



Recommend SVE startup to see if MTBE and benzene can be effectively removed from vadose zone.

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September 7, 2001

Mr. Tom Bauhs
Chevron Products Company
P.O. Box 6004
San Ramon, California 95483

SEP 11 2001

Subject: *Soil Vapor Extraction System Review*
Chevron Service Station No. 9-2582
7240 Dublin Boulevard
Dublin, California
Delta Project No. DG9-2582

Dear Mr. Bauhs:

At the request of Chevron Products Company (Chevron), Delta Environmental Consultants, Inc. (Delta) has evaluated the Soil Vapor Extraction System and Abatement System (System) located at the subject site (Figure 1). The system evaluation was conducted to assess its potential to remediate petroleum hydrocarbon and oxygenate compound releases originating from Mr. Hoosang Hadjian's fuel dispensing operations. The evaluation was based on reports of permitted system operations submitted to Alameda County Health Care Services from March 1992 through December 1996. Site features are shown on Figure 2. A description of the system is detailed below.

System Type

Soil Vapor Extraction and Abatement System

Major Components: King Buck, Hasstech - Series 5 Multimode Combuster

- 100 scfm catalytic oxidizer
- vacuum pump compressor unit

Well network

Three horizontal wells (#1 - northwest end of pump islands, #2 - east side of pump islands, and #3 - north, east and south perimeter of tank field). Vacuum lines are assumed to be buried between 3 and 4 feet below surface grade in piping trenches shown in Figure 2. Vapor recovery wells VW-1 through VW-3 are located north and south of the pump islands. **It appears that VW-1 through VW-3 were used to monitor the radius of influence only, and were never directly connected to system.** A 10-inch diameter PVC casing has been installed in the tank backfill to facilitate potential water removal within the tank basin.

Discussion of the system's potential to remediate MTBE

Groundwater data suggests that recent impacts to soil and groundwater have occurred in the vicinity of the pump islands and underground storage tank complex. The existing system was designed to remove absorbed phase hydrocarbons within the vadose zones in the vicinity of the tank basin and pumps islands. The current system is not designed to remediate groundwater and will not effectively extract dissolved MTBE from groundwater. However, as evidenced by prior system operations, a decrease in dissolved constituents through source removal should slowly follow. Seasonal or pulse operation of the current system may be considered if groundwater remediation is not a feasible alternative. Once the system has been re-started, vacuum and flow controls can be regulated for optimal removal of petroleum hydrocarbon compounds.


Limitations

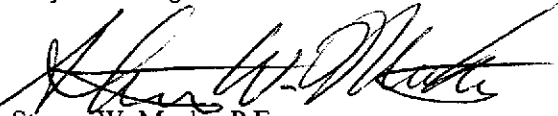
The interpretations contained in this report represent our professional opinions and are based, in part, on information supplied by the client. These opinions are based on currently available information and are arrived at in accordance with accepted hydrogeological and engineering practices at this time and location. Other than this, no warranty is implied or intended.

If you have questions or comments regarding this report, please contact me at (916) 536-2623.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

