California Regional Water Quality Control Board
San Francisco Bay Region

Winston H. Hickox
Secretary for Environmental Protection

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Gray Davis
Governor

August 11, 1999
SLIC No. 01S0523 (DCL)

Ron Mooney
Liquid Sugars, Inc.
7801 Edgewater Drive
Oakland, CA 94621

Subject: Remedial Investigation and Remediation/Risk Management Plan at Liquid Sugars, Inc., 1266 66th Street, Emeryville, Alameda County

Dear Mr. Mooney:

Board staff have reviewed your June 15, 1999, *Report of Soil and Groundwater Investigation and Risk-Based Corrective Action Assessment* for the subject site. As explained below, I find the report acceptable. However, at this time, I cannot accept the recommendation for no further action for the site. A Remediation/Risk Management Plan needs to be submitted before an appropriate resolution of the case can be considered and adopted.

Your consultant, Gribi Associates, drilled 13 borings down to 20 feet below ground surface (bgs) on-site. The locations of these borings were in areas where chlorinated solvents were previously discovered in the groundwater. Soil samples were collected from each of the borings at depths of about 3 feet and 6 feet bgs, with additional deeper soil samples collected in some of the borings. Grab groundwater samples were then gathered from 12 of the borings. Groundwater was generally encountered at about 12 feet bgs.

The soil and groundwater samples were analyzed for halogenated volatile organic compounds (HVOCs). The maximum HVOC concentrations (ppm) found in soil and groundwater are shown in the following table:

	PCE	TCE	c-1,2-DCE	t-1,2-DCE	1,2-DCA	VC
Soil	2.6	0.21	0.82	0.024	0.042	0.18
GW	2.5	0.2	1.2	0.057	2.2	0.15

Contaminated groundwater plumes were found underneath the building on the west side of the site and the open yard to the east. Exact sources of these plumes are difficult to identify. However, HVOCs were generally absent from the soil on the western half of the site, underneath the building. The only significant soil detection of HVOCs occurred around IB-13 and near the Union Pacific railroad tracks and the adjacent rail spurs.

Gribi Associates performed a risk assessment as well. The potential receptors considered were commercial/industrial occupants and construction workers. The complete exposure pathways are indoor and outdoor inhalation of vapors from the soil and groundwater, and dermal contact and ingestion of soil. The indoor inhalation scenarios were considered both for the area where currently there is a building (the west side) and the open yard area (the east side) where there potentially could be a building in the future.

The estimated carcinogenic and noncarcinogenic toxic risks are shown in the following table:

	Carcinogenic Risk	**Hazard Index**
EAST SIDE		
Commercial/Industrial (Outdoor)	3.4E-07	1.0E-04
Commercial/Industrial (Indoor)	4.9E-05	1.0E-02
Construction	8.3E-07	2.4E-03
WEST SIDE		
Commercial/Industrial (Indoor)	2.0E-05	2.2E-02
Construction	1.5E-07	3.0E-04

As expected, the greatest potential carcinogenic risks and noncarcinogenic toxic effects are faced by the indoor commercial/industrial occupants on both the east and west sides of the site. However, these risks are considered acceptable because they are below the target levels of 1.0E-04 and 1 for carcinogenic risk and noncarcinogenic hazard index, respectively.

Nonetheless, "No Further Action" cannot be granted at this time due to exceedances of the Maximum Contaminant Levels for HVOCs in groundwater. Active remediation and/or risk management including regular groundwater monitoring will be required.

Please submit the following technical report acceptable to the Executive Officer by October 15, 1999:

a. Feasibility study evaluating alternative remedial and risk management actions
b. Recommended remedial and risk management actions and cleanup standards
c. Implementation tasks and time schedule

Item a should include projections of cost, effectiveness, benefits, and impact on public health, welfare, and the environment of each alternative action. Item b should include a groundwater monitoring program.

This request for technical reports is made pursuant to Water Code Section 13267, which allows the Board to require technical reports from persons whose activities may have an impact on water quality. You may be subject to administrative civil liability of up to $1,000 per day pursuant to Water Code Section 13268 if you fail to respond, respond late, or submit an inadequate response. Any extension in the above deadline must be confirmed in writing by Board staff.

If you have any questions, please contact Derek Lee of my staff at (510) 622-2374 or e-mail: dcl@rb2.swrcb.ca.gov.

Sincerely,

Stephen I. Morse, Chief
Toxics Cleanup Division

Loretta K. Barsamian
Executive Officer

cc. James Gribi
Gribi Associates
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