GRIBI Associates

*Geological and Environmental Consulting Services*

May 14, 2002

Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502



Attention: Eva Chu

Subject: Sensitive Receptor Survey
Corwood Car Wash UST Site
6973 Village Parkway, Dublin, California
GA Project No. 106-02-03

Ladies and Gentlemen:

Pursuant to the May 2, 2002 letter from your office, Gribi Associates has prepared the following sensitive receptor survey on behalf of Mr. Roger Woodward for the Corwood Carwash site located at 6973 Village Parkway in Burlingame, California (see Figure 1 and Figure 2). This report details survey activities conducted in the site vicinity on May 2, 2002 to determine the presence or absence of sensitive receptors within 1,500 feet of the subject property. The attached information has been compiled to assist the Alameda County Department of Environmental Health in processing this site for regulatory closure.

**Site Background**

The subject property is located on the southeast corner of the intersection of Lewis Avenue and Village Parkway in Dublin, California. Currently, the site is occupied by an automobile car wash. Corwood Car Wash previously operated two unleaded gasoline USTs, located in a common excavation cavity on the northwest side of the site. The UST system was apparently installed in about 1968, and it is our understanding that diesel fuel was also stored in the USTs at some time in the distant past. In March 1991, the UST system was completely retrofitted with state-of-the-art leak prevention and monitoring devices, including interior tank linings, overfill/overspill protection, and a sophisticated leak detection monitoring system.

Previous investigations at the site included: (1) The drilling and sampling of several borings in the early 1990s immediately adjacent to project site USTs; (2) The installation of three groundwater monitoring wells, MW-1, MW-2, and MW-3, at the site in 1993; and (3) Monitoring of the three project site wells in June 1993 and in October 1995. Results of these investigations indicated some residual diesel-range hydrocarbons in subsurface soils immediately surrounding the project site USTs, but only low concentrations of diesel-range hydrocarbons in groundwater in downgradient (south-southeast) well MW-2, with no significant concentrations of Benzene. Note that soil and

groundwater samples from these investigations were not analyzed for MTBE. Based on results of these previous investigations, regulatory site closure was granted for this site in 1996. The three groundwater monitoring wells were subsequently decommissioned by pressure grouting.

On January 31, 2000, b oth p roject site USTs were removed from the site in accordance with Alameda County Department of Environmental Health requirements. In addition, approximately 3,800 gallons of hydrocarbon-impacted groundwater was pumped from the excavation cavity for offsite disposal. Also, approximately 350 tons of hydrocarbon-impacted soil, primarily backfill material, was excavated and removed from the site. After backfilling with clean imported pea gravel, the UST excavation cavity and piping and dispenser excavations were re-surfaced with concrete to match existing surface grade.

Results from soil and groundwater samples collected from the UST removal cavity, together with previous results from soil and groundwater investigations conducted at the site, seem to suggest that although some releases, primarily diesel, occurred from the USTs, these releases remained in the backfill sands for the most part and did not migrate appreciably into native silts and clays surrounding the USTs. Two grab water samples collected from the open UST cavity contained relatively high levels of both diesel- and gasoline-range hydrocarbons, with detections of both Benzene and MTBE. However, given that these samples were collected from an open pit while excavation activities were occurring, we do not believe that these results are representative of true groundwater conditions beneath the site.

Soil samples collected adjacent to removed fuel dispensers indicated no significant releases adjacent to the former west dispenser, and moderate levels of diesel-range hydrocarbons, with no significant level of gasoline-range hydrocarbons, adjacent to the former east fuel dispenser. Given that diesel was only stored in the USTs in the distant past, as well as the apparent aged quality of the gasoline-range hydrocarbons in the east dispenser soil samples, it appears that releases associated with the project site USTs and fuel dispensers occurred in the distant past, prior to UST system upgrades, which included installing secondary containment beneath each dispenser.

