CCM-101

City of Cambridge

22.

IN CITY COUNCIL
December 14, 1998

COUNCILLOR TOOMEY
COUNCILLOR BORN
COUNCILLOR DAVIS
VICE MAYOR GALLUCCIO
COUNCILLOR REEVES
COUNCILLOR TRIANTAFILLOU

ORDERED: That the Cambridge City Council urge the City Manager to instruct the Commissioner of Inspectional Services Department to take any legally possible action to deny or withhold any building permit for, or to undertake any informal review of, any construction proposed for the so-called Com/Energy site until the serious environmental concerns expressed in the enclosed letter, dated November 24, 1998 from John Felix, Deputy Regional Director, Department of Environmental Protection, Bureau of Waste/Site Cleanup (and MEPA Review Coordinator), are completely resolved.

In City Council December 14, 1998.
Adopted by the affirmative vote of nine members.
Attest:- D. Margaret Drury, City Clerk.
A true copy;

ATTEST:- D. Margaret Drury

D. Margaret Drury
City Clerk

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COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
METROPOLITAN BOSTON - NORTHEAST REGIONAL OFFICE

ARGEO PAUL CELLUCCI
Governor

TRUDY COXE
Secretary

DAVID B. STRUHS
Commissioner

November 24, 1998

Trudy Coxe, Secretary
Executive Office of
Environmental Affairs
100 Cambridge Street
Boston, MA 02202

RE: Cambridge/DEIR
Cambridge Research Park
DEIR/EOEA #11657

Attn. MEPA Unit

Dear Secretary Coxe:

The Department of Environmental Protection Northeast Regional Office has reviewed the Draft EIR submitted by Lyme Properties, LLC to construct a mixed-use urban development complex in Cambridge consisting of life sciences research and office space, residential units, retail space, and a hotel (EOEA #11657).

Water Supply:

Section 3.2.2 of the Draft EIR projects water use at the proposed complex of approximately 206,180 gpd. This is almost a 70% increase in water usage from the estimate in the ENF (140,600 gpd). In addition, the DEIR states that the Cambridge Water Department is concerned that the 6-inch water main in Linskey Way and Second Street can handle the project's pressure, flow, and water quality requirements. It is unclear whether their concerns are based on the 140,600 gpd or 206,180 gpd data. If the former, the projected increase in usage to 206,180 gpd will almost certainly strain the existing system. The project proponent should explain and justify the increase in usage and what mitigation measures can be taken to handle or reduce the demand.

Wetlands:

The Certificate asks the project proponent to provide a plan delineating all resource areas and whether or not the local Conservation Commission agrees with the delineation. The proponent does provide plans with the DEIR but only Bordering Land Subject to Flooding has been identified (on the FEMA map). None of the other resource areas including Land Under Water and Riverfront Area (there is no BVW) are delineated. The Certificate also asks for options to avoid or minimize the wetlands impacts. The DEIR does

not clearly state what activities are proposed within the wetland resource areas nor does it include measures to avoid or minimize. The Final EIR should include delineation of resource areas, what activities are planned in these areas, and the mitigation options.

Chapter 21E:

The six "short listed" project alternatives discussed in Section 1.3 all have the common assumption that parking will be predominantly below grade. All six assumptions are said to have been designed to "reduce environmental impacts". DEP is concerned about the lack of discussion and analysis of alternatives that do not require below grade parking. DEP's concerns are triggered by the Proponents plan to remove up to 300,000 cubic yards of material from the site, a large portion of this material highly contaminated, in order to construct a three story underground parking garage. Typically, Brownfields redevelopment of such highly contaminated sites would attempt to minimize the disruption of vast amounts of hard-to-manage contaminated material while still meeting Chapter 21E's goal of achieving a condition of "no significant risk".

The underground garage construction proposal is extremely ambitious due to the presence of highly contaminated site soils and groundwater, not to mention the presence of deep lenses of discrete, oily coal tar residuals. Off-site disposal or reuse options for highly contaminated soils are limited. The process of managing the contaminated media at this site, particularly contaminated groundwater, will be very difficult, not as much due to the technology involved, but more due to the vast amounts of highly contaminated material to be managed. The project also has significant worker health and safety concerns as well the potential for localized air quality impacts during construction and possible long term impacts on indoor air quality of the new development.

