



environmental engineers, scientists,
planners, & management consultants

RECEIVED
90 MAR 20 AM 9:07
OFFICE OF THE CITY MANAGER

CAMP DRESSER & McKEE INC.

One Center Plaza
Boston, Massachusetts 02108
617 742-5151

March 19, 1990

Mr. Robert Healy
City Manager
City Hall
Cambridge, MA 02139

RE: Mayor Thomas W. Danahy Park -
Methane Reuse Feasibility

Dear Mr. Healy:

The purpose of this letter is to respond to the City Council's request for the feasibility of utilizing methane gas from the former dump site for an energy/heat source for the comfort station within the park site.

This request is not a new one. In 1982-83, as part of the preliminary design study, the Manager's Office requested the review of possible methane capture and reuse since energy conservation was a major focus at that time. During the study, our geotechnical subconsultant, Haley & Aldrich, Inc., reviewed the site's potential and indicated it would not be cost-effective or a reasonable investment for several reasons as listed below:

1. The site was closed to active dumping in 1972. Since methane production peaks approximately 7 years after closure, the site was therefore past its prime for methane production and was expected to continue to decline making it an unreliable long-term source.
2. The site has unique characteristics which differentiate it from a normal dump site and decrease its potential for methane production. These characteristics include:
 - a. The majority of the refuse at the former dump was burned during the 1950's and 1960's which reduces decomposition and methane production.
 - b. The site had a significant amount of construction demolition (concrete, rubble, etc.) as landfill which would not generate methane.
 - c. The majority of the refuse is in groundwater which would further reduce decomposition. The gas quality would be poor with a high level of water vapor.

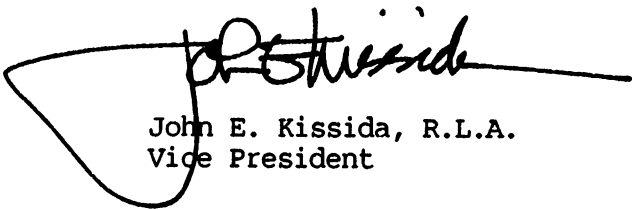
Mr. Robert Healy
March 19, 1990
Page 2

- d. The significant (4 to 40 feet of) fill, placed above the refuse by the MBTA, would make gas extraction more difficult.
3. The existing vent trench would need to be modified to prevent the potential for air to be drawn into the wells which would be installed and pumped for methane capture. Air entering the wells would potentially dilute the gas concentrations.
4. The site closure as approved by DEP does not include a typical clay cap and therefore the gas is not trapped in the landfill. The reasons the clay cap was not required by DEP were the 4 to 40 feet of fill placed by the MBTA, the location of refuse below groundwater, and the landfill age.
5. During the preliminary design study, H&A contacted the alternative energy group of Getty Corporation to discuss site feasibility. They're reaction was that the site did not present a viable source of methane and a detailed study of feasibility would be costly and most likely a waste of money.

We hope that this brief letter addresses the Council's request. If you have any questions or require further information please contact me.

Very truly yours,

CAMP DRESSER & McKEE INC.



John E. Kissida, R.L.A.
Vice President



3

CITY OF CAMBRIDGE
CAMBRIDGE, MASSACHUSETTS 02139
TEL. 498-9011

EXECUTIVE DEPARTMENT
ROBERT W. HEALY
City Manager

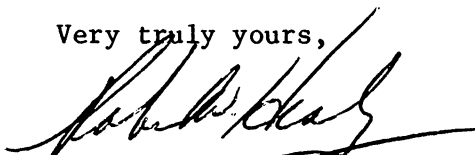
RICHARD C. ROSSI
Deputy City Manager

March 26, 1990

To The Honorable, The City Council:

Enclosed, please find a communication from John E. Kissida, Vice President of Camp Dresser & KcKee, Inc., relative to Council Order No. 22, dated 3/12/90, regarding the feasibility of reusing Methane Gas for energy/heat source from Mayor Thomas W. Danehy Park.

Very truly yours,



Robert W. Healy
City Manager

RWH/mev
enclosure

Agenda # 3

S- 313

Response to Order # 22 of March 12, 1990
regarding the feasibility of reusing
Methane Gas for an energy/heat source for
Mayor Thomas W. Danehy Park.

In City Council,

March 26, 1990

Please on file