On March 3, 2000, Gribi Associates drilled and sampled two soil borings, IB-1 and IB-2, at the site using direct-push coring equipment. Both soil and grab groundwater samples from IB-1, located in an expected downgradient (south-southeast) direction from the former east dispenser island, contained detectable levels of both gasoline- and diesel-range hydrocarbons. In addition, the grab groundwater sample from IB-2, located in an expected downgradient (south-southeast) direction from the former fuel USTs, contained detectable levels of both gasoline- and diesel-range hydrocarbons. However, the laboratory chromatograms for these samples seem to show that the gasoline-range hydrocarbon results in these samples are primarily due to interference from diesel-range hydrocarbons. Thus, soil and groundwater impacts relative the former Corwood Car Wash UST system appear to be primarily related to past diesel releases. Given that diesel was only stored in the USTs in the distant past (probably in the early to mid-1970s), it appears that the majority of releases associated with the USTs occurred in the distant past, prior to UST system upgrades which included installing interior fiberglass linings in both of the USTs.

The only exception to this appeared to be the detection of a low level (0.53 ppm) of MTBE in the IB-2 grab groundwater sample. This MTBE detection was significantly lower than MTBE levels of 5.4 ppm and 1.7 ppm encountered in grab groundwater samples collected from the former UST excavation cavity during tank removal activities. These results seem to suggest minimal downgradient migration of MTBE.

In January 2001, Gribi Associates conducted additional investigation activities at the site that included: (1) The drilling and sampling of two soil borings, IB-3 and IB-4, on the south side of the site using direct-push coring equipment; (2) The collection of one soil vapor sample, VS-1, beneath the car wash cashier's kiosk; and (3) The drilling, installation, and sampling of one groundwater monitoring well, MW-1, at the site. Both soil and groundwater analytical results from this and previous investigations indicate that low-permeability silts and clays beneath the site have resulted in limited impacts to soil and groundwater from past UST-related hydrocarbon releases at the site. The only hydrocarbon constituent detected in downgradient borings IB-3 and IB-4, located near the south project site property line, was low levels of Methyl Tertiary Butyl Ether (MTBE) in grab groundwater samples from these borings. The grab groundwater sample from the easterly boring IB-3, located downgradient (south-southeast) from the former east fuel dispenser, contained 0.390 parts per million (ppm) of MTBE. The grab groundwater sample from the west boring IB-4, located downgradient from the former project site USTs, contained 0.084 ppm of MTBE. These levels of MTBE are relatively low and do not indicate a widespread MTBE problem. This conclusion is bolstered somewhat by the apparent downgradient natural attenuation of MTBE, from 1.7 ppm and 1.8 ppm in the respective former east dispenser and UST areas, to 0.390 ppm and 0.084 ppm in respective downgradient borings IB-3 and IB-4.

The soil vapor sample, VS-1, collected beneath the cashier's kiosk at about three feet in depth contained levels of gasoline constituents that are well below established Risk-Based Screening Levels (RBSLs) for vapors at three feet in depth (*Application of Risk-Based Screening Levels and Decision Making at Sites With Impacted Soil and Groundwater*, San Francisco Bay Regional Water Quality Control Board, August 2000, Table E-2). Vapor sample VS-1 contained only 16 micrograms per cubic meter (ug/$m^3$) of Benzene, and the RBSL for soil gas immediately below a building floor (commercial receptors, fine grained soils) is 280,000 ug/$m^3$.

The monitoring well MW-1 was sampled on January 8 and July 27, 2001. Groundwater analytical results from these sampling events indicated the presence of gasoline-range total petroleum hydrocarbons (TPH-G) at concentrations of 670 micrograms per liter (ug/L) and 490 ug/L, respectively and MTBE at concentrations of 1,700 ug/L and 930 ug/L, respectively. Based on MTBE concentrations in excess of 1,000 ug/L, the Alameda County Department of Environmental Health recommended the completion of a sensitive receptors survey in email correspondence dated November 19, 2001.

