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April 7, 1997

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BY OVERNIGHT COURIER

Ms. Susan L. Hugo
Sr. Hazardous Materials Specialist
Alameda County Environmental Health Services
1131 Harbor Bay Parkway
Suite 250
Alameda, CA 94502-6577

Re: Powell Street Plaza, Emeryville, CA

Dear Ms. Hugo:

As you know, our client Aetna Real Estate Associates, L.P. ("Aetna") is the present owner of the Powell Street Plaza property, having purchased it from Eastshore Partners in 1990. That Eastshore partnership has since disbanded, but its constituents (including The Martin Group) still exist. Pursuant to provisions in the 1990 Purchase and Sale Agreement, the former Eastshore Partners (hereafter, "Eastshore") have been investigating the Plaza property and responding to the concerns of your agency and the Regional Water Quality Control Board, which were the subject of the March 15, 1992 "Notice of Requirement to Reimburse" sent to Aetna and The Martin Group. Aetna has received and reviewed the Risk Assessment and Long-Term Management Strategy for Petroleum Hydrocarbons, Powell Street Plaza and Shellmound III, Emeryville, California, Geomatrix Consultants, Inc. (January 1997) (the "Risk Assessment"), which was prepared on behalf of Eastshore.

Technical concerns with the Risk Assessment are identified in the enclosed letter from Dames & Moore (Aetna's consultant) and are being discussed directly between Dames & Moore and Geomatrix; we understand they will be considered by Geomatrix in the context of possible revisions to the Risk Assessment. The purpose of this letter is to call your attention to several legal concerns.

First, Aetna is concerned that Eastshore is asking you to waive Eastshore's obligation to recover free product at the property. Although it is not clear from the Risk Assessment whether Eastshore intends to seek closure of the site pursuant to the

Containment Zone Policy or not, free product recovery is mandatory in either event. This is a real concern to Aetna because free product has from time to time been observed in certain below-grade utility boxes at the property.

If Eastshore is not proceeding under the Policy, it is instead governed by the State Water Resources Control Board's Chapter 16 Underground Storage Tank Regulations, Cal. Code Regs. § 2610 et seq. (Contamination at the Plaza originated from underground storage tanks operated before Aetna's acquisition of the property by Pacific Intermountain Express, a trucking concern that has since gone bankrupt.) Section 2655(a) of the regulations provide as follows:

> (a) At sites where investigations made pursuant to section 2652 indicate the presence of free product, the owner or operator shall comply with requirements of this section. The owner or operator shall remove free product to the maximum extent practicable, as determined by the local agency, while continuing to take any actions required under sections 2652 through 2654.

(Emphasis added.) Similarly, Section H.2.b of State Board Resolution No. 92-49 (as amended Oct. 2, 1996) establishes as one of the prerequisites for any containment zone designation that: "[f]loating free product must be removed to the extent practicable."

Although Section 5.0 of the Risk Assessment discusses free product, there is no evaluation of the practicability of removing the free product that apparently remains at the Site.

Second, the Risk Assessment assumes that there will be new construction at the Shellmound III property, but that there will be no land use changes at the Powell Street Plaza, and acknowledges that "[i]f the proposed current uses for the Sites change in the future, further evaluation of potential risk to exposure to chemicals in the separate-phase material or dissolved in groundwater may be warranted." (Risk Assessment at p. 44). As you know, for the many reasons stated there, we wrote you on June 26, 1995 that "Aetna strongly disagrees that a deed restriction should be placed on the Property." (A copy of the June 26, 1995 letter is enclosed for your ready reference as Ex. 1.) Aetna's opposition to a deed restriction was reiterated in a January 16, 1996 letter to the State Board by way of comments on the draft Containment Zone Policy (copy enclosed as Ex. 2). In a rebuttal letter dated January 31, 1996 from Eastshore's attorneys (copy enclosed as Ex. 3), they argued that the consent of the property owner (here, Aetna) should not be required as a condition of imposing a use restriction, and confirmed that Eastshore's risk

assessment approach to the property will necessarily require limitations upon Aetna's property-owner rights.

Apparently, the State Board agreed with Aetna's position (also taken by other commentors), because Section III.H.6 of Resolution No. 92-49 (as amended Oct. 2 1996) provides:

> A containment zone shall be implemented only with the written agreement of all fee interest owners of the parcel(s) of property containing the containment zone. Exceptions may be allowed by the Regional Water Board where opposition is found to be unreasonable. In such cases, the Regional Water Board may use the authority of WC Section 13267 to assure access to property overlying the containment zone.

