive Waste Management Board.



THE COMMONWEALTH OF MASSACHUSETTS

LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT BOARD

100 CAMBRIDGE STREET ROOM 903

BOSTON, MASSACHUSETTS 02202

TELEPHONE: (617) 727-6018 FAX: (617) 727-6084

WILLIAM F. WELD
GOVERNOR

CHARLES B. KILLIAN
CHAIRMAN

CAROL C. AMICK
EXECUTIVE DIRECTOR

March 24, 1994

Melvin Chalfen
Commissioner of Health and Hospitals,
City of Cambridge
c/o Cambridge Hospital
1493 Cambridge Street
Cambridge, MA 02139

Dear Dr. Chalfen:

This letter is in response to your telephone call of earlier this week, in which you explained that the Cambridge City Council had adopted a resolution on March 7, 1994, directing you to confer with me to determine what plans are being made to address the on-site storage of low-level radioactive waste (LLRW) on the premises where this waste is produced, after June 30, 1994.

Not knowing the contents of the leaflet that you said was distributed in Kendall Square, I cannot comment on what information may have motivated the Council's resolution. However, here is some factual information:

More than 400 hospitals, government agencies, biotechnology firms, and other businesses, including two nuclear power plants (one operational and another undergoing decommissioning), are licensed by the U.S. Nuclear Regulatory Commission (NRC) or registered with the Massachusetts Department of Labor and Industries (DLI) to use or possess radioactive materials in the Commonwealth. LLRW is generated as a by-product of various uses of radioactive materials. These uses include:

- medical procedures such as cancer diagnosis and treatment, radioimmunoassay, and diagnostic imaging examinations;
- research and development by the biotechnology industry for the treatment and prevention of various diseases, such as AIDS, and in the environmental field to study the effects of chemicals on plant and aquatic life;
- commercial uses such as in instruments that measure level, thickness, and density or that analyze moisture;

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quality control; sealed sources in industrial radiography, smoke detectors and exit signs;

- university education; and
- the production of electricity by a nuclear power plant.

After LLRW is produced, the generator has several waste management options available. The LLRW can be shipped to a licensed LLRW disposal facility, or held on the generator's premises to decay in storage, or be placed in storage for future off-site disposal, or be managed by other methods approved by the NRC. "Storage for decay" refers to a procedure in which LLRW containing relatively short half-lives is held for natural radioactive decay in compliance with applicable federal and state regulations. At the end of the storage period, the waste effectively is no longer radioactive, and (following radiation monitoring) can be disposed of as normal trash.

Besides shipping LLRW to a licensed disposal site, or storing it on site to decay, other management methods authorized by federal regulation allow small quantities of radioactive materials to be discharged to sewers or released into the atmosphere; to be incinerated on site; to be returned to a manufacturer or supplier; or to be recycled and reused by the licensee.

These various waste management and disposal methods are employed by licensees in Massachusetts, including licensees located in Cambridge. They are described in the annual Survey Report issued by the Low-Level Radioactive Waste Management Board, which is a compilation of data on the Board's annual survey of all licensees. Your hospital should already have a copy of the 1992 report; we are currently completing our collection and analysis of 1993 data, and hope to issue the annual Survey Report late this summer.

Concerning LLRW storage in Cambridge, you will be interested to know that most of the licensees planning to store "shippable" waste after June 30, 1994 are biotechnology firms that primarily use H-3 and C-14. These radionuclides are weak beta emitters; their radiation hazard will be contained by the materials comprising the storage packaging.

During 1992, Massachusetts generators produced 349,392 cubic feet of LLRW, of which:

- 177,933 cubic feet containing 27,142 curies was managed by methods not resulting in shipment for disposal (i.e., storage for decay on site, sewer and atmospheric release, etc.);

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- 52,451 cubic feet was eliminated by waste treatment; and
- 119,004 cubic feet containing 76,363 curies of radioactivity was shipped for disposal.

Through December, 1992, there were four disposal sites available to the 100 or so generators of LLRW in Massachusetts that required disposal in a licensed disposal facility. They were located in Barnwell, South Carolina; Beatty, Nevada; Clive, Utah; and Hanford, Washington. (The Utah site is limited by its license to accepting low radioactivity LLRW, and is therefore not available as a disposal site for all types and concentrations of LLRW.)

After Dec. 30, 1992, the only major disposal site available to Massachusetts generators was the Barnwell, South Carolina site. Its availability was a result of a contract that the Management Board successfully negotiated; many neighboring states (New Hampshire, Rhode Island, Maine, and Vermont) do not have contracts for access to this site.

Access to the Barnwell disposal site is scheduled to end on June 30, 1994, which is the date stipulated in the contract. The Management Board is hopeful that future disposal access can be arranged, but does not know at this time whether such will be possible. South Carolina passed a law closing the Barnwell site to states outside the Southeast Compact region, as of June 30, 1994. Only the South Carolina Legislature has the power to change that law, and allow continued disposal access.

As a result of the fact that loss of disposal access is pending, the Management Board has notified all LLRW generators in the Commonwealth to be prepared by June 30 to store all their LLRW on site. As I mentioned, many of these generators are currently, and have in the past practiced storage for decay on their premises. After this June, these generators will also have to store the LLRW that they would have shipped to a disposal site, were one available.

The Management Board has notified all LLRW generators to be prepared for the maximum period of on-site storage allowed by federal regulation, which is five years. The Board's decision was not based on any preference for on-site storage; in fact, the Board does not favor such storage as a long-term LLRW management option. However, because Massachusetts does not yet have a disposal facility available, the interim solution of on-site storage was forced by the pending closure of Barnwell.

The Board recently completed an "On-Site Storage Technical Assistance" project, which encompassed site visits to LLRW generators, in order to determine their status of preparations for on-

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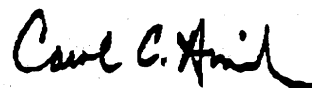
site storage after June 30, 1994. The final report will be issued shortly, but of the 83 locations where such storage is expected to occur:

- 20 licensees are fully prepared;
- 57 licensees have storage plans in progress; and
- 6 licensees were in the initial stages of preparation as of the time of the site visits (the third quarter of 1993).

The Board will continue to monitor the preparations and on-site storage activities of all licensees, to ensure that the conduct of LLRW storage is protective of public health, safety, and the environment.

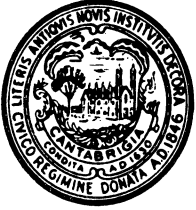
Please let me know if you or the Council would like any additional information.

Sincerely,



Carol C. Amick
Executive Director

cc: Management Board members



CITY OF CAMBRIDGE

CAMBRIDGE, MASSACHUSETTS 02139

TEL. 349-4300

FAX. 349-4307

EXECUTIVE DEPARTMENT

ROBERT W. HEALY

City Manager

RICHARD C. ROSSI

Deputy City Manager

March 28, 1994

To The Honorable, The City Council:

Please find attached a response to Awaiting Report Item No. 15, regarding low level radioactive waste material, received from Dr. Melvin H. Chalfen, Commissioner of Health and Hospitals.

Very truly yours,

Robert W. Healy
City Manager

RWH/mev
attachment

Consent Agenda #6

S-127

Transmitting comm. from R., W. Healy relative
to Awaiting Report Item No. 15 re: low level radioactive
waster material.

for original order see
1994 City Manager's
Requests #64.

In City Council March 28, 1994

Placed on file.