**Description of Survey Activities**

The sensitive receptors survey consisted of: (1) Reviewing the USGS Topographic Map for the site area; (2) Conducting a site area reconnaissance to attempt to identify possible groundwater wells and

surface water bodies; and (3) Contacting the appropriate regulatory agencies to determine if there are potable groundwater wells in close proximity to the subject site. On May 2, 2002, Gribi Associates personnel reviewed the USGS Dublin, California 7.5-minute Quadrangle map and conducted a reconnaissance of the site vicinity to attempt to identify surface water bodies and potable water supply wells in the area surrounding the subject property. Additionally, Gribi Associates personnel contacted Mr. Wyman Hong of the Alameda County 7 Water Agency to determine if there are any registered or permitted potable or non-potable water supply wells within 1,500 feet of the subject site.

**Results of Survey**

The site vicinity search, as well as our review of the USGS Topographic Map for the site (see Figure 1), also revealed that the closest surface water body to the site is an intermittent stream that flows southward parallel to the US Interstate 680 and is located approximately 725 feet west from the Corwood Car Wash site. A stormwater ditch and catch basin is located on the east end of the site; however, this feature, which flows northward to Lewis Street, is located in an expected upgradient groundwater flow direction and is not considered a true surface water body that can affect or be affected by groundwater flow.

