MONITORING WELL INSTALLATION REPORT BEDFORD PROPERTIES SITE GOLDEN GATE DRIVE DUBLIN, CALIFORNIA

Prepared for:
BEDFORD PROPERTIES, INC.
SAN RAMON, CALIFORNIA

Prepared by:
MITTELHAUSER CORPORATION
SAN RAMON, CALIFORNIA

DECEMBER 1991

MITTELHAUSER corporation

2401 Crow Canyon Road, Suite 100
San Ramon, California 94583
(415) 743-0335

January 2, 1992

Ms. Gina DiMatteo
Bedford Properties, Inc.
2000 Crow Canyon Place, Suite 120
San Ramon, California 94583

Subject: Monitoring Well Installation Report
6700 Golden Gate Drive
Dublin, California

Dear Gina:

Mittelhauser Corporation (Mittelhauser) is pleased to present this report documenting the installation of one monitoring well at the former underground storage tank location. The monitoring well was installed at the subject site according to procedures described in Mittelhauser's proposal dated August 23, 1991. A Site Location Map (Figure 1) and Site Plan (Figure 2) showing the location of the monitoring well are attached. All work was performed under the supervision of a Certified Engineering Geologist.

Prior to performing field work, a workplan was submitted to, and all necessary permits were obtained from, the Alameda County Flood Control and Water Conservation District. In addition, Underground Service Alert was contacted to locate public subsurface utilities. A health and safety plan was also prepared.

BACKGROUND

One diesel fuel and one unleaded gasoline underground storage tank (UST) were removed from the subject site by W.A. Craig Contractors. After the tank removal, contaminated soil was encountered on the floor of the tank pit. According to a report by Uriah, Inc., approximately 82 cubic yards of soil was subsequently excavated from the pit. Laboratory analysis of the stockpiled soil detected total oil and grease (TOG) contamination at a maximum concentration of 360 ppm along with minimal gasoline components.

On August 14, 1991, Mittelhauser observed additional soil removal from the tank pit near the juncture of the two USTs until no visual contamination was evident, and the photoionization detector did not detect any organic volatiles. Laboratory analyses of the samples collected from the floor of the excavation did not detect any Total Petroleum Hydrocarbons (TPH) as gasoline or diesel, Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), total oil and grease (TOG), and organic lead.

The excavated soils were added to the previous stockpile which was flattened to an average height of approximately five feet for composite sampling purposes. The stockpiled soil was sampled, analyzed and disposed of properly.

FIELD ACTIVITIES

On November 20, 1991 Mittelhauser personnel observed the installation of one two-inch diameter monitoring well designated as MW1. This well was located approximately in the center of the former tank pit to evaluate any potential impact to groundwater. The monitoring well was installed in the area of the tank juncture which was identified in the Uriah report as the main area of contamination. The location of the monitoring well is shown on the attached Site Plan.

Monitoring Well Installation and Soil Sampling

The boring for the well MW1 was drilled to a total depth of 30 feet using truck-mounted hollow stem auger drilling equipment. Groundwater was encountered at a depth of approximately 20 feet and later stabilized in the monitoring well at a depth of approximately 16 feet.

Soil samples were collected in the borehole at a minimum of five-foot intervals. The samples were collected using a California modified split spoon sampler lined with brass liners driven by a 140-pound hammer falling 30 inches. Blow counts were recorded every six inches. Soil samples collected from above the water table were retained in the brass liners. The ends of the brass liners were wrapped in aluminum foil, covered with plastic endcaps, labeled, and placed in ziplock bags. A total of one sample was selected for analysis. The brass liners were then placed in a cooler with ice, pending delivery to ChromaLab in San Ramon, California, a state-certified laboratory. Chain-of-custody documentation accompanied the samples to the laboratory. The soil samples were classified lithologically in accordance with the Unified Soil Classification System and standard geologic techniques.

No water sample results

The wells were constructed using two-inch diameter PVC pipe with 10 feet of screened PVC (0.020-inch slot) which was placed in the bottom of the borehole. A #2/16 Lonestar sack sand was poured into the annular space surrounding the PVC pipe to a height of two foot above the top of the slotted interval. A two-foot-thick layer of bentonite pellets was placed above the sand and hydrated. The remaining annular space was filled with a neat cement to one foot from the ground surface where concrete was emplaced to support the Christy Box.

