



The Cambridge Hospital



1493 Cambridge Street, Cambridge, Massachusetts 02139 (617) 498-1000

To: Robert W. Healy, City Manager
From: John G. O'Brien, CEO, Cambridge Health Alliance
Harold Cox, Chief Public Health Officer, Department of Public Health
Sam Lipson, Environmental Toxicologist, Department of Public Health
Subject: Response to City Council Order #20 (issued 3/23/98)
Date: April 23rd, 1998

Question #1 - What kinds of soil tests are required prior to the commencement of construction of a project of this size, recognizing the history of the site as a chemical production facility?

No local or state laws require soil tests prior to the commencement of construction strictly based on the size of the project. Specific soil analyses are also not required strictly on the basis of the history of activity on the site. In the absence of a known release of hazardous material construction may proceed in accordance with standard safety and nuisance restrictions.

However, in the event that there has been a release of oil or other hazardous material which has been reported to the Massachusetts Department of Environmental Protection (DEP), there are requirements for characterizing the soil and groundwater as they are effected by the chemicals released. The Massachusetts Contingency Plan (310 CMR 40), governing the cleanup of hazardous waste sites, requires that any specified "location to be investigated" (LTBI) undergo initial investigation, remediation, and establishment of a "permanent solution" or an ongoing abatement plan. Depending on the findings of the initial investigation not all steps are required for each site.

At the 784 Memorial Drive parcel ("the Polaroid site") an Initial Site Investigation (Phase I Report) was conducted in 1994 regarding the 1989 discovery of the release of several solvents from an underground storage tank. The owner contracted GZA GeoEnvironmental, Inc., an environmental engineering firm, to conduct a required site investigation and clean up. The results of the Phase I Report showed sufficiently minor contamination that the owner was permitted to advance directly to the Release Abatement Measure (RAM), an abbreviated "fast-track" cleanup process. Once this RAM was completed, a Response Action Outcome (RAO) was carried out to estimate the risk associated with the site. The RAO of this site did rank the parcel as fit for residential use with no restrictions ('A2' outcome), allowing all types of future development.

The site history in the Phase I Report detailed the historical uses of the site, including both Dover Stamping (metal plating and finishing) and B.B. Chemical (shoe adhesives). The authors of the Phase I Report (GZA) chose to focus exclusively on the area of the solvent release discovered in 1989 and did not include any detail about the past storage and use of hazardous material in other parts of the site. While there is some ambiguity about the intent of the Mass Contingency Plan (MCP) on this question, it appears that they were not required to thoroughly investigate past activities that could have resulted in a chemical release but were not tied to the specifically reported release. The owner could have chosen to test soil samples for metal content. The language of the MCP, however, only steers the site investigator towards this type of inquiry and does not prescribe it.

It is very common that site characterization beyond the strict requirements of the law is requested by the new purchaser or by any lending institution providing funds during title transfer of the property. Because Polaroid sold this property to a Limited Liability Corporation (LLC) which they co-own, the incentive to ask for more thorough testing of the site may have been limited. If Polaroid did not need to borrow money to complete the property transfer, then no third-party lender would need to understand the degree of risk involved in this transaction.

Question #2 - Does the City have any jurisdiction to require testing by the owner?

The City does not have any *specific* jurisdiction to require testing by the owner. The City and its departments may play a role in advising citizens about their available recourse with the DEP and may submit recommendations for action to this and other agencies of the State. The DEP has the authority to audit a site which has been already been investigated if they deem that significant information regarding the contamination of the site was not taken into account during the site investigation. In the specific instance of the Polaroid site, the Cambridge Department of Public Health has already sent a letter recommending that an audit be conducted and testing for metals be done.

Regardless of a decision by the DEP to audit the site, the Cambridge Department of Public Health and the Department of Inspectional Services both have clear authority to require that dust and other airborne material is contained (usually by wetting) during demolition, excavation, and construction. Indeed this authority governs all construction and excavation activity without regard for the possible presence of contaminants in the soil.

Further, the City, acting through its Commissioner of Public Health, has the traditional authority to respond to serious public health threats. This authority has generally been exercised in the context of infectious diseases. In cases where a severe threat exists, like the presence of weapons-grade nerve gas, the local health authorities have exercised their mandate to protect the public health. This authority has not traditionally been exercised in regard to hazardous waste sites, which are managed through Chapter 21E and the MCP and are enforced by the DEP. This authority may have some bearing on particular circumstances involving public exposure to hazardous chemicals, but is not generally employed in this manner.

Question #3 - Can the City or state perform such testing if the owner is unwilling to do so?

In order for testing to be mandated at a site previously investigated and abated, the DEP must choose to audit the site. Once the results of the audit are released, the DEP may issue a Notice of Responsibility (NOR) which could require further testing. If negotiations between the owner and the DEP fail to result in an agreement on testing, the DEP can order entry onto the property and take the necessary samples. Though the DEP can perform testing if the owner refuses, they are far more likely to pursue the matter through legal means. In the event of a hazard to the public which is based upon specific chemical data, DEP is likely to take swift action which will result in the testing of a site. After DEP has exhausted all remedies to compel the owner or responsible party to properly characterize the site, it will carry out such testing on its own authority.

Question #4 - How will area residents know if contaminants are present in the soil that is being excavated?

