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November 16, 2007

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Ian Bowles, Secretary
Executive Office of Energy and Environmental Affairs
MEPA Office
100 Cambridge Street, Suite 900
Boston, Massachusetts 02114

Subject: **Fan Pier Development, EOEA #12083**
Request for Advisory Opinion
Proposed Addition of Bioresearch Laboratory Use

Dear Secretary Bowles:

This is a request for an Advisory Opinion pursuant to 301 CMR 11.01(6) submitted by Epsilon Associates, Inc. on behalf of Fan Pier Development LLC as to whether a Notice of Project Change is required in order to add bioresearch laboratory use as an allowable use for a portion of the Fan Pier development.

Recently, biotechnology and pharmaceutical companies have shown a strong interest in a mixture of office and research laboratory space on Fan Pier. As a result, the proponent is seeking to include bioresearch laboratory use among the allowed uses on the site. Although the original planning for Fan Pier did not contemplate research laboratory use, approximately 1,574,000 square feet of buildings on Parcels A, B, E, and F could be used for a mixture of office and research laboratory space.

The project is a multi-phase, mixed-use development located on Boston's Fan Pier which includes nine buildings, including the already-constructed Institute of Contemporary Art. As approved, the project will contain a mix of uses including hotel, residential, office, retail, restaurant, extensive civic and cultural amenities, significant open space, parks, and water-dependent uses. All of these requirements are detailed in the Consolidated Written Determination for

Waterways Application No. W02-0404-N, originally issued by the Department of Environmental Protection on June 28, 2002 ("CWD") pursuant to Chapter 91. **The addition of laboratory use described herein will not alter these obligations.**

Fan Pier underwent comprehensive joint MEPA and Article 80 review and received a Certificate from the Secretary of Environmental Affairs on its Final Environmental Impact Report ("FEIR") in September 2001. Chapter IV of the FEIR discusses the project's consistency with the Chapter 91 Waterways Regulations as modified by the City of Boston Municipal Harbor Plan dated July 2000 and approved with conditions by the Secretary of EOEA in his December 6, 2000 Decision, and provides an analysis of the project's conformance. **Results of that analysis remain unchanged despite the proposed use reallocation and inclusion of bioresearch laboratory use.**

The physical aspects of the project remain unchanged. As described herein, the addition of bioresearch laboratory use represents a non-material change in use from the use mix initially considered for Fan Pier.

To accommodate the significant interest from biotechnology and pharmaceutical companies, the proponent seeks the ability to dedicate approximately 1,574,500 square feet of upper floor space in buildings on Fan Pier to a mixture of office and laboratory space; buildings may be dedicated either solely to office use or to a combination of these uses. Depending on the needs of the user, office/laboratory buildings may have an office-to-laboratory use ratio ranging from 50:50 to 30:70. As described below, research use will be limited to biosafety level ("BSL") 1 and/or BSL-2 laboratories.

In addition, the Fan Pier program now contemplates a smaller, more upscale hotel than the Hyatt hotel which was studied in the FEIR, and now contains fewer residential units.

Giving effect to those changes in use allocation, the following table demonstrates the resulting allocation:

Use	Area (square feet)			Percentage	
	Initial Project	Change	New Proposal	Initial	New
Hotel	478,000 (650 rooms)	(264,500) (475 rooms)	213,500 (175 rooms)	16%	7%
Office	1,223,380	(374,755)	848,625[1]	40	30
Residential	1,091,200 (675 units)	(127,200) (75 units)	964,000 (600 units)	36	33
Retail	134,420	40,580	175,000	4.5	6
Bioresearch Laboratory	0	725,875	725,875[2]	0	24

As explained below, the impacts from this proposed use reallocation are neutral, largely as a result of the concurrent reduction in hotel size. Accommodating the interests of biotechnology and pharmaceutical tenants, however, could accelerate the pace of build-out on Fan Pier, thus encouraging more timely completion of open space and water-dependent uses; these latter uses are linked by the CWD to coincide with the completion of buildings. Furthermore, bioresearch is associated with high-quality jobs, the introduction of which will promote robust economic growth and help the Boston area remain at the forefront of technological and scientific fields.

Revised Impact Analysis: No significant net change

The following discussion examines the impacts from the revised use allocation and demonstrates that such impacts are generally unchanged from the initial uses proposed for the project.

Trip Generation and Parking Demand

The expected occupancy density of laboratory space is one person for every 500

1 This represents a midpoint between 787,250-910,000 square feet of office space (27-31% of the total program) after assuming a range of potential use allocations, including a 50% office /50% laboratory mix of all 1,574,500 square feet, or one full building all office, and the balance 40% office / 60% research laboratory.

2 This represents a midpoint between 664,000-787,250 square feet of research laboratory space (23-27% of the total program) using the same assumptions.

square feet; this estimate is based on conversations with two potential occupants contemplating a mixture of office and laboratory uses. This laboratory space density is roughly 50% of the assumed density of office space. Using a hypothetical allocation of 54% office and 46% laboratory space, projected occupancy would be the equivalent of 1,211,565 square feet of office space, which is virtually the same amount of office space studied for transportation impacts in the MEPA/Article 80 record. Consistent with that estimate, the Institute of Transportation Engineers' ("ITE") trip generation rates for a research center (Land Use Code 760) are approximately 70% of those for general office use (Land Use Code 710).