Because Section 13267 of the Water Code merely authorizes the regional boards to require access to property, it is difficult to see how that provision could form the legal basis for an involuntary deed restriction. In any event, as explained in our June 26, 1995 letter to you, Aetna's opposition to a deed restriction in this instance is far from unreasonable. In addition, when the property is ultimately redeveloped (as it inevitably will someday), residual contamination at the site will necessitate incremental expenditures (for disposal of excavated soil, worker health and safety and the like) which should not fairly be borne by Aetna.

We hope you will consider these views in evaluating the Risk Assessment and in responding to Eastshore and Geomatrix about it.

Very truly yours,

Barry S. Sandals

Enclosure
cc (w/encl.): Stephen Morse, RWQCB
Diane Mims, RWQCB
Sam Arigala, RWQCB
Ravi Arulanantham, RWQCB
David Cooke, Esq.

sf-280593

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April 7, 1997
14707-159-179

Mr. Barry S. Sandals
Morrison & Foerster, LLP
425 Market Street
San Francisco, California 94105-2482

Subject: **Final Comments to Draft Report**
Risk Assessment and Long Term Management
Strategy for Petroleum Hydrocarbons
Powell Street Plaza
Emeryville, California

Dear Mr. Sandals,

As you are aware, on March 21, 1997, Dames & Moore transmitted comments on the Draft Report, Risk Assessment and Long Term Management Strategy for Petroleum Hydrocarbons, Powell Street Plaza and Shellmound III, Emeryville, California (Geomatrix Consultants, January 1997) (the "Risk Assessment") to Geomatrix. On March 31, 1997, we discussed our comments with Mr. Jamie Tull and Ms. Ann Holbrow of Geomatrix by telephone. As a result of our discussion, we understand that Geomatrix will address the following in the next revision of the report:

a. Clarify their understanding of the extent of the free phase.
b. Clarify the role of MW-3 in estimating the extent and volume of free phase.
c. Consider alternatives to calculating free phase volume based on information sent by D&M.
d. Clarify their understanding of the free phase removal efforts completed to date and their effectiveness. However, Geomatrix has declined our request that they evaluate the feasibility of recovering the remaining free product. They presumed the RWQCB would make that judgement.
e. They would clarify that the exposed worker scenario is addressed in Section 7.0.
f. They would make a statement that free product from MG-1 is representative of that on the Powell Street Plaza site.
g. They will not address residential scenarios unless directed by the agencies.
H. They will clarify that groundwater beneath the site is not a drinking water source and has no other beneficial uses other than recharge to the Bay.

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Based on our review of the Risk Assessment and our subsequent discussions, our final comments to the draft report are presented as Attachment 1 to this letter. If you have any questions regarding our comments, please call me at (408) 451-1125.

Very truly yours,
Dames & Moore, Inc.

Randolph C. Brandt, R.G.
Associate/Senior Hydrogeologist

Attachment 1 (4 Pages)

cc: Jeffrey Fraulino, Allegis
Jeffery Berry, Aetna

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ATTACHMENT 1
Dames & Moore Comments

Human Health Risk Assessment

General Comment #1 - Estimates of risks for the construction worker and maintenance worker scenarios are associated with a high degree of uncertainty due to the uncertainty associated with the exposure parameter assumptions. Unlike the residents and industrial workers, there are no standard default exposure assumptions for construction and maintenance workers which are universally accepted and which are certain to represent future conditions. Dames & Moore believes that the exposure parameters used in the analysis for the construction and maintenance workers are reasonable estimates based on best professional judgement of what may occur in the future. In the case of the construction worker and maintenance worker, one non-conservative emission model assumption was used which may potentially underestimate risks associated with worker exposures. The depth to contamination was assumed to be six feet, which was the shallowest depth to groundwater for undisturbed soil; however, if the construction workers and maintenance workers are excavating soil, the depth to contamination could be reasonably expected to be less than six feet. Assuming that the maintenance workers excavate soil to a depth of one foot above the groundwater table for a conservative 250 days/year, then the predicted air emissions would increase by a factor of six, and the excess cancer risk would be higher (i.e., approximately 8×10^{-6}). Even with this increase, the excess cancer risk is within the range of $1x10^{-4}$ to $1x10^{-6}$ typically considered acceptable by the EPA and is less than the State of California's Proposition 65 $1x10^{-5}$ risk level for worker notification. Therefore, no unacceptable risks are predicted even if the depth to contamination is one foot above groundwater (less than that used in the Geomatrix evaluation).

