



environmental engineers, scientists,
planners, & management consultants

CAMP DRESSER & McKEE INC.

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Walnut Creek, California 94596
510 933-2900, Fax. 510 933-4174

August 9, 1994

Mr. Scott Seery
Department of Environmental Health
Hazardous Materials Division
1131 Harbor Bay Parkway, Room #250
Alameda, California 94502-6577

Subject: *Groundwater and Production Well Data
San Antonio Pump Station*

RECEIVED
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DIVISION
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Dear Mr. Seery:

At your request, following our meeting on July 20, 1994, Camp Dresser & McKee Inc. (CDM) compared the results of quarterly groundwater sampling with the results of soil and groundwater samples collected during remediation of soils at the San Antonio Pump Station. This letter presents the data as well as information on groundwater production wells in the proximity of the San Antonio Pump Station.

This letter report follows the completion of one year of groundwater monitoring at the pump station which evidenced no detection of site compounds of concern. Four chemical compounds were detected in groundwater samples over four quarters of sampling but they are believed to be the results of field or laboratory contamination. Groundwater production wells were investigated to determine the closest well which may be impacted by site groundwater contamination if present.

Chemical Compound Investigation

To determine whether the source of the detected compounds was from an on site source or from sample contamination, CDM compared the quarterly results to data collected by Environmental Bio-Systems (EBS) during remedial excavation and monitoring well installation in 1992 (refer to EBS's *Report on Soil Excavation and Ground Water Exploration, 1992*).

Table 1 presents a summary of the compounds detected in groundwater samples during the four quarters of sampling from June 1993 to May 1994. Detected compounds included chloroform, bromodichloromethane, phenol, and 4-methylphenol. Chloroform was detected in the first and second quarters of sampling at similar concentrations in monitoring wells MW2 and MW3. No other consistency was apparent in the sample results.

Data collected in 1992 by EBS evidenced petroleum compounds (TPH and TOG) in the removed soils. Semi-volatile compounds including naphthalene, fluorine,

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anthracene, and pyrene, collectively referred to as polycyclic aromatic hydrocarbons and commonly associated with coal tar pitch, were detected in several soil samples. Groundwater samples collected by EBS in June 1992 from the three site groundwater monitoring wells were all non-detect.

None of the compounds detected in 1993-1994 quarterly groundwater samples were present in earlier soil or groundwater samples collected by EBS.

Table 1
Compounds Detected in Groundwater

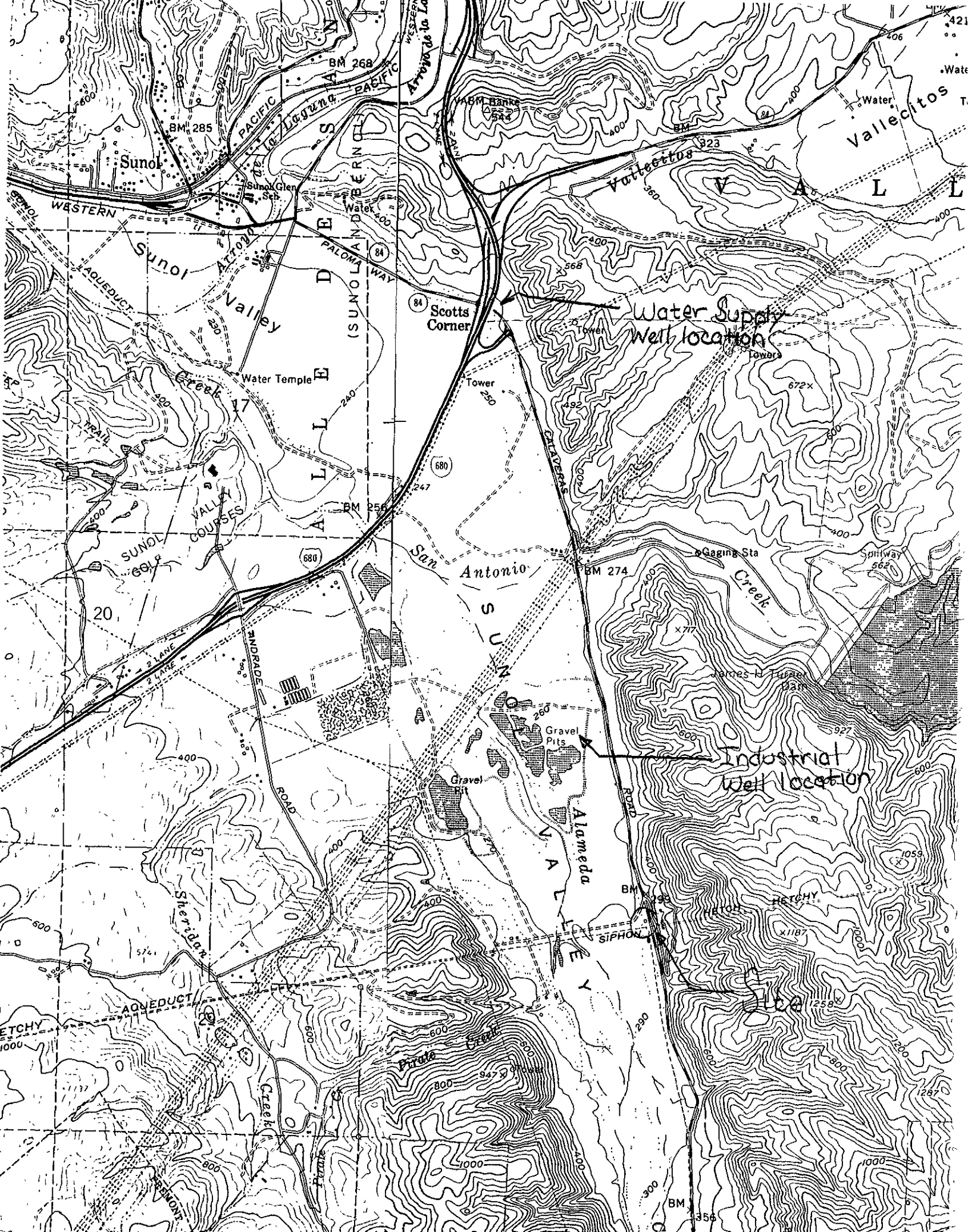
| Quarter | Compound | MW1 | MW2 | MW3 |
|---------|---------------------------|-----------|----------|----------|
| First | Chloroform | -- | 3.7 µg/l | 0.9 µg/l |
| Second | Chloroform | 10 µg/l | 2.2 µg/l | 0.9 µg/l |
| | Bromodichloro- methane | 0.57 µg/l | -- | -- |
| Third | --- | | | |
| Fourth | Phenol | 13 µg/l | -- | -- |
| | 4-Methylphenol | 28 µg/l | -- | -- |