While estimated trip generation for the office/laboratory space would not materially change results from the previous analysis related to office use alone, the project's use reallocation would reduce overall project trip generation due to the reductions in the magnitude of hotel and residential uses. Using ITE daily trip generation rates for high-rise condominiums (Land Use Code 232) and urban hotels (Land Use Code 310), daily person trips to Fan Pier would decrease by approximately 4,190 (i.e., roughly 8%); this is the equivalent of a reduction in vehicle trips of approximately 1,271.

Similarly, the use reallocation will somewhat reduce demand for on-site parking. The following table presents the assumed parking demand for the various uses contemplated for the initial project and reflected in the MEPA/Article 80 record:

Use	Parking Demand
Hotel	0.65/1000 sf
Office	1.17/1000 sf
Residential	1.5/unit (condo)
Retail	0.82/1000 sf

Based on these ratios, the MEPA/Article 80 study of shared parking resulted in the following estimates for parking demand: 1,431 spaces for office use; 186 spaces for hotel use; and 744 spaces for residential use.

With the use reallocation, the aggregate office/laboratory space will generate the same or lesser demand for parking (since laboratory space has a substantially lower occupancy rate). Furthermore, parking demand from the hotel and residential uses will decrease by approximately 172 and 112 spaces, respectively.3 Since office use

3 The reduction in residential space demand assumes that all on-site units are market units.

generates the most intense demand for parking, the project will provide parking that is sufficient for all planned uses even if the area devoted to office space is greater than the mid-point assumed in this analysis.

Water and Sewerage

Project engineers calculated sewerage flow from Fan Pier using the design flows specified in Title V of the State Sanitary Code (310 CMR 15.203). While Title V defines design flows for office, hotel, and residential uses, it does not specify a design flow for laboratory use. For office space, the Title V flow rate used in the MEPA/Article 80 record was 75 gallons-per-day (gpd) per 1,000 square feet; this rate generated an estimated sewerage flow of 91,754 gpd for the office use. In the absence of state guidance for laboratory space, engineering data from other laboratories and input from potential occupants have been used to estimate a design flow of 125 gpd per 1,000 square feet. When sewerage flow is calculated for the reallocated uses, the increased sewerage from office/laboratory space is more than offset by reductions in hotel and residential flows. This information is included in the following table:

Use	Original Flow (gpd)	New Flow (gpd)	Change in Flow (gpd)
Office	91,820	63,647	(28,173)
Laboratory	0	90,734	90,734
Hotel	71,500	19,250	(52,250)
Residential	148,500	132,000	(16,080)
Retail	6,725	8,750	2,025
Total	*318,545*	*314,381*	*(4,164)*

Safety Standards

The proponent is committed to promoting the economic and environmental health, well-being, and safety of the community, including the residential community on Fan Pier. As such, any bioresearch laboratory constructed on Fan Pier will meet the safety standards applicable to facility-specific activities.

The U.S. Centers for Disease Control and Prevention ("CDC") and National Institutes of Health ("NIH") have specified four levels of precaution that are necessary for laboratory work with biological agents. These levels are referred to as Biosafety Levels ("BSL") 1 through 4, and laboratories are designed to accommodate the precautions for personnel and the environment that are required for each level. The most basic level of precaution, BSL-1, is typically appropriate for "undergraduate and secondary educational training and teaching laboratories," or for laboratories dealing with agents that are "not known to consistently cause disease in healthy adult humans," while BSL-2 procedures are required for work involving agents of "moderate potential hazard," for which immunization or antibiotic treatment is nonetheless available. These are laboratories which require precautions for the safety of workers, but do not pose a public health risk.4

The proponent anticipates that research activity conducted on Fan Pier will only pertain to BSL 1 or 2, which is comparable to many major medical schools and hospitals across the United States. Any BSL-2 facilities would be built to containment standards and the requirements defined in the Biosafety in Microbiological and Biomedical Laboratories, Fifth Edition5. As with other structures on Fan Pier, any laboratory space will meet current building codes and standards, and will be designed and constructed in accordance with applicable wind and seismic codes.

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4 In contrast, BSL-3 laboratories contain agents that can cause serious or deadly disease through inhalation route exposure and BSL-4 laboratories involve "dangerous and exotic agents that pose a high individual risk of life-threatening disease, which may be transmitted via the aerosol route and for which there is no available vaccine or therapy." These are laboratories which could cause the spread of disease, and could therefore constitute a public health risk. "

5 U.S. Department of Health and Human Services. 2007. Biosafety in Microbiological and Biomedical Laboratories (BMBL). Centers for Disease Control and Prevention and National Institutes of Health (NIH). 5th Edition, February. http://www.cdc.gov/OD/ohs/biosfty/bmbl5/bmbl5toc.htm.

While BSL-1 standards are applicable to laboratories using agents that pose minimal risk, BSL-2 standards are more stringent in three important ways: (1) laboratory personnel will be specifically trained to handle pathogenic agents and will be supervised by scientists competent in handling and working with infectious agents; (2) laboratory access will be restricted; and (3) Biological Safety Cabinets (BSCs) or other physical containment equipment will be used for all procedures that could potentially create infectious aerosols or splashes.