DEP's comments should not to be taken to mean that the project should not proceed. The environmental cleanup of this property required by c. 21E (achieving a "Permanent Solution") will not likely happen unless it is linked to site redevelopment. GZA's "Phase III - Identification, Evaluation, and Selection of Comprehensive Remedial Action Alternatives" states in Section 7.00, Summary and Conclusions: "Lower bound costs for achieving a Permanent Solution, which would essentially reduce contaminant levels on the property to background concentrations, range from $44 million to $85 million. Implementing a Permanent Solution would also take several years to complete. Due to the excessive costs and time frames, and the potential for significant real and perceived risks, the implementation of a Permanent Solution is considered infeasible at this time." "... it is possible that a Permanent Solution could prove cost effective and therefore feasible in the future for certain sections of the site if the required remediation is conducted as part of site redevelopment. Under such a scenario, remediation efforts would be phased, allowing the achievement of Permanent Solutions for specific portions of the site, which would be implemented as those portions

[illegible] of the site undergo redevelopment [illegible] yards of contaminated soil from [illegible] [illegible] in this year [illegible] given to the [illegible] DEP agrees that a Permanent Solution will be difficult to achieve [illegible] without the incentives provided by redevelopment. However, it is important to note that the site owners and other historical "Potentially Responsible Parties" (PRPs) are required under [illegible] to achieve a Permanent Solution regardless of whether or not the site is redeveloped (note page [illegible] of the DEIR states that environmental remediation will not be achieved with a "no build" alternative). As stated in the DEIR, a "Class C" Response Action Outcome (RAO) was filed with DEP for this site in 1997. This does not mean that additional remediation of this site is not required. Class C RAO's apply to disposal sites where a "Temporary Solution" has been achieved. The coal tar residues at the site exceed DEP's "Upper Concentration Limits" (UCLs). UCLs in soil and groundwater are concentrations of oil and/or hazardous material which, if exceeded, indicate the potential for significant risk of harm to public welfare and the environment under future conditions. Section 310 CMR 40.0580 of the MCP states that the PRP for a site where a Temporary Solution has been implemented and a Class C RAO filed must undertake a periodic evaluation of the Temporary Solution. The periodic evaluation must address, among other things, the feasibility of implementing one or more Permanent Solutions for the site. In other words, there is a continuing obligation for the owner and the other PRPs involved in this site to implement a Permanent Solution (Class A or B RAO) even if the site remains as is.

The following are DEP's specific comments on this proposal:

1. The large amount of contaminated soil to be excavated is a concern to DEP. Section 5.2 of the DEIR mentions the site contaminant conditions: oil was reported in 14 soil borings in 1982; an assessment was done to find the source of "black oily tar-like seeps in a utility vault on Third Street in 1988; in 1997, tar and oils were observed in test trenches -floating oils were observed in several wells, a dense oil layer was observed in one area; later studies found a deep sand layer in the north area of the site "often stained with a dark, tacky viscous material with a strong odor. This material increases in concentration with depth." Soil samples were found to be highly contaminated with coal tar residuals, toluene, ethylbenzene, xylene, and PAHs. High soil contaminant levels of benzene have been found, which, if the soil is removed from the site, would require that the soil be regulated as a "hazardous waste". The estimated soil volumes to be excavated provided to DEP are:

- 110,200 cubic yards of benzene contaminated soil (likely "hazardous waste" D018 if taken off-site);
- 130,900 cy of soil with PAHs >100 mg/kg;
- 68,400 cy of soil with PAHs <100 mg/kg;
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It will take considerable planning to find legally permitted outlets for this amount of material. For example, DEP records show

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that approximately 400,000 cubic yards of contaminated soil (non-hazardous waste soil) are managed in one year for all projects in the entire Commonwealth through the MCP's Bill of Lading process. Such soils come from a range of projects from Brownfield's development to oil spills.