Chloroform is a simple halogenated hydrocarbon (CHCl_3) and phenol ($\text{C}_6\text{H}_5\text{OH}$) is a benzene ring (C_6H_5) with an attached hydroxyl group (OH). 4-methylphenol is phenol with an attached methyl group (CH_3). These compounds are unrelated to the polycyclic aromatic hydrocarbons (two or more benzene rings fused together) which were originally detected on the site.

Both phenol and chloroform are used in analytical laboratories and routinely detected as laboratory contaminants. Bromodichloromethane and chloroform are trihalomethane compounds created as a byproduct from drinking water disinfection. These compounds are routinely detected in chlorinated drinking water supplies and together have a drinking water standard of 100 µg/L. Drinking water standards have not been established for phenol or 4-methylphenol.

Groundwater Production Well Investigation

The City of San Francisco contacted Mr. Wyman Hong of the Alameda County Water Conservation District Zone 7 to determine the location of the closest groundwater production wells to the site. An industrial well is located at the Santa Clara Sand and Gravel company on Calaveras Road approximately 0.75 miles from the site and two groundwater supply wells are located at the corner of Calaveras Road and Interstate 680 approximately 2 miles from the site (see attached figure and City memo).



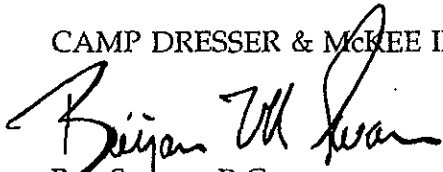
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Given the location of the nearest production wells to the site, it is CDM's opinion that there is no quantifiable risk represented by the above detected compounds if they are in fact present in site groundwater. Further, it appears that the detected compounds are related to field or laboratory contamination based upon their absence in earlier site sampling.

If you have any questions concerning the content of this letter, please call.

Sincerely,

CAMP DRESSER & McKEE INC.



Ben Swann, R.G.
Hydrogeologist

cc Paul Mazza (SFWD)
Lee Fong (SFWD)
Willy Tsai (SFWD)

Attachments: Site Map
Memo - City and County of San Francisco

BS#1.018

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JB

City and County of San Francisco
Public Utilities Commission

San Francisco Water Department
Water Supply and Treatment Division
Treatment Section



MEMO

August 1, 1994

To: Files
From: Leland Fong *LF*
Subject: SAN ANTONIO PUMP: ADJACENT WATER SUPPLY WELLS

Spoke to Wyman Hong with Alameda County Water Conservation District - Zone 7 regarding water supply wells between Sunol Filter Plant and Sunol Yard. There are wells located between these facilities. Two are for water supply and one for industrial.

The water supply wells are located at the intersection of I680 and Calaveras Road. The water supply well identification numbers are 4S1E16F2 (460' and 4F1E16F3 (420').

The industrial well is located north of the pump station (Santa Clara Sand and Gravel) on Calaveras Road. The identification number is 4S1E16L8 (452').

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|--|-------------------------|--------------|---|
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| To <i>Bau Swann</i> | From <i>L Fong</i> | | |
| Co. <i>CDM</i> | Co. <i>SFWWD</i> | | |
| Dept. | Phone # <i>872-5937</i> | | |
| Fax # <i>510-933-4174</i> | Fax # | | |

cc: WTesi
PMazza
SShaw