CDC and NIH requirements for BSL-2 facilities are attached to this request. In addition to standard microbiological practices, BSL-2 facilities must employ a number of special practices to maintain health and safety standards. Any BSL-2 bioresearch facility that locates at the project site will adhere to these requirements. CDC and NIH also identify certain safety equipment that BSL-2 facilities must employ as primary barriers and personal protective equipment; laboratory facilities must also contain secondary barriers such as self-closing doors, sanitary/safety infrastructure, and a design that allows for decontamination. All of these standards are contained in the attached document and will be strictly observed.

Both the CDC and the Boston Public Health Commission ("BPHC) draw a clear distinction between the research conducted in BSL-1 and BSL-2 facilities from the potentially dangerous research conducted in BSL-3 and BSL-4 facilities. CDC regulations require "handwashing and waste decontamination facilities" in BSL-2 laboratories, but provide that "[a]t BSL-3, more emphasis is placed on primary and secondary barriers to protect personnel in contiguous areas, the community, and the environment..." BPHC regulations draw an even clearer distinction, defining a "laboratory" as "a room or rooms which is or are used primarily for biological research.... in which any agent is used at biosafety levels three and four..."[6] Those regulations and BPHC Guidelines for implementing the regulations provide extensive licensing, inspection, and operational requirements for BSL-3 and BSL-4 facilities but do not seek to regulate BSL-1 and BSL-2 facilities at all.

Accordingly, the proponent believes that including BSL-1 or BSL-2 laboratory use among the allowed uses for the project represents an immaterial change in the overall project and does not require the filing of a Notice of Project Change.

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[6] BPHC Biological Laboratory Regulations, September 19, 2006, Section 1.00(o)

We appreciate your review of this request for an Advisory Opinion, and respectfully request that you concur with our findings that this change is insignificant in terms of environmental consequences does not require the filing of a Notice of Project Change

Sincerely,

EPSILON ASSOCIATES, INC.

Peggy Briggs

Margaret B. Briggs
Managing Principal

cc: Myrna Putziger, The Fallon Company

Attachments:

A. Secretary's most recent Certificate on this project
B. Laboratory Biosafety Level 2 Criteria (Centers for Disease Control and Prevention and the National Institutes of Health)

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September 14, 2001

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS
ON THE
FINAL ENVIRONMENTAL IMPACT REPORT

PROJECT NAME	:	The Fan Pier Development
PROJECT MUNICIPALITY	:	Boston
PROJECT WATERSHED	:	Boston Harbor
EOEA NUMBER	:	12083
PROJECT PROPONENT	:	The Fan Pier Land Company c/o Spaulding & Slye Colliers
DATE NOTICED IN MONITOR	:	August 8, 2001

As Secretary of Environmental Affairs, I hereby determine that the Final Environmental Impact Report (FEIR) submitted on this project **adequately and properly complies** with the Massachusetts Environmental Policy Act (MEPA, M.G.L. c. 30, ss. 61-62H) and with its implementing regulations (301 CMR 11.00).

Over the past year, my office and the Department of Environmental Protection (DEP) have worked closely with the City and the proponent to make very significant changes in the Fan Pier project, enhancing the environmental benefits it will offer the public. I want to express my appreciation to Mayor Thomas M. Menino, Boston Redevelopment Authority (BRA) Director Mark Maloney, BRA planner Linda Haar, and their staffs for all of their efforts. The project now complies with the requirements of the Municipal Harbor Plan (MHP) that I approved last December. The total density of the project has been reduced by 12%, from 3.3 million to 2.9 million square feet. Maximum building heights have been lowered by up to 50 feet, lessening wind and shadow impacts on public waterfront activities. Buildings will be set further back from the water, and the Public Green has doubled in size, to two acres: comparable to Post Office Square. Over 56% of the total project site will now be open space, and over 40% will be parks, plazas, and other pedestrian-friendly spaces -- far in excess of the baseline regulatory standards.

47,000 square feet of civic facilities have been added to the project, in the form of the Harbor Islands Gateway facility and the Multi-Cultural Family Center. These additional parks and civic uses will turn the site into a true public destination. These changes embody the broad policy goals of Chapter 91, to protect public trust rights to waterfront access.

The MEPA review of this and other projects has also further a coordinated approach to transportation issues. Last September, along with Transportation Secretary Kevin Sullivan and the City, I convened the South Boston Transportation Summit. Our mutual goal was to ensure high-quality, environmentally sustainable transportation access to the Fan Pier and other waterfront projects. Significant steps have been taken since then:

- The state transportation agencies have signed a legally binding Consent Order that commits them to fund and construct the full Silver Line, extending to Chinatown, the South End, and Roxbury, by 2008. This will ensure high-quality transit service to the South Boston waterfront from all of Boston and the neighboring communities.
- Massport has agreed, as part of MEPA review of the Commonwealth Flats master plan, to study the feasibility of grade separating the Silver Line at D Street, to ensure that no bottleneck ensues.
- The MEPA review of the South Station air-rights has focused attention on the need to protect and expand the rail capacity of the station, which is a major transit gateway to the waterfront, as well as to downtown Boston.
- The Fan Pier, along with other landowners, has developed an equitable method for identifying future shortfalls in district-wide transit capacity, and allocating each party's fair-share responsibility for closing any potential gap.
- DEP is developing recommendations for a harbor-wide water transportation system. All projects receiving Chapter 91 licenses, including the Fan Pier, will share in the costs of building and operating that system. The Fan Pier Cove will serve as one of the two major water transportation hubs in South Boston.
- The Seaport Transportation Management Association (TMA) has taken on a leadership role in coordinating the efforts of private landowners into a district-wide system of transportation demand management.