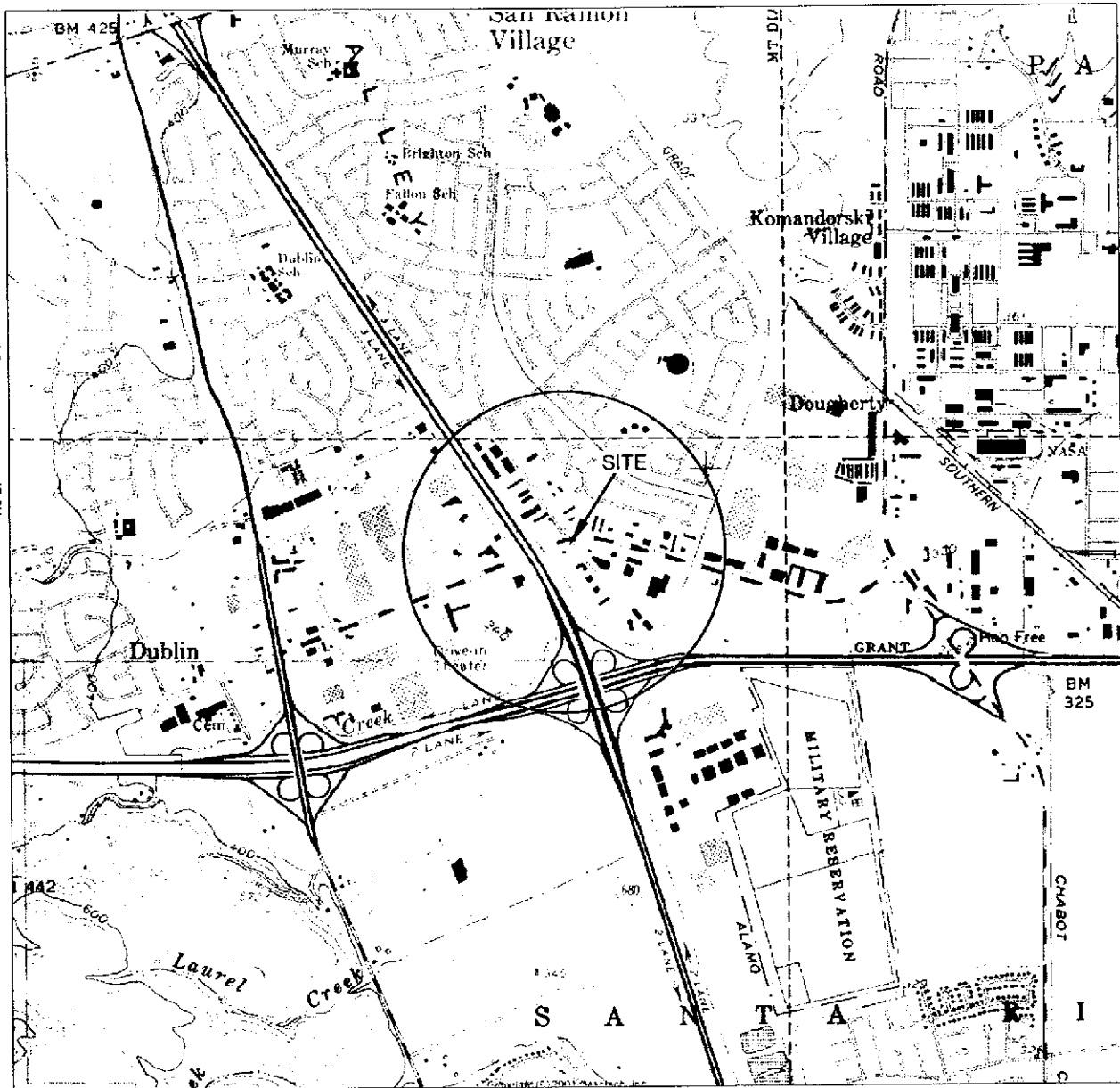

Benjamin I. Heningburg
Project Manager


Steven W. Meeks, P.E.
California Registered Civil Engineer No. C057461

BIH (Lrp001-9-2582.doc)
Enclosures



Cc: Ms. Eva Chu - Alameda County Health Care Services
Mr. Hoosang Hadjian - Dublin Auto Wash