It may be difficult for the limited number of permitted soil outlets to handle such large volumes of soil in a relatively short timeframe. The Cambridge Project will generate roughly 260,000 cy of contaminated soil at one time, some likely requiring disposal as hazardous waste. Some of the "less contaminated" soils may be disposed of in Massachusetts landfills, but there is no facility in Massachusetts permitted to take soil which is "hazardous waste". Contaminated soil disposal/reuse options should be identified very early in the life of the project.

On-site soil treatment and/or insitu stabilization may not be an option for highly contaminated soils. DEP permits may be necessary for on-site treatment of marginally contaminated soils if this is an option. A more complete evaluation of the soil management issues can be found in GZA's "Phase III- Identification, Evaluation, and Selection of Comprehensive Remedial Action Alternatives", June 1997.

Again, DEP feels that parking alternatives which minimize disruption of highly contaminated site soils and groundwater should be addressed. If the underground parking option remains the preferred alternative, DEP feels that a description and evaluation of the soil management issues like that which is provided in the GZA report should have been provided in the DEIR.

2. Groundwater and NAPL (non-aqueous phase liquid) management is also a concern for DEP. Groundwater samples show exceedences of DEP "Upper Concentration Limit" (UCL) for benzene and significantly elevated concentrations of ethylbenzene, toluene, xylenes, and naphthalene. Section 6.3.2, Site Dewatering, describes the construction dewatering needs and mentions "the dewatering discharge may need to be treated perpetually". In light of the reported presence of non-aqueous phase lenses of contamination and significant groundwater contamination, traditional small-scale dewatering treatment systems may be unsuitable for this project. DEP feels that the site dewatering and NAPL recovery elements of this project will require careful planning and should have been addressed in more detail in the DEIR.

3. Section 6.6.1., Air Quality, fails to mention the possibility of odor or volatile contaminant impacts from the excavation effort. The site is heavily contaminated with volatile organics and odor causing chemicals. Contaminated soil excavation, handling, treatment, if conducted, and general on-site soil management is likely to cause off-gassing of VOCs and odors. Studies should be conducted to determine the potential for such air quality impacts. If there will be a problem, contingencies for preventing such emissions must be developed and implemented. A related and important concern is worker health and safety when excavating and

handling the contaminated media. Deep excavations may require confined space safety precautions. [illegible]

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5. It will require an extremely aggressive remediation effort to achieve a Class A or B RAO for this site. The site has significant contamination of the type and quantity that will be difficult to simply remove. In addition, significant post-remediation site monitoring will likely be necessary to confirm that a Class A or B RAO has been achieved, should that be possible.

6. Care must be taken to thoroughly "assess" the extent of contamination at this site. The MCP defines a "disposal site" as any area where oil and/or hazardous material <u>has come to be</u> <u>located</u>. It appears that the environmental site assessments conducted to date focus on the footprint of the property to be developed, not the "disposal site" as is required by 21E. For example, Figure 5.1 of GZA's Phase III titled, Tar and NAPL Location Plan, 6/30/97, shows the presence of 8-16 feet of NAPL in monitoring wells at the property boundary on Third Street. No investigations have been conducted to determine the extent of off-property migration of NAPL. The absence of such information appears to be a deficiency which brings into question the validity of the Class C RAO currently filed for the "disposal site". Regardless of the development proposal, off-<u>property</u> migration to adjacent properties, canals, etc., must be studied for a valid RAO to be filed.

In conclusion, DEP is concerned because it appears that (1) alternatives which do not involve underground parking have not been discussed and (2) a limited amount of study and planning has gone into the aspects of this project involving the excavation of a three story parking garage at such a highly contaminated site. The contaminated media management issues involved in this project are equivalent to those likely found in one of the larger federal Superfund projects. This does not mean that the project should not go forward. However, it does mean that the garage excavation should not be started until the site conditions are completely defined and the soil and groundwater management (excavation, handling, reuse and/or disposal) plans are completely understood, approved and/or permitted. DEP feels that the DEIR could have

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described the site contamination problem in more detail. Any construction activity that results in the disturbance of such contamination, not to mention the management and proper disposal or reuse of such material once it is disturbed, is a project requiring careful review and understanding by those parties participating in the MEPA process.