Taken together, these measures show the project's consistency with the smart growth goals of the Community Preservation Initiative and Executive Order 385 (Planning for Growth), which favor the reuse of previously developed sites that are well-served by public infrastructure.

Project Description

As described in the FEIR, the Fan Pier Development will include approximately 2.927 million square feet of hotel, residential, office and retail development and 107,000 square feet of civic uses on an approximately 14.9 acre site on the South Boston Waterfront. The site is currently a paved parking lot, containing approximately 1,650 spaces. The project site also includes about six acres of water in the Fan Pier Cove. Nine buildings are proposed, ranging in height from about 175 feet to 244 feet. Proposed new uses include 1,223,000 square feet of office space, 675 residential units (1,090,000 square feet), 650 hotel rooms (475,000 square feet), and

134,420 square feet of retail space. Two underground garages with a total of 2,285 parking spaces, public open space, surface streets, docks, boardwalks, a floating breakwater/fishing pier, and a site for a new building for the Institute of Contemporary Art (ICA) also are planned.

Jurisdiction / Joint Review

The project is undergoing MEPA review and requires the preparation of a mandatory EIR pursuant to Section 11.03 (3) (a) 5 of the MEPA regulations, because it involves new non-water dependent use of one or more acres of tidelands and requires a Chapter 91 license. It will need a sewer connection permit, Water Quality Certification, air quality approval and a construction dewatering permit from DEP, approval from the Executive Office of Transportation and Construction to build on a railroad right-of-way, and Federal Consistency Certification from the Massachusetts Coastal Zone Management Office. It also will be reviewed by the Army Corps of Engineers, the Federal Aviation Administration, and the EPA.

MEPA review of this project is being coordinated with review by the Boston Redevelopment Authority (BRA). The FEIR has also been submitted as a Final Project Impact Report under Article 80 of the Boston Zoning Code. The project will also require approval by the Boston Zoning Commission as a Planned Development Area.

Chapter 91 and Municipal Harbor Plan (MHP)

As I anticipated in the DEIR certificate, the MHP process has provided an effective forum for determining the extent of allowable substitutions from the DEP Waterways Regulations, 310 CMR 9.00, and the offsetting public benefits to be required. The MHP decision required certain fixed offsets to be provided on the Fan Pier site. Other offsets were expressed in terms of performance standards, with the offsets to be defined by the proponent as project design progressed. A formula contained in the MHP (and modified in certain respects by my decision) allows impacts arising from height substitutions to be quantified, and the appropriate type and level of offsets to be determined.

The FEIR provides the appropriate level of analysis for this stage of project design. The analysis of shadow impacts takes a "worst case" approach, analyzing the impacts of the maximum potential building envelope for each building. Final building designs should not exceed these impacts, and may well produce lower levels of impacts. Even under this worst-case analysis, the reductions in building heights and total density required under the MHP decision have reduced the total area affected by shadows by one-third, from 253,000 s.f. to 162,000 s.f., compared with the impacts described in the City's initial MHP submission.

The FEIR provides the fixed offsets required under the MHP decision. These include one acre of public open space over and beyond the baseline Chapter 91 requirements, strict limits on the area of the site devoted to streets and surface parking, public access to the breakwater, and dedication of site J for a civic use (the ICA). The configuration of streets and open spaces on the

site has been confirmed, consistent with the MHP and my decision. These fixed offsets exceed 90% of the total offset requirement under the MHP formula. The balance of the offsets will be provided in the form of water transportation benefits above baseline, and/or improvements to water-related public access within the Boston Harbor Islands National Park Area. These will be finalized during the licensing process.

In my MHP Decision, I called on the City to begin expeditiously its commitment to a civic and cultural uses master planning process for the South Boston waterfront and the Fort Point Channel. Although the process is not a precondition of Fan Pier licensing, because a full range of civic facilities for the site had already been identified during the MHP process, the intent was to aid in the programming of the Harbor Islands Gateway and Multi-Cultural Family Center. I trust, therefore, that a broadly inclusive master planning process will start in the near future.

Water Transportation

Water transportation benefits, including both capital improvements and operating subsidies, will be central both to the baseline Chapter 91 licensing of the project, and to the full complement of offsets. This certificate describes below how DEP is developing a harbor-wide approach to water transportation which will apply to this and other projects.

