



July 1, 1997

Mr. Michael Gill
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, California 94105

CLEAN Contract Number N62474-88-D-5086
Contract Task Order 0235

**Subject: C Aquifer Monitoring Wells
Moffett Federal Airfield, California**

Dear Mr. Gill:

During the initial phase of the remedial investigation at Moffett Federal Airfield (MFA), wells were installed in the C aquifer. Since the end of the recent drought, these wells have experienced increasing artesian pressure and have developed surface leaks. The Navy proposes to destroy these wells following Santa Clara Valley Water District (SCVWD) procedures. The following paragraphs present the rationale for this recommendation.

Nine wells were installed in the C aquifer to monitor the aquifer's piezometric surface and aqueous chemistry. The wells were installed when most of California was experiencing a severe drought, and the piezometric surface of the groundwater in the aquifer was below the ground surface. Over the past 4 years, rainfall has equaled or exceeded historical averages for the region. Subsequently, the piezometric surface of groundwater in the C aquifer has risen to the point that all of the wells at MFA screened in this aquifer (and some wells screened in the overlying B2 aquifer) are artesian. According to drillers in the area, this phenomenon has also been observed at numerous locations throughout the northern portion of the Santa Clara groundwater basin.

The monitoring wells that were screened in the C aquifer were not constructed to manage artesian conditions. According to Mr. Don Motsko at Water Development Corporation, a packer system can be installed at the top of the casing in each well to seal it at the surface for about \$1,000 per well. However, he noted that the resulting hydrostatic pressure of the groundwater may create a leak between the casing and the sanitary seal. Installation of a deep packer (placed just above the screened interval) and riser pipe system would cost substantially more per well.

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Twenty-three samples have been collected from the nine C-aquifer monitoring wells. Most samples contained no detectable amounts of volatile organic compounds (VOCs).

Of 11 total detections, seven target VOCs were detected once, and two target VOCs were detected twice each in samples from six of the nine C-aquifer monitoring wells. One detected target VOC was also detected in the associated laboratory blank. Nine of the values were qualified as estimated because they were below the calibration range of the laboratory instrument. The attached tables present detections of target VOCs in samples from C-aquifer (Table 1) and adjacent B2-aquifer (Table 2) monitoring wells at MFA. The attached figure illustrates well locations.

These detections appear to be anomalies; the detections did not indicate a trend in contaminant type or frequency in any C-aquifer well. Data for samples collected from adjacent wells that are used to monitor the overlying B2 aquifer further indicate that the detections in samples from the C-aquifer wells are outliers. These B2-aquifer data are also presented in the attached table, and locations of the wells from which the samples were collected are presented in the attached figure.

The data indicate that the C aquifer has not been affected by contaminant releases from past activities at MFA. Therefore, the Navy plans to destroy these C-aquifer wells, rather than incur the cost of modifying them to accommodate the artesian condition. Typically, SCVWD requires that registered monitoring wells be destroyed by filling them with grout for their entire depth.

The Navy respectfully requests that the regulatory agencies register exceptions to this proposal by July 25, 1997. The Navy plans to commence destruction activities on July 28, 1997.

If you have any questions, please call Willis Wilcoxon at (303) 312-8822 or Tim Mower at (303) 312-8874.

Sincerely,


Willis Wilcoxon
Project Geologist


for Timothy Mower
Project Manager

WW/gdm

Attachments

cc: Stephen Chao, U.S. Navy
Don Chuck, U.S. Navy
Joseph Chou, DTSC
Michael Rochette, RWQCB

TABLE 1
MOFFETT FEDERAL AIRFIELD
DETECTED VOLATILE ORGANIC COMPOUNDS
IN C-AQUIFER GROUNDWATER SAMPLES
(Concentrations in micrograms per liter)

Well Name	Sample Date	Chemical Name	Concentration
W10-6	14-Sep-94	Benzene	0.09 J
W3-10	4-Oct-93	Trichloroethene	2
W3-16	6-Oct-93	1,2-Dichloroethene (Total)	0.4 J
W3-16	6-Oct-93	Methylene Chloride	0.3 J
W3-16	29-Aug-94	Toluene	0.4 J
W4-8	16-Dec-92	Acetone	2 B
W4-8	16-Dec-92	Tetrachloroethene	0.6 J
W5-5	8-Dec-92	Carbon Disulfide	0.2 J
W9-3	27-Aug-92	Benzene	0.9 J-G
W9-3	27-Aug-92	Toluene	1 J
W9-3	27-Aug-92	Xylene (Total)	0.4 J-G

Notes:

- B Compound also detected in laboratory blank
- J Estimated value; concentration below method calibration range
- J-G Estimated because value is below contract required quantitation limit (CRQL) but above 5- or 10-times rule for blank contamination

