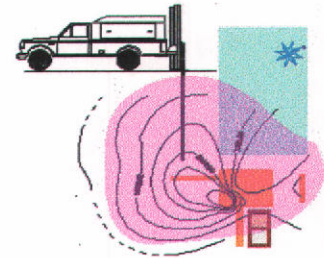


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We Don't Just Work on Your Environmental Problems. We Solve Them!

November 11, 1997

Madhulla Logan, M.S.
Hazardous Materials Specialist
Alameda County Health Care Agency
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

(510) 567-6764 Phone
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**SUBJECT: RESPONSE TO ALAMEDA COUNTY LETTER DATED OCTOBER 29, 1997
REGARDING SITE SPECIFIC RISK ASSESSMENT FOR THE FORMER CRYER
BOAT YARD FOR: 1899 Dennison Street, Oakland, CA 94611**

Dear Ms. Logan:

I am in receipt of the aforementioned letter regarding the requirement for a site specific risk assessment. I would like to develop a site conceptual model, if it is determined that a risk assessment is still necessary, after your review and evaluation of the following rationale which expresses an opinion to the contrary. The model would address the contaminants, migratory pathways, and receptors to be evaluated and your concurrence would be necessary before we could proceed.

One scenario, worth noting, with regard to exposure routes unique to the site, is that any future building development will be set on piers instead of spread footings due to the high groundwater level. This means that a new building would rest upon structural supports which are excavated with a drill rig and that spread footing excavations would be no deeper than one foot below ground surface to support concrete slabs. Therefore, the duration of exposure, of contaminants to construction workers would be limited to only a very few weeks at very low levels (e.g. contaminants at less than one foot bgs). The following is my rationale as to why a risk evaluation may not be needed and what contaminants and exposure pathways would be evaluated if a risk assessment were to be applied to this site.

Health Based Risk Assessment

DIESEL

The 5,000 PPM diesel identified in soil in 1991 is only considered a risk in that it could leach out into the groundwater and could present a taste and odor threshold problem with respect to drinking water or exposure to groundwater during excavation in soil to the water table. **Since it is obvious that diesel was identified in groundwater, and that exposure is based upon its presence in groundwater, we don't have to evaluate the risk posed by diesel in soil.**

In October of 1996, diesel was identified in groundwater at location #1 at 20,000 ppb and location #2 at 3,400 ppb. Diesel was analyzed immediately adjacent to location #1 in boring 1A and immediately adjacent to location #2 in boring 2A at non-detectable levels in May of 1997. Boring 2A was placed very close to the above ground tank location which appears to be the only point source in the vicinity that

could have discharged the diesel fuel.

Since groundwater levels appear to be greater than four feet bgs, and footing excavations will not be designed for depths any greater than 1.0 foot bgs (i.e. the main structural load for a building would be on piers and footing excavations would be designed so that the bottoms would be above the high groundwater level), no construction workers will be exposed to the diesel in groundwater at 20,000 ppb which is above the taste and odor threshold. **So diesel, in effect, does not have to be evaluated for health risk.**

BENZENE

In 1996, 0.15 PPM benzene was identified in soil and 55 ppb benzene was identified in groundwater at location # 1. It was non-detectable in groundwater in boring 1A in 1997.

Since benzene appears to be at non-detectable levels in the area of concern, I assert that a risk evaluation does not need to be performed. Also, the risk evaluation to be performed by the Port of Oakland for the hydrocarbons emanating from above ground tank point source on their side of the property line will provide a "worst case scenario" for a risk assessment as the risk of exposure to benzene is most likely greatest, closest to the point source (i.e. the point source is on the Port of Oakland's side of the property line. Even if I were to evaluate the benzene concentrations as identified in 1996, the only health risk to evaluate would be benzene vapor migration into buildings and/or the atmosphere. This scenario will be mitigated, anyway, by asphalt paving of the site and placing a plastic vapor barrier between the future slab and ground surface. **So benzene, in effect, does not have to be evaluated for health risk.**

METALS

Antimony was identified at levels above the MCL; however, there is no beneficial use of groundwater. **Antimony in groundwater should therefore not be evaluated for health risk.**

Exposure of arsenic to construction workers by dermal contact and ingestion would be for such a short duration of exposure (e.g. 2 to 3 weeks), at such low concentrations, that it doesn't warrant risk evaluation.

Arsenic in groundwater should not be evaluated for health risk because arsenic has not leached into groundwater to unacceptable levels as has been demonstrated by groundwater sampling and analysis.

Ecological Risk Assessment

Diesel, benzene, and antimony are the only constituents of concern dissolved into groundwater. Fate and transport calculations based upon site specific field data would probably demonstrate that the very high organic carbon content in combination with clay soils would impede migration of these contaminants into bay waters to acceptable levels. Also, the point sources for these contaminants actually lie between the subject property and the Bay water on the Port of Oakland side of the property line. In effect, the low levels of contaminants would have to travel laterally, towards the original point sources, pass through the point sources on the Port of Oakland side of the property line, and on to the Bay. A risk evaluation for impact to

Bay waters would therefore be redundant because the point sources all already closure to the Bay waters and would therefore be better evaluated for a "worst case scenario" by the Port of Oakland's environmental consultant.

Site Specific Field Data

If a risk assessment is still required, site specific parameters for porosity, bulk dry density, organic carbon content, groundwater gradient, and hydraulic conductivity must be obtained. In order to circumvent the potential cost of additional field investigation, we respectfully request that you guide us, where possible to adjacent site files which might have applicable field parameters that we can apply to the subject site.

Metal Slag

The mound of metal slag is located offsite on the Port of Oakland side of the property. Questions with regards to its origins and how it will be disposed of should be directed to the Port of Oakland.

Sincerely,



Franklin J. Goldman
CEO/GeoSolv, LLC
Registered Geologist No. 5557
Certified Hydrogeologist No. 466