Project Phasing

Because of the size of this project, it will necessarily be licensed and constructed in phases. DEP's comment letter proposes a procedure which includes the issuance of a master written determination, to be followed by individual licenses for each building. This approach will allow the confirmation of the precise extent of impacts and offsets, based upon final building designs. Regardless of which portion of the project is developed first, the FEIR has committed to creating major public benefits as part of the initial phase. This will include a continuous Harborwalk, the water transportation dock and ticketing facility, and two-thirds of the Public Green. Phasing commitments should be finalized in the licensing process, in a manner that minimizes public disruptions and maximizes public use and enjoyment of tidelands at all intermediate phases of development.

Programming, Management, and Enforceability

The FEIR contains a conceptual approach to the long-term stewardship of public spaces and facilities on the site, including the programming and management of the project's open spaces, civic facilities, docks, and water sheets. The comment letters support the proponent's proposal to create a Friends of Fan Pier advisory committee. The implementation of these measures will be refined and finalized during the licensing process, when issues such as the scheduling of street closures for pedestrian use will be addressed. The licensing process will also define the precise legal mechanism by which use of the interior spaces slated for civic and cultural use will be assured in perpetuity.

Transportation

In the DEIR certificate I called for the development of a unified transportation strategy for the South Boston waterfront, to address concerns over the cumulative impacts of this and other projects. Such a strategy is, by necessity, the composite of many different actions undertaken by both public agencies and private parties. The first step in developing the unified strategy was the South Boston Transportation Summit, which I convened last September, together with Transportation Secretary Kevin Sullivan, MBTA General Manager Robert Prince, BRA Director Mark Mahoney, and Boston Transportation Department (BTD) Commissioner Andrea D'Amato.

In preparation for the summit, EOEA's independent transportation consultant reviewed the BTD's comprehensive *South Boston Transportation Study*, which identified current and future transit capacity measures and a range of potential additional capacity enhancements. EOEA's consultant also updated district-wide land use projections, to supersede the now-outdated "Green Book," and it developed a precedent-setting methodology that concentrates on peak-hour transit capacity, and not on roadways, as the appropriate focus of transportation analysis and impact mitigation in an urban area such as this. As I anticipated, this work has provided the basis for a more informed MEPA review of district-wide transportation impacts involving this and other projects in the waterfront area.

Transit Infrastructure

The cornerstone of transportation access to the waterfront is public investment in the transit infrastructure. As noted above, the state transportation agencies have signed a legally binding Consent Order that commits them to fund and construct the full Silver Line, extending to Chinatown, the South End, and Roxbury, by 2008. This will ensure high-quality transit service to the South Boston waterfront from all of Boston and the neighboring communities. In addition, Massport has agreed, as part of MEPA review of the Commonwealth Flats master plan, to study the feasibility of grade separating the Silver Line at D Street, to ensure that no bottleneck ensues. Finally, the MEPA review of the South Station air-rights has focused attention on the need to protect and expand the rail capacity of the station, which is a major transit gateway to the waterfront, as well as to downtown Boston. All three of these measures are key elements in the unified strategy for the waterfront.

Allocation of Transit Capacity

The FEIR, like the Commonwealth Flats FEIR that I reviewed earlier this year, embodies one of the key goals of the summit: defining an equitable method of allocating responsibility among various private parties for closing any potential future gap between transit capacity and demand. I am particularly pleased that landowners are committing to their fair share of a district-wide approach to mitigation, regardless of whether their own projects are completed early or late in the development cycle. In this case, the Fan Pier has committed to providing additional capacity, in the form of water transportation or ground shuttles, at a level of up to 300 peak hour

seats.[1]

Water Transportation

Many comments on the DEIR and at the Transportation Summit expressed enthusiastic support for increased water transportation. I fully endorse those comments. Not only does water transportation remove traffic from highways and local streets, and offer an alternative to transit; it also exposes passengers to the sights and the sounds, the wind and the salt, of Boston Harbor, our region's greatest natural resource.

As I requested in the MHP decision, DEP has been developing a consistent approach to determining the baseline level of water transportation commitment that will be required for the Chapter 91 licensing of Boston Harbor projects. In the case of the Fan Pier, the state agencies agree with the proponent that the Fan Pier Cove is the appropriate location for a major water transportation hub. In addition to constructing the dock, I anticipate that the proponent will provide significant operating subsidies and in-kind support for berthing discounts and infrastructure maintenance. Adjoining licensed projects will also contribute to the district-wide water transportation system on a level basis, regardless of whether or not facilities are located on their own sites.

Parking

Constraining parking supply is a key action in ensuring a high transit mode share. The FEIR describes a project-wide parking ratio of 0.76 spaces / 1000 s.f. – a level comparable to that of downtown Boston projects, and far below typical suburban levels (which often exceed 4 spaces / 1000 s.f.).[2] The City is currently in the process of submitting its South Boston parking freeze plan and inventory to DEP for review and approval, as required under the Clean Air Act. I strongly urge that the final Freeze Plan should set district-wide standards for constrained parking ratios, at levels comparable to those proposed for the Fan Pier and Commonwealth Flats. To further support transit use, the final Section 61 Finding and the TAPA should define allowable parking ratios at interim phases of development, like those proposed in the Commonwealth Flats FEIR (where the maximum interim ratio is capped at 2.0 spaces / 1000 s.f.).