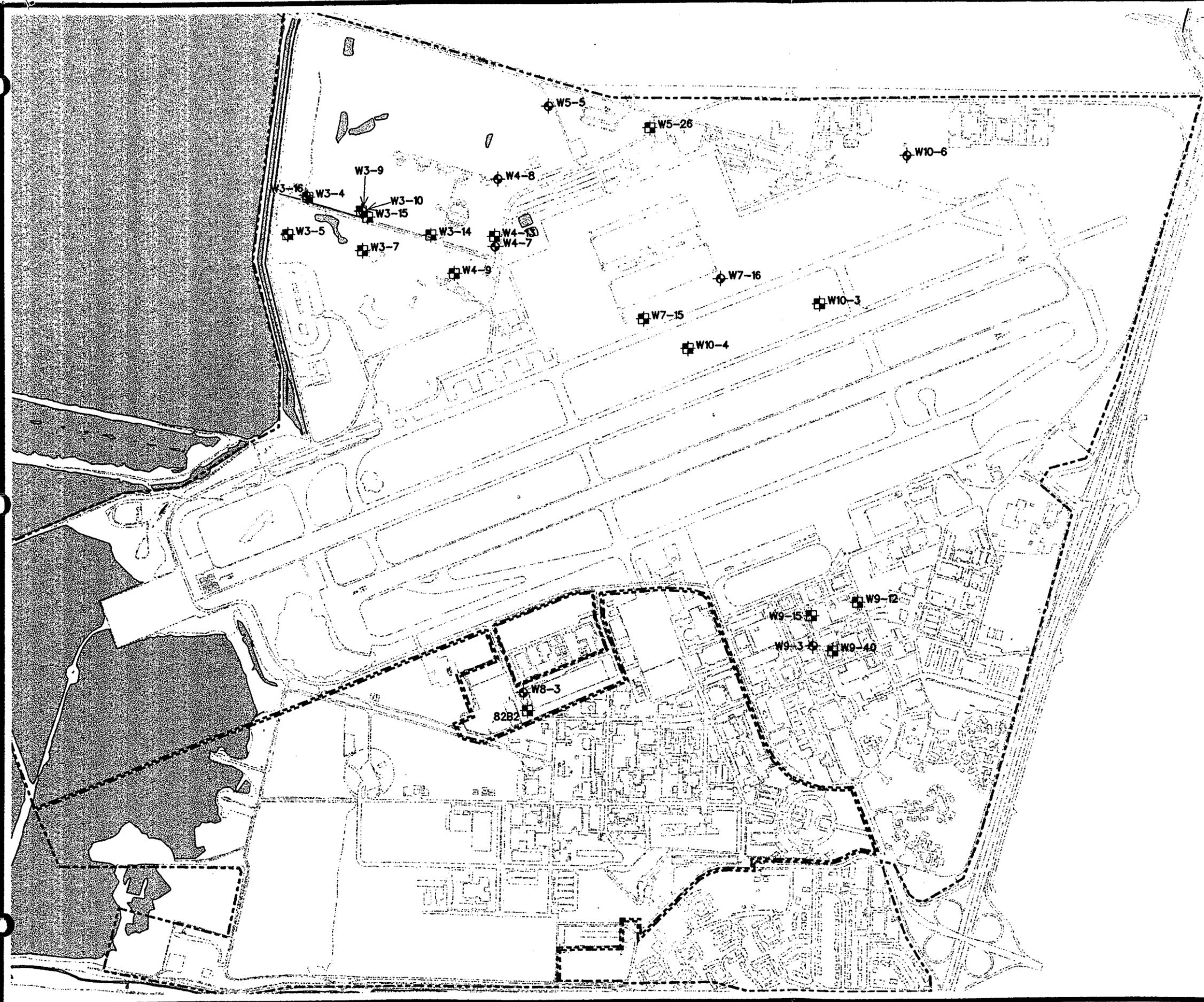
TABLE 2

MOFFETT FEDERAL AIRFIELD
 DETECTED VOLATILE ORGANIC COMPOUNDS
 IN B2 AQUIFER GROUNDWATER SAMPLES
 (Concentrations in micrograms per liter)

Well Name	Associated C-Aquifer Well	Sample Date	Chemical Name	Concentration
W10-3	W7-16	5-Oct-93	Benzene	0.7 J
W10-3	W7-16	5-Oct-93	Ethylbenzene	0.5 J
W10-3	W7-16	5-Oct-93	Toluene	3
W10-3	W7-16	5-Oct-93	Trichloroethene	2
W10-3	W7-16	5-Oct-93	Xylene (Total)	4
W10-3	W7-16	15-Sep-94	Trichloroethene	2
W10-4	W7-16	5-Oct-93	Toluene	0.4 J
W10-4	W7-16	5-Oct-93	Xylene (Total)	0.4 J
W7-15	W7-16	16-Jun-93	1,2-Dichloroethene (Total)	0.3 J
W7-15	W7-16	16-Jun-93	4-Methyl-2-Pentanone	8 J-K
W7-15	W7-16	16-Jun-93	Trichloroethene	1 J
W3-4	W3-16	30-Sep-93	Trichloroethene	1 J
W3-4	W3-16	7-Nov-95	1,2-Dichloroethene (Total)	0.7
W3-4	W3-16	7-Nov-95	Trichloroethene	1
W3-5	W3-16	7-Nov-95	1,2-Dichloroethene (Total)	0.6
W3-5	W3-16	7-Nov-95	Trichloroethene	1
W3-7	W3-10	4-Oct-93	Benzene	0.1 J
W3-7	W3-10	4-Oct-93	Trichloroethene	2
W3-7	W3-10	1-Sep-94	Benzene	0.09 J-H
W3-15	W3-10	5-Oct-93	Benzene	0.2 J
W9-40	W9-3	31-Aug-92	Carbon Disulfide	0.2 J-G

Notes:

- J Estimated value; concentration below method calibration range
- J-G Estimated value due to value below CRQL but above 5- or 10-times rule for blank contamination
- J-H Estimated value due to method holding time violation
- J-K Estimated value because calibration for gas chromatography mass spectrometry (GC/MS) tuning criteria is out of quality control (QC) limits



LEGEND

-  MONITORING WELLS IN AQUIFER B2
-  MONITORING WELLS IN AQUIFER C
-  AIRFIELD BOUNDARY

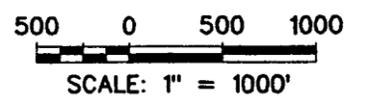


FIGURE 1
MOFFETT FEDERAL AIRFIELD
WELL LOCATION MAP