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September 12, 1991

Dr. Ravi Arulanantham  
Alameda County Department of Environmental Health  
Division of Hazardous Materials  
80 Swan Way, Suite 200  
Oakland, California 94621

Dear Dr. Arulanantham:

**RECOMMENDATIONS FOR QUARTERLY GROUNDWATER SAMPLING AND INTERIM REMEDIATION AT THE FORMER TARGET STORE T-328 LOCATED AT 7608 AMADOR VALLEY BOULEVARD, DUBLIN, CALIFORNIA**

This letter identifies the recommendations for a quarterly groundwater monitoring program and interim remediation of groundwater at the former Target store T-328 located at 7608 Amador Valley Boulevard, Dublin, California. The scope of work is based on the results and recommendations presented in the "Results of Additional Site Characterization Report, Target Store T-328, 7608 Amador Valley Boulevard Dublin, California" dated August 5, 1991 and your verbal comments to these results and recommendations.

The scope of work is divided into two sections, interim remediation and quarterly groundwater monitoring program.

Interim Remediation

The purpose of the Interim Remediation is to remove significantly impacted groundwater from the backfilled former tank excavation. Grab groundwater samples collected in the former tank excavation reported 39 ppm of TPH/G. Monitoring well MW-4, immediately adjacent to the former excavation contained 6 ppm of TPH/G and 0.680 ppm of benzene. Removing groundwater from the excavation will reduce the potential migration of petroleum hydrocarbons from the former tank excavation.

The scope of work will include the following activities:

- Install one 4-inch diameter PVC extraction well within the backfill material of the tank excavation using hollow stem auger drilling equipment. The well will be completed to a depth of approximately 20-feet and will consist of 10 feet of 0.020 inch slot continuous wire-wrap well screen and 10 feet of blank casing. Filter pack material (8/20 mesh sand) will be installed from total

depth to approximately two-feet above the well screen. A two foot bridge consisting of fine grained sand will be installed above the filter pack and a sanitary seal of neat cement will be installed from the top of the bridge to groundsurface.

- Develop the extraction well. Extraction well development consists of surging and pumping the well. Initially a surge block is lowered into the screened interval and slowly raised and lowered, starting from the top of the screen and working to the bottom. This allows any fine grained material that is capable of passing through the filter pack to enter the well. After surging the well, a minimum of 10 casing volumes are pumped from the well. This removes all fine grained material contained in the well and assures that a water sample representative of local hydrologic condition can be taken. During well development physical parameters including temperature, electric conductivity, pH, and turbidity are monitored. Well development will continue until turbidity reading of less than 100 ntu's and stabilized temperature, electric conductivity, and pH readings are recorded.
- Up to approximately 15,000 gallon of water, approximately three times the estimated capacity of the former tank excavation, will be pumped from the extraction well. The water will be pumped between 5 and 10 gpm into 5,000 gallon vacuum trucks and will be transported to a recycling facility. Extraction of groundwater will be limited to four consecutive days. During extraction the static water level of nearby monitoring wells will be recorded three times a day to determine the area influenced by water removal. One water sample will be collected after extraction and analyzed by DHS Luft Method Manual Method for Total Petroleum Hydrocarbons as gasoline (TPH/G) and by EPA 8020 for benzene, toluene, and ethylbenzene (BTEX).

#### Quarterly Groundwater Monitoring Program

A one year groundwater quarterly monitoring program of the six wells will be conducted. The tentatively scheduled sampling events will be September and December 1991, and March and June 1992.

- Measurement of groundwater elevations in all wells.
- Sampling of five monitoring wells and one extraction well.



- Laboratory analysis of 7 water samples (including the trip blank) each quarter by McLaren/Hart Analytical Laboratory for TPH/G and BTEX. The samples will be preserved and shipped in an ice packed cooler via overnight courier. Proper chain-of-custody documentation will accompany the samples to the laboratory.
- Collection of a replicate sample if previous quarter analyses shows anomalous results at any of the wells.
- Disposal of groundwater generated during the sampling of the six wells to a oil recycler.
- Prepare a quarterly monitoring report which will be submitted to the Alameda County Department of Environmental Health.
- Summarizing results which will include: a groundwater elevation contour map with inferred groundwater flow direction, a table summarizing historical water levels, a site map showing well locations and chemicals detected, well construction data, a table of chemical analytical data for each well, copies of analytical data sheets, well sampling and chain-of-custody records, and a schedule update for the project. The text will document the sampling efforts, and present conclusions and recommendations based on analyses of the data.

All of the work completed will follow the specification for well installation, well development and sampling as defined in the "Work Plan for Phase 1 Investigation Target Store T-328 Dublin, California". All necessary permits will be obtained.