Transportation Demand Management

Fan Pier Land Company has joined the Seaport TMA, and it will work with that group to implement a number of transportation demand management measures. The proponent committed to requiring future developers, owners, and employers in the proposed complex to adhere to certain TDM measures, and to encourage additional ones. As noted by DEP in its comment letter,

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1 I note discrepancies among filings in the treatment of capacity on the Massport-funded AITC, over and beyond airport trips. In future submissions, parties should presume that 50% of non-airport capacity should be treated as district-wide public transit, to be allocated prorata, and the balance should be treated as additional capacity provided by Commonwealth Flats as project-specific mitigation.

2 The Commonwealth Flats FEIR sets a comparably restrained parking ratio of 0.72 spaces / 1000 s.f. By contrast, the ENF for Pier 4 proposed a much higher ratio of 1.6 spaces / 1000 s.f.

many of the measures listed as "encouraged" would have the greatest potential benefits, and I concur with its recommendation that those measures be added to the "required" list.

Future Monitoring and Mitigation

The FEIR commits the proponent to providing additional transit capacity at future buildout stages, at the point when it is required to mitigate district-wide conditions. As part of the final Section 61 Finding and the TAPA, the proponent shall detail the specifics of a monitoring program to confirm how actual transportation conditions (both roadway and transit) are performing, compared with projections. Monitoring reports shall also compare aggregate transit capacity with demand. Each report shall determine whether additional capacity is required, and if so, it shall propose the most effective potential measure or measures. To ensure future public input into this process, the proponent shall file periodic monitoring reports with state and local agencies, and a notice of the availability of the reports will be published in the *Environmental Monitor*. Reports shall be filed when individual Chapter 91 licenses have been filed for an aggregate of approximately one-third, two-thirds, and full buildout, respectively, or whenever three years has elapsed since the prior license filing. The final Section 61 Finding and the TAPA shall also clarify the legally enforceable conditions to be attached to applicable permits, to ensure that the proposed mitigations are implemented in a timely fashion.

It has been suggested that such future monitoring and identification of mitigation might best be done on a coordinated district-wide basis, rather than project-by-project. Clearly, the BTD and/or the BRA, perhaps in conjunction with the Seaport TMA, would be the most effective entities for creating such a system.

Other Issues

Air Quality

The results of a revised air quality analysis for carbon monoxide (CO) was reported in the FEIR. Based on that study, there will be no exceedances of national ambient air quality standards for CO for either the one-hour or eight-hour build scenarios.

Construction Management

The proponent has agreed to participate in the Voluntary Diesel Retrofit Program (VDRP), and will include VDRP measures in written project specifications. I applaud the proponent for making this commitment, and request it to continue to work with DEP to examine additional diesel reduction measures that can be taken, including requiring contractors to use on-road low sulfur diesel.

Wastewater

As part of the EIR, the proponent studied the impacts of future development in the area on the Boston Water and Sewer Commission's (BWSC) water and wastewater infrastructure. The study concluded that a new sewer would be required along the proposed Congress Street

extension between D Street and Trilling Way to accommodate flows from the Fan Pier and Massport developments. That sewer will provide the collection system in the area with sufficient capacity to handle peak dry weather flows at the full build scenario. The BWSC expects that the Fan Pier Land Company and Massport will assist with the design and construction of the new sewer, and may also require them to implement further measures to reduce inflow and infiltration.

Water Quality

Stormwater Management. The BWSC intends to require the proponent to participate in the design and installation of a 42-inch storm drain on A Street. The extent of the proponent's role in that project will be determined during Sewer Use permitting by the City.

Dredging. The project includes dredging and confined aquatic disposal of approximately 9,800 cubic yards of material from an approximately 80,000 square foot area within the Fan Pier Cove. Plans for this work are still in a preliminary stage, and it is clear that much more information will need to be developed during the state and federal permitting processes. I expect that the proponent will work closely with DEP, the Coastal Zone Management Office and the Division of Marine Fisheries to expand the dredging/disposal alternatives analysis; develop design and construction details; produce a biological characterization of the areas to be dredged and filled; demonstrate that the proposed disposal method is environmentally sound; and propose a monitoring plan.

Historic Resources

In July 2000, MHC issued a finding that the project, as shown in the DEIR, would have "no adverse effect" on the adjacent Fort Point Channel Historic District. The proponent should keep MHC informed of changes in the project that have the potential to adversely affect historic resources. Plans for the tide pool feature now incorporate 140 feet of historic granite seawall that previously was to be removed. I anticipate that the proponent will continue to consult with the Boston Landmarks Commission on the details of the treatment of the historic seawalls.

Logan Airport

Massport now states that the current proposal appears to be consistent with the FAA's Terminal Instrument Procedures 40:1 slope for Runway 27. The proponent should submit new aeronautical studies to FAA as soon as possible, so that the federal review of this issue can proceed.

Mitigation Commitments / Section 61 Findings

The FEIR included proposed Section 61 Findings for all state permit areas. In accordance with Section 11.12 (5) (e) of the MEPA regulations, final Section 61 Findings must be forwarded by each permitting agency to the MEPA office, which will publish a Notice of Availability in the Environmental Monitor.