However, because groundwater has historically been shallow, and in fact free phase hydrocarbon has been observed in valve boxes, the risk assessment should also consider the scenario where the construction/maintenance workers are directly exposed to groundwater during construction activities at the site. Under this scenario, the exposure pathways would include inhalation of vapors (with no soil cover), dermal contact, and incidental ingestion of groundwater and free phase hydrocarbon.

General Comment #2 - The sampling methodology and the laboratory analytical data for BTEX was not presented, so Dames & Moore is unable to verify the concentrations and locations of detected levels. It is also our understanding that the sample of free phase hydrocarbon collected and tested for the Risk Assessment was collected from well MG-1 which is located on the Shellmound III property. The Risk Assessment does not state whether the sample is representative of that which is present under the Powell Street Plaza Site.

General Comment #3 - It is our opinion that there is still a high degree of uncertainty by the data presented in the report on the extent, thickness, mobility, and recoverability of free phase hydrocarbons. Based on our understanding of the site characterization data and the extent of the free phase hydrocarbon as depicted in Geomatrix's Figure 4, we would interpret the extent of the free phase hydrocarbons as being more wide spread. Specifically, we believe there is one contiguous area of free product which includes wells MG-1, MG-3, MW-3, MW-7 (now abandoned), and MW-13 as opposed to the two smaller areas presented on Figure 4. Geomatrix also attempts to estimate the volume of free phase hydrocarbon present in the southernmost area (represented by well MG-1) by using an approach proposed by De Pastrovich, et al. (1979). Our concern with this approach is twofold: 1) the volume of the northernmost area is not considered; and 2) the methodology is outdated. A more appropriate approach would be to use that of Lenhard and Parker (1990) or Beckett & Huntley (1994) to estimate total volume of free phase hydrocarbon remaining in the contiguous area described above.

General Comment #5 - While we agree that the mobility assessment suggests that migration to Temescal Creek is not likely, the Risk Assessment has not evaluated the "recoverability" of the residual free phase hydrocarbon still present under the Powell Street Plaza and Shellmound III properties. While Geomatrix's evaluation of the migration potential (Section 5.2 of the Risk Assessment) could be an indicator of the ability of the hydrocarbon to flow into a recovery well, various practical approaches to product recovery have not been adequately evaluated.

General Comment #6 - The Risk Assessment did not consider physical hazards associated with the residual free phase hydrocarbon. Specifically, free phase hydrocarbon has been observed floating on the water which accumulates in below grade sprinkler valve boxes and other below grade utility boxes. It is our opinion that the potential for fumes, fire, or explosion hazards and exposure to landscape workers who access the utility boxes should be considered.

General Comment #7 - The hydrogeological approach in Appendix B and C is appropriate; however no site-specific measurements of the conductivity were obtained. Permeability of the water bearing unit was derived from measurements taken at a site approximately 1/4 mile south and porosity values were taken from published literature. Based on the non-specific parameters selected the approach has a high degree of uncertainty; however, the data used could be interpreted to be generally conservative.

General Comment #8 - The methodology used to estimate the indoor air concentration is a screening level model based upon the combination of Farmer's model for vapor emissions and a box model for dilution into indoor air. The methodology used is not consistent with the approach recommended by the ASTM risk-based corrective action (RBCA) standard; however, the approach is generally accepted by the Department of Toxic Substances Control (DTSC) and Regional Water Quality Control Board (RWQCB) and is based on simplistic, conservative

models. The methodology to estimate outdoor air concentrations is similar, based upon the combination of Farmer's model for vapor emissions and a box model for dilution into outdoor air. The parameters used in the model (e.g., crack ratio, building exchange rates, wind speed, and height of mixing zone) were reasonable.