All soil and water generated during drilling, sampling and extraction will be contained, analyzed and disposed of properly. The above defined scope of work will be completed under an updated version of the original Health and Safety Plan for the Phase 1 investigation.

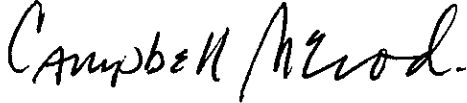
The additional work will begin approximately two weeks after final approval has been given by the Alameda County Department of Environmental Health.



Dr. Ravi Arulanantham  
September 12, 1991  
Page 4

If you have any question of comments please do not hesitate to call us.

Sincerely,



Campbell McLeod  
Supervising Geologist



Clifton Davenport, CEG 1455  
Principal Hydrogeologist

cc: Phil Byers  
Target Stores

0829AMD2



**Certificate of Insurance**

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON YOU THE CERTIFICATE HOLDER. THIS CERTIFICATE IS NOT AN INSURANCE POLICY AND DOES NOT AMEND, EXTEND, OR ALTER THE COVERAGE AFFORDED BY THE POLICIES LISTED BELOW.

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This is to Certify that

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**MC LAREN ENVIRONMENTAL ENGINEERING, INC.  
11101 WHITE ROCK ROAD  
RANCHO CORDOVA, CA 95670**

Name and address of Insured.

This certificate is issued at the issue date of this certificate, insured by the Company under the policy(ies) listed below. The insurance afforded by the listed policy(ies) is subject to all their terms, exclusions and conditions and is not altered by any requirement, term or condition of any contract or other document with respect to which this certificate may be issued.

TYPE OF POLICY		CERT. EXP. DATE*	POLICY NUMBER	LIMIT OF LIABILITY	
WORKERS' COMPENSATION		<input checked="" type="checkbox"/> CONTINUOUS <input type="checkbox"/> EXTENDED <input type="checkbox"/> POLICY TERM	WC2-611-004145-01 WC1-611-004145-02 WC2-611-004145-03	COVERAGE AFFORDED UNDER W.C. LAW OF THE FOLLOWING STATES: <b>ALL STATES EXCEPT MONOPOLISTIC STATE FUND STATES AND MAINE.</b>	EMPLOYER'S LIABILITY Bodily Injury By Accident <b>\$1,000,000</b> Ea. Acc. Bodily Injury By Disease <b>\$1,000,000</b> Pol Limit Bodily Injury By Disease <b>\$1,000,000</b> Ea. Person
COMMERCIAL GENERAL LIABILITY	<input type="checkbox"/> CLAIMS MADE RETRO DATE: 07/21/91		RG1-611-004145-52	General Aggregate-Other than Products/Completed Operations <b>\$2,000,000</b> including products and completed operations	
	<input checked="" type="checkbox"/> OCCURRENCE			Products/Completed Operations Aggregate <b>Included in General Aggregate</b>	
	SPECIAL/EXCL ENDORSEMENTS			Bodily Injury and Property Damage Liability <b>\$1,000,000</b> per occurrence Personal and Advertising Injury per person/organization Other	
AUTO LIABILITY	<input checked="" type="checkbox"/> OWNED <input checked="" type="checkbox"/> NON-OWNED <input checked="" type="checkbox"/> HIRED		AS1-611-004145-05 AS1-611-004145-06	\$ 1,000,000 EACH ACCIDENT-SINGLE LIMIT-B.I. AND P.D. COMBINED \$ EACH PERSON \$ EACH ACCIDENT OR OCCURRENCE \$ EACH ACCIDENT OR OCCURRENCE	
OTHER	<b>*WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY IS EXCLUDED FOR THE STATE OF MAINE.</b>				
LOCATION(S) OF OPERATIONS & JOB # (If Applicable)			DESCRIPTION OF OPERATIONS.		
Target Store-7200 Amador Valley Blvd, Dublin, Ca			Underground Tank Removal		

\*If the certificate expiration date is continuous or extended term, you will be notified if coverage is terminated or reduced before the certificate expiration date. However, you will not be notified annually of the continuation of coverage.

**NOTICE OF CANCELLATION: THE COMPANY WILL NOT TERMINATE OR REDUCE THE INSURANCE AFFORDED UNDER THE ABOVE POLICIES UNLESS 30 DAYS NOTICE OF SUCH TERMINATION OR REDUCTION HAS BEEN MAILED TO:**

Liberty Mutual Insurance Group

CERTIFICATE NUMBER →

Alameda County Health Department  
80 Swan Way Room 200  
Oakland, Ca 94621

*Laura K Anderson*  
AUTHORIZED REPRESENTATIVE

Attn: Ravi Arulananthan

9-11-90

DATE ISSUED

WESTON, MA 02193

OFFICE