September 14, 2001
DATE

Bob Durand

Comments received :

U.S. Dept. of Justice, 8/6/01
South Boston Neighborhood House, 8/31/01
Local 26, 9/5/01
Massachusetts Convention Center Authority, 9/6/01
Goulston & Storrs, 9/6/01
DEP, 9/7/01
Alliance of Boston Neighborhoods, 9/7/01
Seaport TMA, 9/7/01
Massport, 9/7/01
Stephen H. Kaiser, 9/7/01
DEP/BWP, 9/7/01
Save the Harbor/ Save the Bay, 9/7/01
Institute of Contemporary Art, 9/7/01
Holland & Knight, 9/7/01
MCZM, 9/7/01
Steven Goldin, 9/7/01
The Boston Harbor Association, 9/7/01
Seaport Alliance for a Neighborhood Design (SAND), 9/7/01
Division of Marine Fisheries, 9/10/01
Boston Environment Department, 9/10/01
Boston Redevelopment Authority, 9/10/01
Boston Water and Sewer Commission, 9/11/01
Conservation Law Foundation, 9/01

ATTACHMENT B: Laboratory Biosafety Level Criteria – BSL-2

Centers for Disease Control and Prevention and National Institutes of Health

The Centers for Disease Control and Prevention (CDCP) and National Institutes of Health (NIH) identify standards for operations at microbiological and biomedical laboratories. These standards are defined in the *Biosafety in Microbiological and Biomedical Laboratories* (BMBL), Fifth Edition[1]. Since a biosafety level (BSL) 2 research laboratory is a new use for the project, the standards for this type of facility are included herein.[2]

A. Standard Microbiological Practices

1. The laboratory supervisor must enforce the institutional policies that control access to the laboratory.

2. Persons must wash their hands after working with potentially hazardous materials and before leaving the laboratory.

3. Eating, drinking, smoking, handling contact lenses, applying cosmetics, and storing food for human consumption must not be permitted in laboratory areas. Food must be stored outside the laboratory area in cabinets or refrigerators designated and used for this purpose.

4. Mouth pipetting is prohibited; mechanical pipetting devices must be used.

5. Policies for the safe handling of sharps, such as needles, scalpels, pipettes, and broken glassware, must be developed and implemented. Whenever practical, laboratory supervisors should adopt improved engineering and work practice controls that reduce risk of sharps injuries.

   Precautions, including those listed below, must always be taken with sharp items. These include:

   a. Careful management of needles and other sharps are of primary importance. Needles must not be bent, sheared, broken, recapped, removed from disposable syringes, or otherwise manipulated by hand before disposal.

   b. Used disposable needles and syringes must be carefully placed in conveniently located puncture-resistant containers used for sharps disposal.

   c. Non-disposable sharps must be placed in a hard-walled container for transport to a processing area for decontamination, preferably by autoclaving.

   d. Broken glassware must not be handled directly. Instead, it must be removed

[1] U.S. Department of Health and Human Services. 2007. Biosafety in Microbiological and Biomedical Laboratories (BMBL). Centers for Disease Control and Prevention and National Institutes of Health (NIH). 5th Edition, February.

[2] For the entire set of CDCP/NIH standards, visit: http://www.cdc.gov/OD/ohs/biosfty/bmbl5/bmbl5toc.htm.

using a brush and dustpan, tongs, or forceps. Plasticware should be substituted for glassware whenever possible.

6. Perform all procedures to minimize the creation of splashes and/or aerosols.

7. Decontaminate work surfaces after completion of work and after any spill or splash of potentially-infectious material with appropriate disinfectant.

8. Decontaminate all cultures, stocks, and other potentially infectious materials before disposal using an effective method. Depending on where the decontamination will be performed, the following methods should be used prior to transport:

    a. Materials to be decontaminated outside of the immediate laboratory must be placed in a durable, leak-proof container and secured for transport.

    b. Materials to be removed from the facility for decontamination must be packed in accordance with applicable local, state, and federal regulations.

9. A sign incorporating the universal biohazard symbol must be posted at the entrance to the laboratory when infectious agents are present. Posted information must include: the laboratory's biosafety level, the supervisor's name (or other responsible personnel), telephone number, and required procedures for entering and exiting the laboratory. Agent information should be posted in accordance with the institutional policy.

10. An effective integrated pest management program is required. See Appendix G.

11. The laboratory supervisor must ensure that laboratory personnel receive appropriate training regarding their duties, the necessary precautions to prevent exposures, and exposure evaluation procedures. Personnel must receive annual updates or additional training when procedural or policy changes occur. Personal health status may impact an individual's susceptibility to infection, ability to receive immunizations or prophylactic interventions. Therefore, all laboratory personnel and particularly women of child-bearing age should be provided with information regarding immune competence and conditions that may predispose them to infection. Individuals having these conditions should be encouraged to self-identify to the institution's healthcare provider for appropriate counseling and guidance.

B. Special Practices

1. All persons entering the laboratory must be advised of the potential hazards and meet specific entry/exit requirements.

2. Laboratory personnel must be provided medical surveillance and offered appropriate immunizations for agents handled or potentially present in the laboratory.

3. Each institution must establish policies and procedures describing the collection and storage of serum samples from at-risk personnel.