Specific Comments for Geomatrix Report-

1) The location of the former extraction trenches should be identified on Figure 2.
2) The direction of groundwater flow should be discussed in the text and an arrow added to Figure 2.
3) Because the LNAPL detected at the Shellmound III site is in close proximity to the East Bay MUD interceptor, the interceptor should be addressed as a potential conduit for migration of the free phase to Temescal Creek.
4) The basis for exclusion of future use of groundwater at the site (e.g.. non-potable due to salinity, insufficient yield, etc.) should be included in the report.
5) The risk assessment for emissions from free product is based upon a sample from the Shellmound III property. Text should be added to indicate that a sample from the source area was not obtained (due to physical limitations) and whether the product on the PSP site is expected to chemically similar to the product on the Shellmound III site.
6) The PES Reference for January 9, 1995 is missing.
7) Page 14. The filtering of the dissolved phase samples to remove sediments may also remove source-related PAHs, since most PAHs have relatively high organic carbon partition coefficients and tend to sorb to solids. The sorption tends to retard migration of the PAHs in groundwater, so the use of filtered samples to predict impacts from groundwater upon surface water is reasonable; however, the more conservative approach (which may be requested by the agencies) is to use the unfiltered results.
8) Page 26. If dermal exposure to chemicals in groundwater and to free product is considered a reasonable pathway of exposure for the construction/maintenance workers, then to be consistent the incidental ingestion should also be considered a reasonable pathway. The potential for exposure would not be "remote"(as in improbable), but the intake would presumably be very low because the workers are most likely to ingest the water when they wipe their wet hands across their mouth, and not by drinking the water directly or by swimming in it.
9) Page 32. The summing of hazard quotients for all chemicals, regardless of endpoint will only overestimate the potential for non-carcinogenic health effects if the chemicals have different endpoints and do not have synergistic effects.
10) Page D-1. No conversion factor is needed in the equation.
11) Page D-2. Darcy's Law should be corrected to Dalton's Law.
12) Page D-5. The mixing height used in the calculations for indoor air was 3.0 meters, not 3.75 meters as stated in the text.

13) Table D-1. The vapor pressures for volatile chemicals in free product should be presented. These vapor pressures are used in Table D-4.
14) Table D-1. The Henry's Law Constant for acenaphthylene is ten times higher than reported in the table. The value should be 1.6×10^{-4}. The diffusivity in air should be corrected to 0.0421 for acenaphthylene, 0.0324 for anthracene, 0.030 for fluoranthene, and 0.0272 for pyrene. The correct values for all chemicals except acenaphthylene were used in Tables D-2 and D-5 through D-7.
15) Tables D-4 and D-6. Due to errors in the diffusivity in air and Henry's Law Constant for acenaphthylene, the emission rate and indoor air concentration should be 100-fold higher than stated. This affects all tables which present air concentrations and hazards for acenaphthylene; however, since the hazard quotients for acenaphthylene are very low, it has no effect on the overall conclusions of the risk assessment.
16) Table 1. Footnotes 3 and 4 are missing.
17) Table 3. A footnote should be added that states that the groundwater concentrations are for filtered samples.
18) Table 8. The EPA Region IX PRG Table (US EPA, 1996a) does not have published toxicity criteria for acenaphthylene. The toxicity criteria in the table is the criteria for a different, but structurally similar chemical named acenaphthene. A footnote should be added to indicate that the toxicity criteria for acenaphthene was used as a surrogate for acenaphthylene.

Ecological Evaluation:

Comment #1 - Table 5-7 is not a evaluation of only the ecological risks since many of the water quality criteria are based on protection of humans consuming aquatic organisms. These human health criteria do, however, tend to be more conservative than the ecological criteria. It appears the most conservative of any health criteria was generally selected which may not be appropriate. However, since none of the modeled surface water concentrations exceeded the most conservative of any health criteria, the basic conclusion that the groundwater does not pose adverse health effects to aquatic species in Temescal Creek and the San Francisco Bay is reasonable based on the available data.

Comment #2 - The water quality value presented on Table 5-7 for xylenes is apparently referenced incorrectly, since there is no established ambient water quality criteria (AWQC) for xylenes. However, even performing a LC50 to maximum acceptable toxicant concentration (MATC) conversion (Suter 1993): Log(MATC) = 0.98 x Log(LC50) - 0.6 (g/L) for xylenes, conservatively yields a MATC value of 283 ug/L. This MATC value of 283 ug/L is greater than the modeled surface water concentration of 0.015 ug/L, which indicates that no adverse ecological risk from xylenes is predicted.