The 1994 Phase I Report contained several categories of information on this site, including soil data characterizing the degree of contamination resulting from the reported solvent release, historical uses of the entire site, and the known history of chemical releases and abatements on the site. Since the subsequent abatement (by soil removal) resulted in acceptably low levels of all detected solvents (as established in the concluding Release Action Outcome) there was no requirement for further testing. As metals were never cited in the initial discovery of chemicals released there is no requirement to test for them.

Furthermore, because the site was fully abated for those chemicals identified from the original solvent release and the site was assigned an 'A2' rating (allowing future residential development on the site) there are no requirements for testing this soil before it is removed. While the DEP does require that soil removed to a residential site meet state soil standards for these areas mandated testing is not an explicit part of this rule. On the other hand, if the soil is removed to a landfill or asphalt batching plant then, it must be analyzed for certain metals and these values must be submitted to the DEP and meet standards which DEP imposes.

Because of the 'A2' assignment, indicating that a "permanent solution" has been reached, the owner is not required to hire a Licensed Site Professional (LSP) during demolition, excavation or construction on the site. On the Polaroid site the owner has decided to assign an LSP during excavation in the event that any unexpected materials or structures are uncovered and need to be investigated. The firm Haley and Aldrich, Inc. (Boston) has been contracted to carry out these oversight responsibilities.

If the DEP decides to audit the site and if they determine that further field samples must be collected from the area to be excavated, more soil data may eventually be available to the City and the public.

Question #5 - What monitoring are other state or federal agencies required or able to do?

As stated in the response to Question #2, the DEP has the authority to require testing at a site if they determine during an audit of a previously filed site assessment that additional testing is warranted. This decision will be based on the strength of evidence that there may have been past releases on the site which were not addressed during the Phase I Report. DEP is currently considering whether to conduct a site audit of the 784 Memorial Drive parcel.

In the event of a possible air quality hazard suggested by chemical data the DEP is authorized to characterize and monitor the impact of that source of airborne pollution and to impose additional measures to contain that potential hazard. The DEP maintains a strike-force equipped to respond immediately at the site of an imminent air quality hazard. If they have sufficient cause for concern, they may require that containment measures beyond soil wetting be taken (e.g. shrouds, separator walls). Monitoring activities which may be invoked can include the placement of air monitoring devices around the property for determination of air quality violations. This authority is not likely to be exercised by DEP without specific soil testing data indicating a significant risk of air contaminant exposure. Therefore this action would probably also be based on a DEP audit which mandates further testing.

The EPA has some authority to require sampling of sites which they regard as severely contaminated, but in general do not exercise these powers unless they recognize areas of extreme hazard which are not being properly addressed by state and local agencies.

Question #6 - What measures is the owner required to take to ensure the safety of area residents?

The owner must comply with all public safety and nuisance codes, including the containment of dust and noise during demolition and excavation on the site. Among other necessary precautions are the containment of dust during transfer to vehicles for removal and the covering of these vehicles during transport of the demolished material away from the site.

If the prior remediation of the site has not resulted in final cleanup of the hazardous materials identified the owner is required to have a Licensed Site Professional (LSP) on the site during demolition and excavation. As indicated earlier, the Polaroid site was deemed to have been fully abated and therefore no such requirement was applicable to development at that location. At their own discretion the owners have decided to hire an LSP to monitor excavation at that site in the event that materials or structures are discovered which might be a cause of concern.

Question #7 - What redress is available should any of the above City or state agencies or private owners fail in their obligations to ensure public safety, including monetary damages such as fines, or terminations of permits?

The owner of the site is responsible for complying with all legal requirements, including all DEP orders. In the event that the owner fails to satisfy the requirements placed on it by the DEP, the owner faces the possibility of stiff fines. Chapter 21E of the Massachusetts General Laws provides 1) up to a \$25,000 civil fine for each violation, and each day that the violation continues is deemed a separate violation; 2) up to a \$25,000 criminal fine and/or up to two years imprisonment in a house of correction; and 3) up to a \$100,000 fine and/or imprisonment of up to twenty years for failure to report contamination which has not yet been identified to the DEP. If an LSP fails to perform its responsibilities properly, it is at risk of losing its license. If the DEP must step in itself to complete testing or clean up, it can recover up to three times its actual costs from the owner. The prior issuance of a permit from any City department provides no amnesty from full compliance with all statutory requirements and/or DEP orders. In addition, a property owner must be in compliance with the State Building Code, and other state and local ordinance regulations and statutes at all times that demolition, excavation or construction is conducted on the site. The Commissioner of Inspectional Services has the power to enforce compliance with the provisions of the State Building Code.

Finally, the owner of any property which is found to pose a health hazard to the public remains liable for injuries and other damages resulting from contaminants originating on that property.



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23.

EXECUTIVE DEPARTMENT
ROBERT W. HEALY
City Manager

RICHARD C. ROSSI
Deputy City Manager

April 27, 1998

To The Honorable, The City Council:

In response to Awaiting Report Item No. 16, regarding a report on what regulations are currently in place to prevent airborne or other contaminants during construction on the former Polaroid site, received from John O'Brien, CEO, Cambridge Health Alliance; Harold Cox, Chief Public Health Office, Department of Public Health; and Sam Lipson, Environmental Toxicologist, Department of Public Health.

Very truly yours,

Robert W. Healy
City Manager

RWH/mec
Attachment

Consent Agenda #23

S-285

Regarding a report on what regulations
currently in place to prevent airborne
or other contaminants during the
construction of the ofrmer Polaroid
site.

In City Council April 27, 1998

ORDER ADOPTED

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