4. A laboratory-specific biosafety manual must be prepared and adopted as policy. The

biosafety manual must be available and accessible.

5. The laboratory supervisor must ensure that laboratory personnel demonstrate proficiency in standard and special microbiological practices before working with BSL-2 agents.

6. Potentially infectious materials must be placed in a durable, leak proof container during collection, handling, processing, storage, or transport within a facility.

7. Laboratory equipment should be routinely decontaminated, as well as after spills, splashes, or other potential contamination.

    a. Spills involving infectious materials must be contained, decontaminated, and cleaned up by staff properly trained and equipped to work with infectious material.

    b. Equipment must be decontaminated before repair, maintenance, or removal from the laboratory.

8. Incidents that may result in exposure to infectious materials must be immediately evaluated and treated according to procedures described in the laboratory biosafety safety manual. All such incidents must be reported to the laboratory supervisor. Medical evaluation, surveillance, and treatment should be provided and appropriate records maintained.

9. Animals and plants not associated with the work being performed must not be permitted in the laboratory.

10. All procedures involving the manipulation of infectious materials that may generate an aerosol should be conducted within a Biological Safety Cabinet (BSC) or other physical containment devices.

C. Safety Equipment (Primary Barriers and Personal Protective Equipment)

1. Properly maintained BSCs (preferably Class II), and other appropriate personal protective equipment, or other physical containment devices must be used whenever:

    a. Procedures with a potential for creating infectious aerosols or splashes are conducted. These may include pipetting, centrifuging, grinding, blending, shaking, mixing, sonicating, opening containers of infectious materials, inoculating animals intranasally, and harvesting infected tissues from animals or eggs.

    b. High concentrations or large volumes of infectious agents are used. Such materials may be centrifuged in the open laboratory using sealed rotor heads or centrifuge safety cups.

2. Protective laboratory coats, gowns, smocks, or uniforms designated for laboratory use must be worn while working with hazardous materials. Remove protective clothing

before leaving for non-laboratory areas (e.g., cafeteria, library, administrative offices). Dispose of protective clothing appropriately, or deposit it for laundering by the institution. It is recommended that laboratory clothing not be taken home.

3. Eye and face protection (goggles, mark, face shield or other splatter guard) is used for anticipated splashes or sprays of infectious or other hazardous materials when the microorganisms must be handled outside the BSC or containment device. Eye and face protection must be disposed of with other contaminated laboratory waste or decontaminated before reuse. Persons who wear contact lenses in laboratories should also wear eye protection.

4. Gloves must be worn to protect hands from exposure to hazardous materials. Glove selection should be based on an appropriate risk assessment. Alternatives to latex gloves should be available. Gloves must not be worn outside the laboratory. In addition, BSL-2 laboratory workers should:

    a. Change gloves when contaminated, integrity has been compromised, or when otherwise necessary. Wear two pairs of gloves when appropriate.

    b. Remove gloves and wash hands when work with hazardous materials has been completed and before leaving the laboratory.

    c. Do not wash or reuse disposable gloves. Dispose of used gloves with other contaminated laboratory waste. Hand washing protocols must be rigorously followed.

5. Eye, face and respiratory protection should be used in rooms containing infected animals as determined by the risk assessment.

D. Laboratory Facilities (Secondary Barriers)

1. Laboratory doors should be self-closing and have locks in accordance with the institutional policies.

2. Laboratories must have a sink for hand washing. The sink may be manually, hands-free, or automatically operated. It should be located near the exit door.

3. The laboratory should be designed so that it can be easily cleaned and decontaminated. Carpets and rugs in laboratories are not permitted.

4. Laboratory furniture must be capable of supporting anticipated loads and uses. Spaces between benches, cabinets, and equipment should be accessible for cleaning.

    a. Bench tops must be impervious to water and resistant to heat, organic solvents, acids, alkalis, and other chemicals.

    b. Chairs used in laboratory work must be covered with a non-porous material that can be easily cleaned and decontaminated with appropriate disinfectant.

5. Laboratory windows that open to the exterior are not recommended. However, if a laboratory does have windows that open to the exterior, they must be fitted with screens.

6. BSCs must be installed so that fluctuations of room air supply and exhaust do not interfere with proper operations. BSCs should be located away from doors, windows that can be opened, heavily traveled laboratory areas, and other possible airflow disruptions.

7. Vacuum lines should be protected with High Efficiency Particulate Air (HEPA) filters, or their equivalent. Filters must be replaced as needed. Liquid disinfectant traps may be required.

8. An eyewash station must be readily available.

9. There are no specific requirements on ventilation systems. However, planning of new facilities should consider mechanical ventilation systems that provide an inward flow of air without recirculation to spaces outside of the laboratory.

10. HEPA filtered exhaust air from a Class II BSC can be safely recirculated back into the laboratory environment if the cabinet is tested and certified at least annually and operated according to manufacturer's recommendations. BSCs can also be connected to the laboratory exhaust system by either a thimble (canopy) connection or a direct (hard) connection. Provisions to assure proper safety cabinet performance and air system operation must be verified.

11. A method for decontaminating all laboratory wastes should be available in the facility (e.g., autoclave, chemical disinfection, incineration, or other validated decontamination method).