During the site vicinity search conducted on May 2, 2002, Gribi Associates personnel did not observe any water supply wells in close proximity to the subject site. Additionally, interviews with local residences indicated that potable water is supplied by the City of Dublin. Finally, Mr. Hyman Wong of Alameda County Zone 7 Water Agency provided a map and information via e mail, included in Attachment A, that indicates that there are no registered or permitted water supply wells within 1,500 feet from the project site. Additionally, the map shows that, other than the project site monitoring well, the closest monitoring well is more than 500 feet southeast from the project site.

**Conclusions/Recommendations**

Based on the results of the field reconnaissance, conversations with regulatory agencies, and the presumption that the MTBE plume is relatively small in size, Gribi Associates does not believe that the apparent releases of fuel hydrocarbons from the former project site USTs pose a significant risk to surface water or groundwater receptors identified in the site vicinity. For this reason, Gribi Associates requests on behalf of Mr. Roger Woodward that the Alameda County Department of Environmental Health grant regulatory closure for this site.

We appreciate this opportunity to provide this report for your review. Please contact us if there are questions or if additional information is required.

Very truly yours,

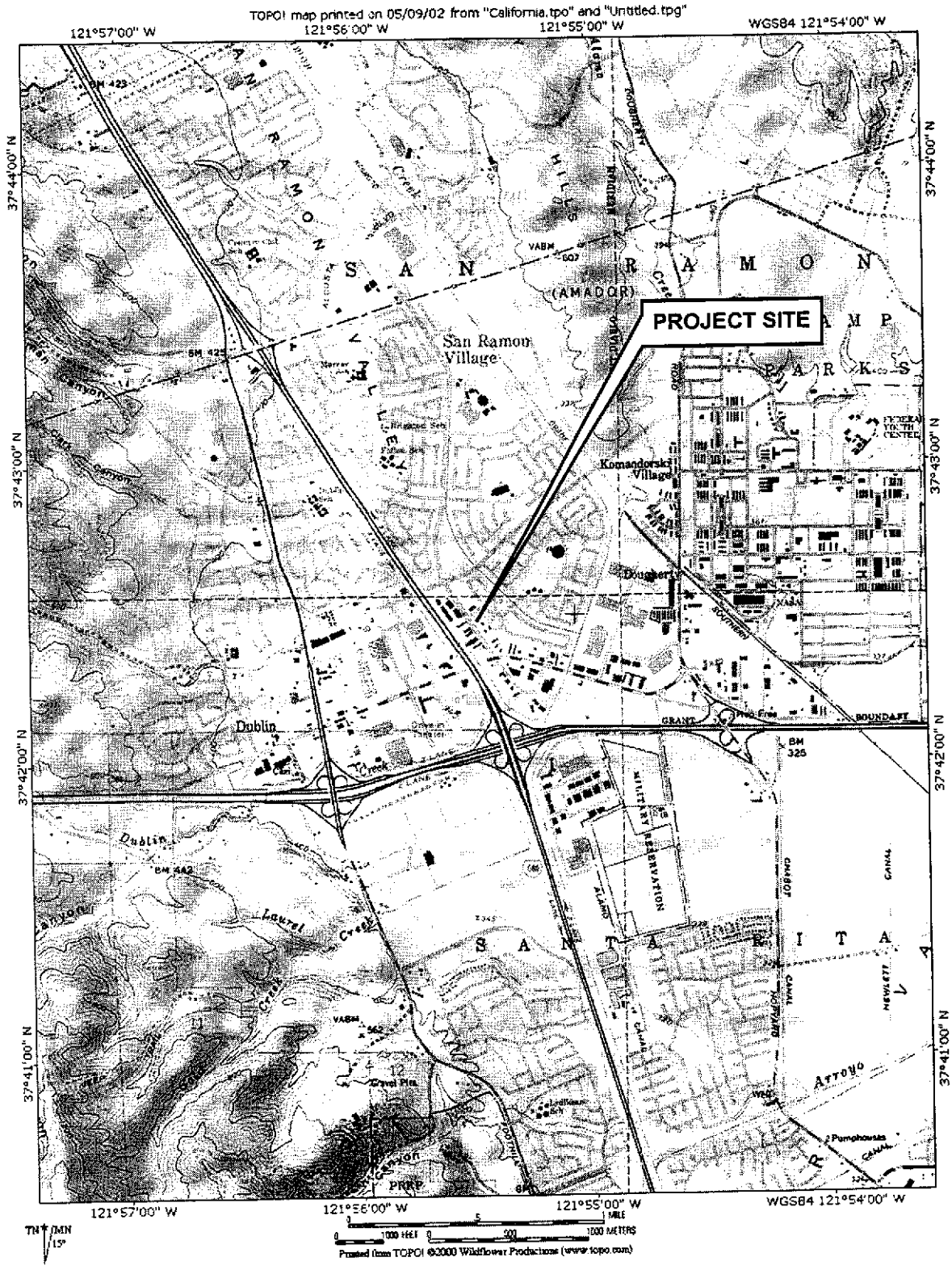
James E. Gribi
Registered Geologist
California No. 5843