The top of the well was secured with a locking plug and enclosed in a water-tight, locking vault. The hollow stem augers were steam cleaned prior to use in the boring. All steam cleaning rinseate generated during monitoring well installation and purge water from well development activities and drill cuttings were placed in 55-gallon DOT-approved drums and stored onsite pending appropriate disposal.

Copies of the Boring Logs, Well Construction Diagram and Water Well Driller Reports are attached in Appendix A.

Monitoring Well Development

The well was developed on December 12, 1990 by purging and over-pumping until the water discharged from the wells was clear. Prior to development, the well was monitored for depth to water and the presence of free product or sheen. No free product or sheen were observed in the well. Monitoring data are summarized in Table 1.

ANALYSIS OF SOIL SAMPLES

The soil sample(s) collected from the borehole for the monitoring well MW1 was analyzed for TPH-G using EPA Method 5030 in conjunction with modified EPA Method 8015, TPH-D using EPA Method 3550 in conjunction with modified EPA Method 8015, and for BTEX using EPA Method 8020. The laboratory analytical results of the soil samples collected from the boring did not detect any of the constituents.

The groundwater sample was analyzed for TPH-G, TPH-D, BTEX and TOG. Laboratory analyses of the groundwater sample did not detect any of the constituents, except for 0.63 ppm TPH-D.

The laboratory analytical results for the soil samples are summarized in Tables 2 and 3. Copies of the laboratory analytical results and chain-of-custody docmentation are attached.

GEOLOGY AND HYDROGEOLOGY

Regional geologic maps locate the subject site on Recent Alluvium consisting of unconsolidated clay, silt and sand with some gravel (Dibblee, 1980). Subsurface materials encountered in the boring drilled for MW1 consisted of approximately 17 feet of tank pit backfill underlain by approximately 13 feet of natural earth materials. The backfill consisted of light brown silty gravel. Natural earth materials underlying the backfill consisted of approximately three to four feet of brown silty clay underlain by one to two feet of wet interbedded layers of silty gravel and sandy silt. Below this interbedded sequence, gray silty clay was encountered to the total depth explored.

The Alameda County Flood Control and Water Conservation District (Zone 7) mapped the site within the Dublin Subbasin of the Livermore Valley Groundwater Basin. Groundwater elevation contours for the the shallow aquifer of this area for the Fall of 1990 indicated regional groundwater flow to the southeast. Within the depth explored, the main water bearing unit appears to be the interbedded sediments encountered between the approximate depths of 20 to 23 feet. Based on the observed rise of groundwater level in the Monitoring Well, this unit appears to be confined by the overlying clay soils.

CONCLUSIONS AND RECOMMENDATIONS

Native soil below the bottom of the former tank pit did not contain any petroleum hydrocarbons. A trace of diesel contamination was detected in the groundwater sample collected from MW1.

Based on the minimal diesel found in the groundwater, we recommend that one year of quarterly monitoring and sampling be performed in order to monitor the trend and concentration of diesel in groundwater. If the concentration does not increase, we will submit a closure request to the regulatory agencies.

DISTRIBUTION

We recommend that copies of this report be sent to Mr. Ravi Arulanantham of the Alameda County Environmentla Health Services. District. The Water Well Drillers Reports for the monitoring wells will be sent to the Department of Water Resources.

LIMITATIONS

This report was prepared solely for the use of Bedford Properties. The content and conclusions provided by Mittelhauser in this assessment are based on information collected during our investigation, including, but not limited to, visual site inspections; regulatory agencies and other pertinent individuals; a review of available public documents; subsurface exploration and laboratory testing of soil and groundwater samples and our professional judgment based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly-revealed conditions must be evaluated and may invalidate the conclusions of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials left onsite, in accordance with existing laws and regulations.

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. Mittelhauser is not responsible for the accuracy or completeness of information provided by other

individuals or entities which is used in this report. This report presents our professional judgment based upon data and findings identified in this report and the interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

Should you have any questions, please do not hesitate to contact us at (510)743-0335.