GENERAL NOTES:
 BASE MAP FROM U.S.G.S.
 DUBLIN, CALIFORNIA
 7.5 MINUTE TOPOGRAPHIC
 PHOTOREVISED 1980



QUADRANGLE LOCATION

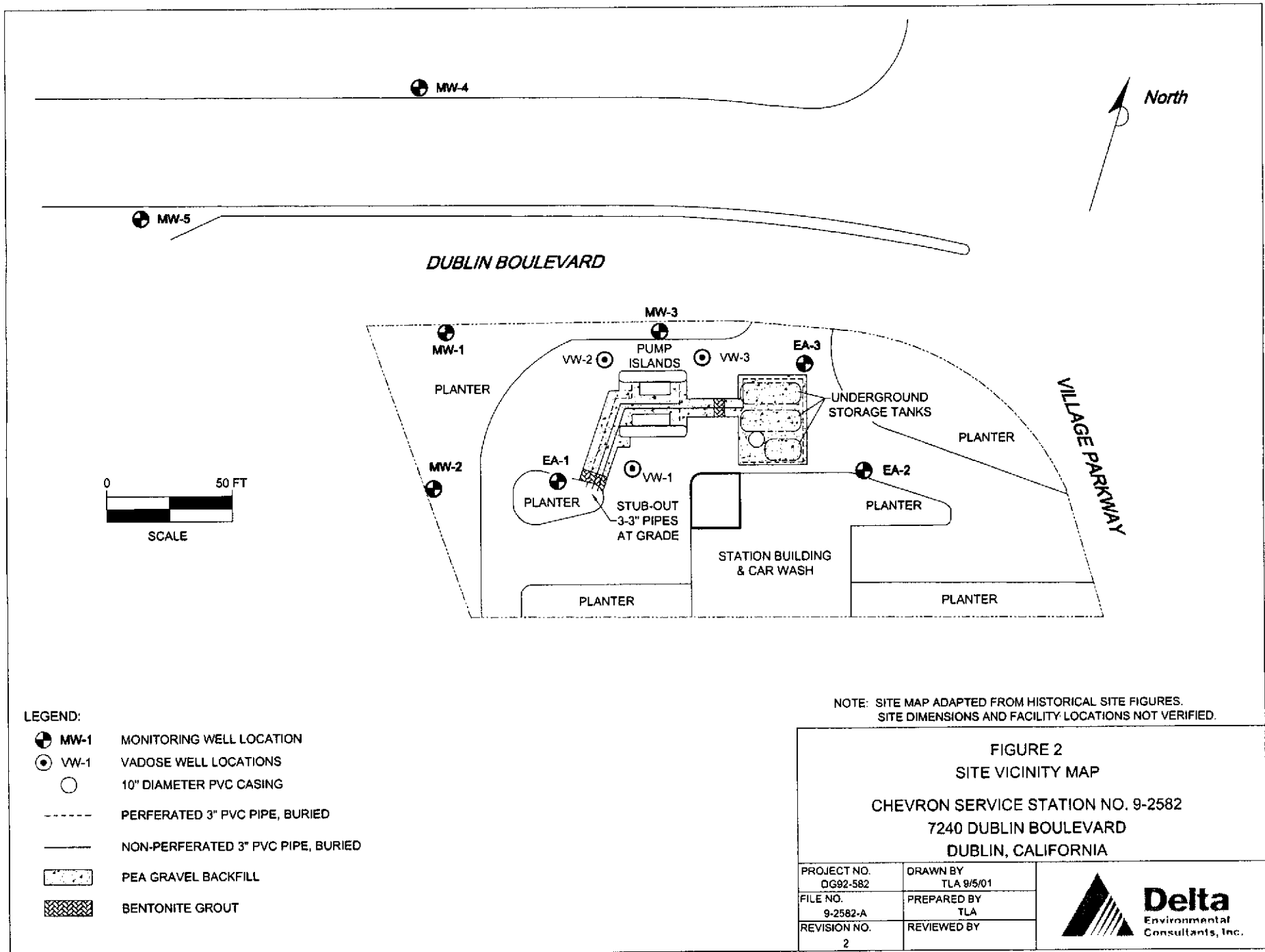


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



FIGURE 1
 SITE LOCATION MAP
 CHEVRON SERVICE STATION NO. 9-2582
 7240 DUBLIN BOULEVARD
 DUBLIN, CALIFORNIA

PROJECT NO. DG95-607	DRAWN BY TLA 9/4/01
FILE NO. 9-5807-1A	PREPARED BY TLA
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LEGEND:

-  **MW-1** MONITORING WELL LOCATION
-  **VW-1** VADOSE WELL LOCATIONS
-  10" DIAMETER PVC CASING
-  PERFERATED 3" PVC PIPE, BURIED
-  NON-PERFERATED 3" PVC PIPE, BURIED
-  PEA GRAVEL BACKFILL
-  BENTONITE GROUT

NOTE: SITE MAP ADAPTED FROM HISTORICAL SITE FIGURES.
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

FIGURE 2
SITE VICINITY MAP

CHEVRON SERVICE STATION NO. 9-2582
7240 DUBLIN BOULEVARD
DUBLIN, CALIFORNIA

PROJECT NO. DG92-582	DRAWN BY TLA 9/5/01	 <p>Delta Environmental Consultants, Inc.</p>
FILE NO. 9-2582-A	PREPARED BY TLA	
REVISION NO. 2	REVIEWED BY	