It is also important to point out that the MCP process has to be re-opened in order for the garage construction to occur. DEP NERO's view is that the large scale contaminated media removal and management involved in the garage construction is, for all intents and purposes, the "excavation" alternative in GZA's Phase III report. The proponent will have to comply with the MCP's "Phase IV - Implementation of Remedial Action Alternatives" to construct the garage. The MCP process does offers opportunities for public input in this project.

In closing, it is appropriate to cite sections of the PRP's consultant reports to emphasize the complexities of the proposed construction project. The following is from the Phase III - Identification, Evaluation, and Selection of Comprehensive Remedial Action Alternatives; GZA; June 1997:

> Section 5.21.1, Excavation: "Excavation activities in the contaminated area would be technically complex. The presence of numerous existing active and inactive subsurface utilities, as well as the foundations of former structures, will present logistical problems and risk concerns during the excavation activities if they are left in place. The existence of DNAPL at depths in excess of 20 feet potentially proximate to the property lines will likely require earth support structures to allow excavation. In addition, many soil handling activities will likely require that workers be fitted with at least Level C respiratory protection. Finally, construction dewatering with treatment will also be required. During on-site dewatering, off-site groundwater levels would have to be monitored to assess the potential for settlement of adjacent roads, utilities and buildings.
>
> "Excavation activities pose several potential short-term environmental and human health problems. Short-term exposure risk during excavation could be high due to the likelihood of human contact with contaminated soils and coal tar. In addition, excavation activities (particularly lateral earth supporting bracing) pose significant physical hazards, as does off-site transportation of contaminated soils. Air emissions would also be an issue as the contaminated media is brought to the surface, exposing volatile compounds to the atmosphere that are now contained within the outer mass of the weathered tar. The generation of fugitive dust would also be a concern. In addition to the actual on-site and health risks posed by the liberation of contaminants to the atmosphere, the perceived health risks to the adjacent community would likely be high due to the generation of significant odors, and the proximity and numbers of abutters."
>
> "The feasibility of excavation as a remedial action for the site is low due to the logistics and risks associated with soil and coal tar removal. In addition, handling difficulties will be encountered during excavation of the coal tar, which will also be difficult to manage once removed from the subsurface. Finally, if the contaminant concentrations exceed RCRA limits, excavation will result in the generation of a RCRA waste."
>
> "GZA anticipates that it will take approximately two to three years to remove the contaminated media and complete the excavation activities on site. A lower bound estimate of excavation costs, not including treatment or off-site disposal, is approximately $11.5 million, assuming treated material can be used as backfill."

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"...Site Risk Assessment Conclusions: A condition of no Significant Risk to human health was found to exist for all but two of the receptors evaluated; the two exceptions were the future on-site [illegible] worker and future on-site employee. [illegible] the on-site future [illegible] were identified for incidental ingestion of soil. For the future on-site employee, elevated cancer risks were identified for dermal contact and incidental ingestion of surficial soils. Evaluations concerning future site condition were carried out under the assumption that the site would undergo commercial redevelopment for use as either office or research space. Under such redevelopment plans, surficial soils may be accessible on portions of the site, driving the elevated risks which were identified for future on-site employees."

The DEP Northeast Regional Office appreciates the opportunity to comment on this proposed project. Specific questions regarding the following issues should be addressed to the following people: Jim Persky at (978) 661-7767 for water supply; Richard Chalpin at (978) 661-7701 for Chapter 21E issues. General questions regarding these comments should be directed to David Shakespeare at (978) 661-7797.

Sincerely,

John Felix,
Deputy Regional Director,
MEPA Review Coordinator

cc: Dave Murphy, DEP/O&P Boston
Richard Chalpin, DEP/BWSC NERO
Jim Persky, DEP/BRP NERO
Cambridge Board of Health
Cambridge Water Department

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In conclusion, DEP is concerned because it appears that (1) alternatives which do not involve underground parking have not been discussed and (2) a limited amount of study and planning has gone into the aspects of this project involving the excavation of a three story parking garage at such a highly contaminated site. The contaminated media management issues involved in this project are equivalent to those likely found in one of the larger federal Superfund projects. This does not mean that the project should not go forward. However, it does mean that the garage excavation should not be started until the site conditions are completely defined and the soil and groundwater management (excavation, handling, reuse and/or disposal) plans are completely understood, approved and/or permitted. DEP feels that the DEIR could have