Eric G. Hetrick
Project Geologist

EGH:ct
Enclosure

File: \\Eric\c\My Documents\My Files\Well Surveys\Corwood Car Wash\Survey report.wpd

cc Mr. Roger Woodward, R. L. Woodward Industries, Inc.

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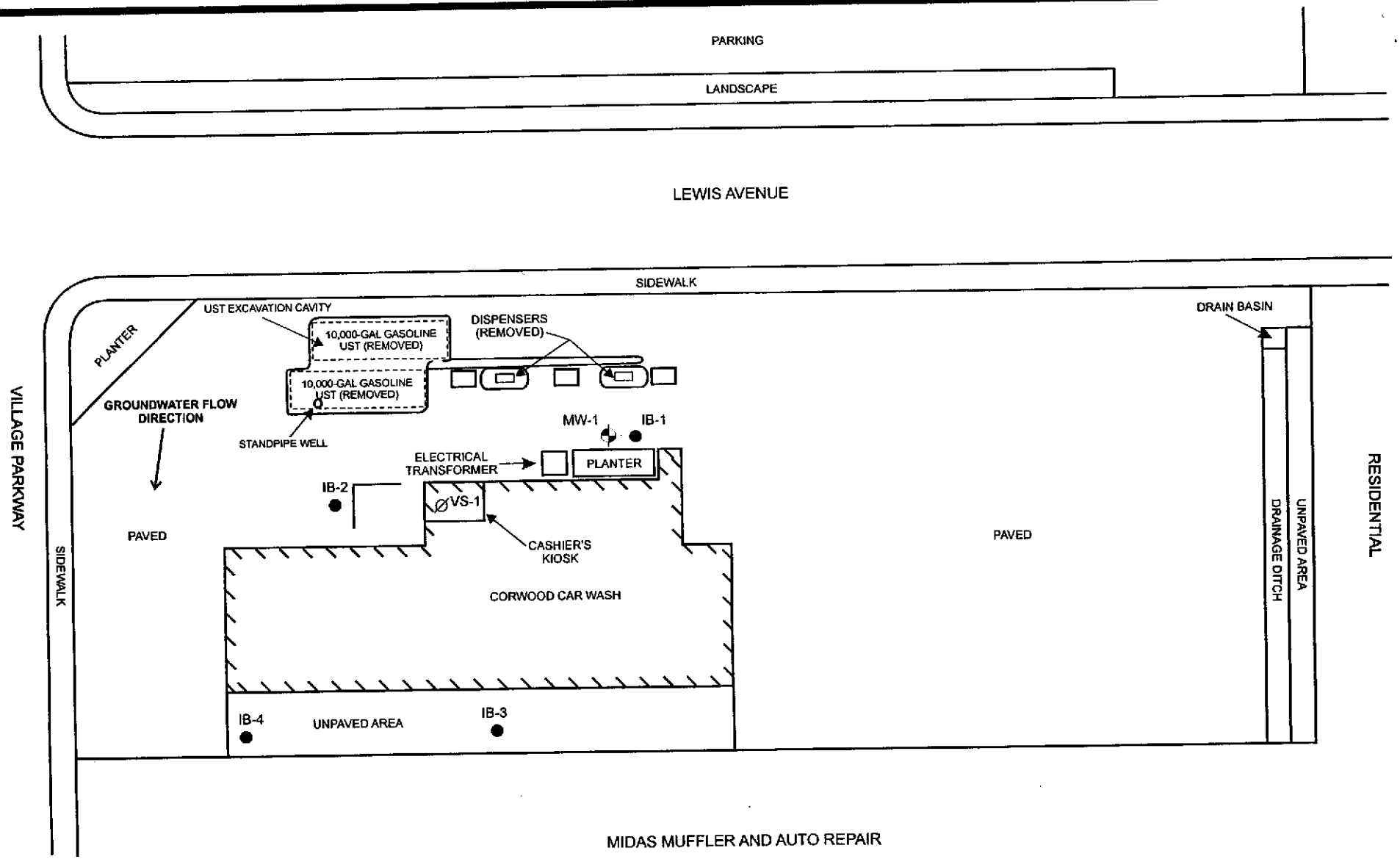
|---|---|---|---|---|
| DESIGNED BY: | CHECKED BY: | **SITE VICINITY MAP** | DATE: 05/08/02 | FIGURE: 1 |
| DRAWN BY: EGH | SCALE: | CORWOOD CAR WASH SITE<br>6973 VILLAGE PARKWAY<br>DUBLIN, CALIFORNIA | **GRIBI Associates** | |
| PROJECT NO: 106-02-03 | | | | |




Ø - SOIL VAPOR SAMPLE LOCATION

⊕ - GROUNDWATER MONITORING WELL LOCATION

● - INVESTIGATIVE BORING LOCATION

0 30 60

APPROXIMATE SCALE IN FEET

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| DESIGNED BY: | CHECKED BY: |
| DRAWN BY: JEG | SCALE: |
| PROJECT NO: 106-02-02 | |

