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October 28, 1997

Ms. Madhulla Logan
Hazardous Material Specialist
Alameda County Health Care Service
Environmental Protection
1131 Harbor Bay Parkway, #250
Alameda, California 94502-6577

Re: **Response to Comments, Risk Assessment for Property Located at
2099 Grand Avenue, Alameda, California**

Dear Ms. Logan:

Thank you for your comments in your October 16, 1996, letter in reference to the risk assessment conducted by SECOR International Incorporated (SECOR) at 2099 Grand Avenue in Alameda, California (the Site). We have revised the risk assessment keeping your concerns in mind. The following text reproduces your comments and provides a point-by-point response to the five issues raised in your letter.

I. Alameda County Comment No. 1:

Only results of recent subsurface soil samples collected in October 1994 was used to evaluate the risk although investigations conducted by Zaccor in 1992 and SECOR in 1993 identified significant concentrations of diesel, gasoline, oil and grease and other constituents in soil and groundwater around the above-ground storage tank area. Since the monitoring wells, MW-5 to MW-8 were installed in the perimeter of the plume, soil and groundwater samples collected from these borings/well are not representative of the Site. Hence, data submitted from previous investigations should be included in the evaluation of the risk.

SECOR Response to Comment No. 1:

We agree that some of the data collected and analyzed by previous investigators should be included in the revised risk assessment. As a result we have added the soil and groundwater data collected and analyzed by Zaccor in 1992. However, soil data collected and analyzed by SECOR in 1993 were obtained from areas outside the AST source area. SECOR (1993) reported concentrations of total petroleum hydrocarbons as diesel (TPHd) and total petroleum hydrocarbons as gasoline (TPHg) at concentrations lower than those samples collected and analyzed by Zaccor. The 1993 SECOR data were not included in the revised risk assessment, which will result in a much more conservative (health-protective) estimation of the potential risk(s) posed by constituents present at the Site.

II. Alameda County Comment No. 2:

The risk assessment has proposed using PAH's as indicator compounds to evaluate the risk for diesel by using LUFT Manual's recommended percentage of benzopyrene in diesel as 0.07 ug/gm. Since benzopyrene has been identified in the groundwater samples during the March 1996 quarterly groundwater monitoring conducted on-site, the percentage of benzopyrene should be calculated from the actual site data.

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SECOR Response to Comment No. 2:

According to data presented in Table 3-2, only fluorene and naphthalene were detected in groundwater at very low concentrations. Benzo(a)pyrene was not detected in any of the wells sampled.

III. Alameda County Comment No. 3:

Please provide a reference of the site-specific value used for the air exchange rate.

SECOR Response to Comment No. 3:

The indoor air exchange rate used in the risk assessment was obtained from the following source: American Society for Testing Materials (ASTM), 1995. Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites. November 1995.

IV. Alameda County Comment No. 4:

Since the contaminated soil around the above ground tank, (the source) has not been removed, this Department is concerned about continuous release of petroleum hydrocarbon contamination to the Bay. A detailed investigation and ecological risk assessment was conducted for the San Francisco Airport which is approved by the San Francisco Regional Water Quality Control Board (RWQCB) to identify cleanup levels for diesel, jet fuel, gasoline, and BTEX. Attached is a summary of the ecological risk assessment and cleanup levels prepared by the State Regional Water Quality Control Board. Since 1995, RWQCB has adopted an order which includes cleanup criteria based on ecological risk assessments (Order No. 95-136) and hence this issue should be evaluated for the referenced project. Based on the results of this evaluation, a effective cleanup strategy (source removal should be evaluated as one of the cleanup strategies) may need to be implemented to reduce or prevent migration of petroleum compounds to the Bay.

SECOR Response to Comment No. 4:

Detected concentrations of TPHd exceed the Salt Water Ecological Protection Zone Standard of 100 $\mu\text{g}/\ell$ at a number of different well locations. However, as indicated in Section 5.3.1 of the revised risk assessment, BTEX constituents have not been detected in the wells closest to the Bay (i.e., monitoring wells MW-1, MW-5, MW-6, MW-7, and MW-8) since February 1995. Furthermore, of seven monitoring wells sampled for 16 different PAHs (Table 3-2 of the revised report), only two PAHs - fluorene (0.9 $\mu\text{g}/\ell$) and naphthalene (0.93 $\mu\text{g}/\ell$) were detected in groundwater samples collected from the following seven monitoring wells: MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8. The only reported PAH concentrations were in the sample collected from monitoring well MW-2, at concentrations well below the lowest available chronic national AWQC value of 6.16 $\mu\text{g}/\ell$ developed for the PAH fluoranthene (Suter, 1995). When compounded with the fact that any chemical reaching the shoreline will be instantaneously diluted upon entering the Bay (lowering the concentration that much more), TPHd present at the Site does not appear to represent a toxicity threat to aquatic organisms in the San Francisco Bay.

Reference

Suter, G W. II *Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Freshwater Biota* Environmental Toxicology and Chemistry, Vol 15, No. 7, pp 1231-1241.

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V. Alameda County Comment No. 5:

Since exposure to surface contaminants is a pathway that need to be evaluated for landscaped areas, a site map showing areas of the Site that will be landscaped (as opposed to areas that will be capped), and locations of the proposed commercial buildings and restaurant that are to developed on-site (for the vapor transport pathway) should be submitted to this Department. If a final plan is not available, then the risk assessment should take a conservative perspective in evaluating the risk, i.e. assuming that the building could be built anywhere on the Site, and any area on the Site could be potentially landscaped. Also, risk management practices can be implemented if applicable (e.g. Importing clean fill above the contaminated soil in landscaped areas to eliminate exposure, using vapor barrier to reduce indoor air exposure, etc.).

SECOR Response to Comment No. 5:

Final proposed site plans are not available. Therefore, we have made appropriate changes in the risk assessment to include quantitative evaluation of cancer risks and non-cancer adverse health effects to a hypothetical on-site landscape worker receptor.

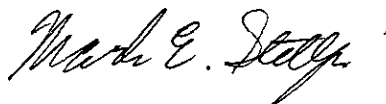
The results of the revised risk assessment (Sections 7.3, 7.4, and 9.0) indicate that estimated cancer risks and noncancer adverse health effects are either below or within agency threshold levels of concern (i.e., 1×10^{-5} to 1×10^{-6} for cancer risk and 1.0 for noncancer effects). If you have any questions regarding the methods used in the revised risk assessment conducted for the Site, please do not hesitate to call either one of us at (510) 686-9780.

Sincerely,

SECOR International Incorporated



Daniel K. Lee, M.P.H.
Associate Environmental Scientist



Mark Stelljes, Ph.D.
Principal-in-Charge, Risk Assessment

cc: James Richie, SECOR