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> Section 5.21.1, Excavation: "Excavation activities in the contaminated area would be technically complex. The presence of numerous existing active and inactive subsurface utilities, as well as the foundations of former structures, will present logistical problems and risk concerns during the excavation activities if they are left in place. The existence of DNAPL at depths in excess of 20 feet potentially proximate to the property lines will likely require earth support structures to allow excavation. In addition, many soil handling activities will likely require that workers be fitted with at least Level C respiratory protection. Finally, construction dewatering with treatment will also be required. During on-site dewatering, off-site groundwater levels would have to be monitored to assess the potential for settlement of adjacent roads, utilities and buildings.
>
> "Excavation activities pose several potential short-term environmental and human health problems. Short-term exposure risk during excavation could be high due to the likelihood of human contact with contaminated soils and coal tar. In addition, excavation activities (particularly lateral earth supporting bracing) pose significant physical hazards, as does off-site transportation of contaminated soils. Air emissions would also be an issue as the contaminated media is brought to the surface, exposing volatile compounds to the atmosphere that are now contained within the outer mass of the weathered tar. The generation of fugitive dust would also be a concern. In addition to the actual on-site and health risks posed by the liberation of contaminants to the atmosphere, the perceived health risks to the adjacent community would likely be high due to the generation of significant odors, and the proximity and numbers of abutters."
>
> "The feasibility of excavation as a remedial action for the site is low due to the logistics and risks associated with soil and coal tar removal. In addition, handling difficulties will be encountered during excavation of the coal tar, which will also be difficult to manage once removed from the subsurface. Finally, if the contaminant concentrations exceed RCRA limits, excavation will result in the generation of a RCRA waste."
>
> "GZA anticipates that it will take approximately two to three years to remove the contaminated media and complete the excavation activities on site. A lower bound estimate of excavation costs, not including treatment or off-site disposal, is approximately $11.5 million, assuming treated material can be used as backfill."

"[illegible] Site Risk Assessment Conclusions: A condition of No Significant Risk to human health was found to exist for all but two of the receptors evaluated; the two exceptions were the future on-site redevelopment worker and future on-site employee. [illegible] risks were identified for the on-site future redevelopment worker [illegible] through dermal contact and incidental ingestion of soil. For the future on-site employee, elevated cancer risks were identified for dermal contact and incidental ingestion of surficial soils." "Evaluations concerning future site condition were carried out under the assumption that the site would undergo commercial redevelopment for use as either office or research space. Under such redevelopment plans, surficial soils may be accessible on portions of the site, driving the elevated risks which were identified for future on-site employees."

The DEP Northeast Regional Office appreciates the opportunity to comment on this proposed project. Specific questions regarding the following issues should be addressed to the following people: Jim Persky at (978) 661-7767 for water supply; Richard Chalpin at (978) 661-7701 for Chapter 21E issues. General questions regarding these comments should be directed to David Shakespeare at (978) 661-7797.

Sincerely,

John Felix,
Deputy Regional Director,
MEPA Review Coordinator

cc: Dave Murphy, DEP/O&P Boston
Richard Chalpin, DEP/BWSC NERO
Jim Persky, DEP/BRP NERO
Cambridge Board of Health
Cambridge Water Department

CCM-101

City of Cambridge

22.

IN CITY COUNCIL
December 14, 1998

COUNCILLOR TOOMEY

ORDERED: That the Cambridge City Council urge the City Manager to instruct the Commissioner of Inspectional Services Department to take any legally possible action to deny or withhold any building permit for, or to undertake any informal review of, any construction proposed for the so-called Com/Energy site until the serious environmental concerns expressed in the enclosed letter, dated November 24, 1998 from John Felix, Deputy Regional Director, Department of Environmental Protection, Bureau of Waste/Site Cleanup (and MEPA Review Coordinator), are completely resolved.

Consent Order #22 7/1CM

Coucnillor Toomey re: take legal action to deny or withold any building permit for the proposed ComEnergy site.

In City Council December 14, 1998

ORDER ADOPTED