**SITE PLAN**

CORWOOD CAR WASH
6973 VILLAGE PARKWAY

DATE: 05/08/02

FIGURE: 2

**GRIBI Associates**

**ATTACHMENT A**

**INFORMATION PROVIDED BY ALAMEDA COUNTY ZONE 7 WATER AGENCY**

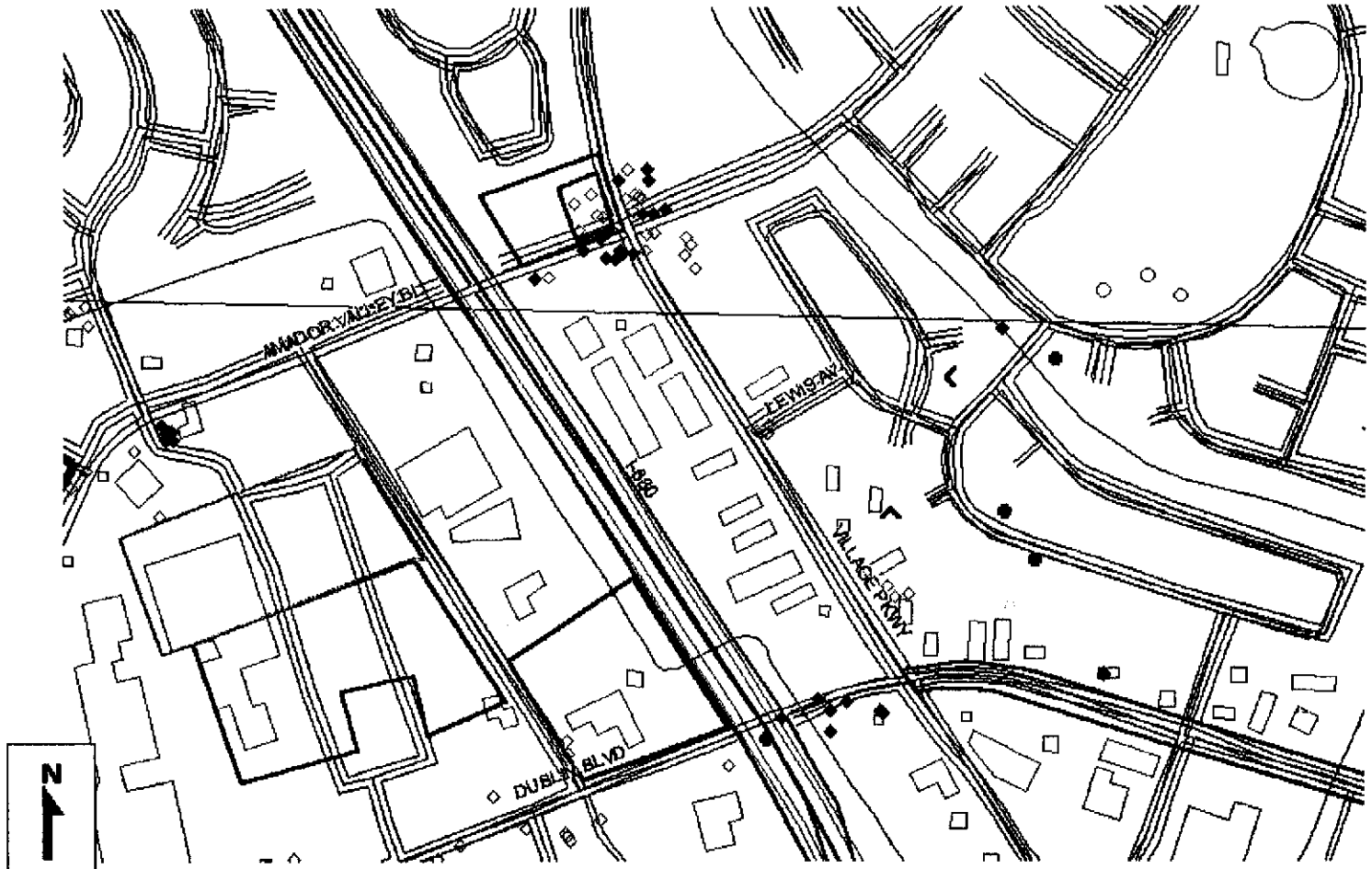
**ehetrick@sbcglobal.net**

**From:** "Wyman Hong"
**To:** <ehetrick@sbcglobal.net>
**Sent:** Tuesday, May 07, 2002 2:20 PM
**Attach:** Village Pkwy.BMP
**Subject:** Well location map

Eric,
Here's the well location map of the area near 6973 Village Parkway in Dublin. There are no water supply wells within a 1500 feet radius of you site. They are all monitoring wells (red diamonds).

Wyman Hong
Water Resouces Specialist
email: whong@zone7water.com
phone: (925) 484-2600 ext. 235

<<Village Pkwy.BMP>>

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|---|---|---|---|
| | **ZONE 7 WATER AGENCY**<br>5997 PARKSIDE DRIVE<br>PLEASANTON, CA 94588 | **WELL LOCATION MAP** | SCALE: 1"= 500 ft<br>DATE: 5/7/02<br>6973 Village Pkwy, Dublin<br>H:\FLOOD\RCFERALL\RCFERALL9.WOR |