Sincerely,

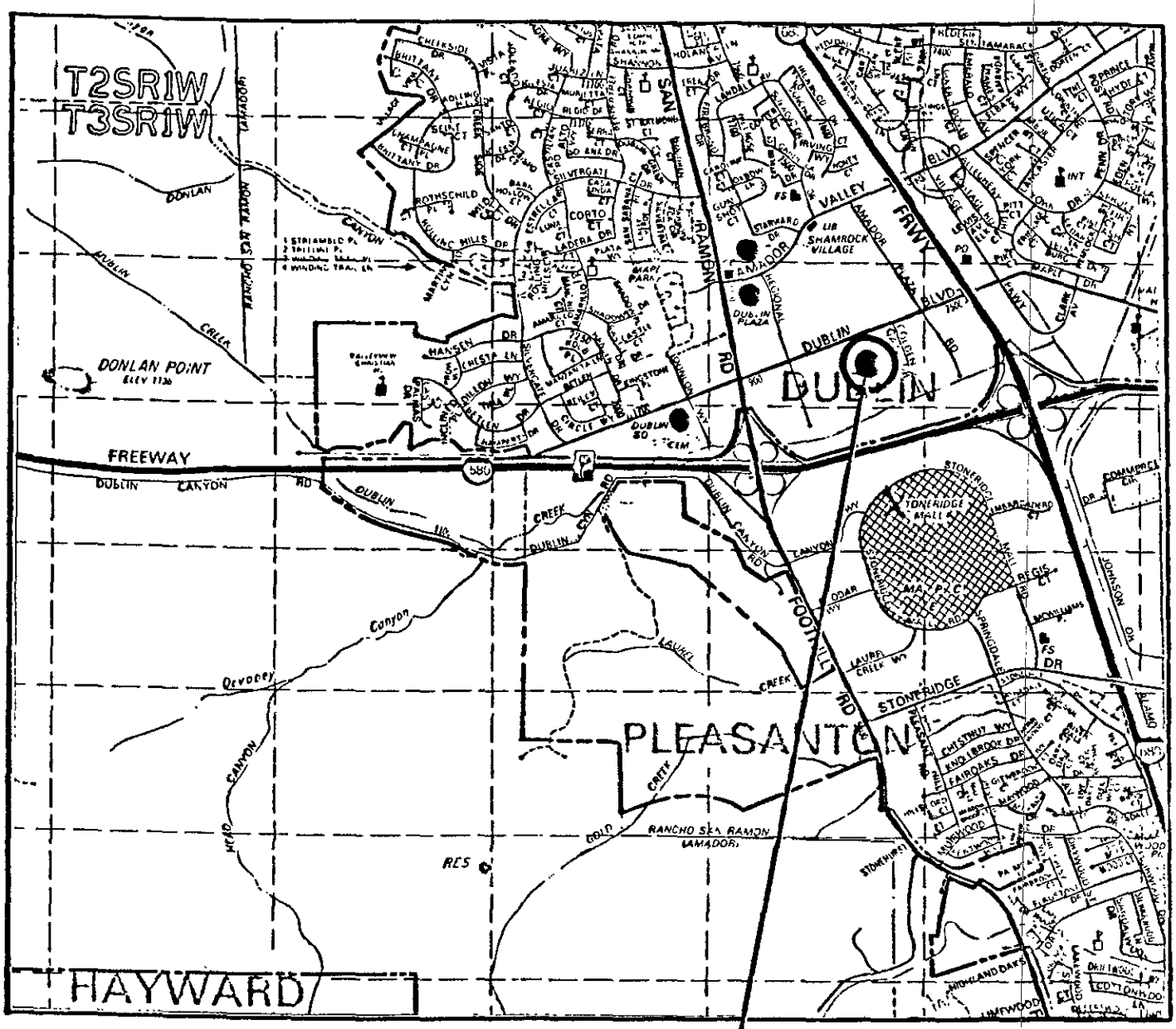
MITTELHAUSER CORPORATION

Parnian Kaboli
Project Manager/Principal Consultant

Dan Collins
Certified Engineeering Geologist
EG#1195, expires 6/30/92

RWP/PAK/skm
1753R1

Attachments: Site Location Map
Site Plan
Tables 1, 2 and 3
Boring Log
Monitoring Well Construction Diagram
Laboratory Analytical Results
Chain-of-Custody Documentation



BASE MAP
- ALAMEDA AND CONTRA COSTA
THE THOMAS GUIDE
1989 UPDATED EDITION

ENG	RWP
CHK BY	RWP
APP BY	
DRAWN	DLP
DATE	12/18/91
SCALE	
CAD NO	17530002
PRJ NO	P1753

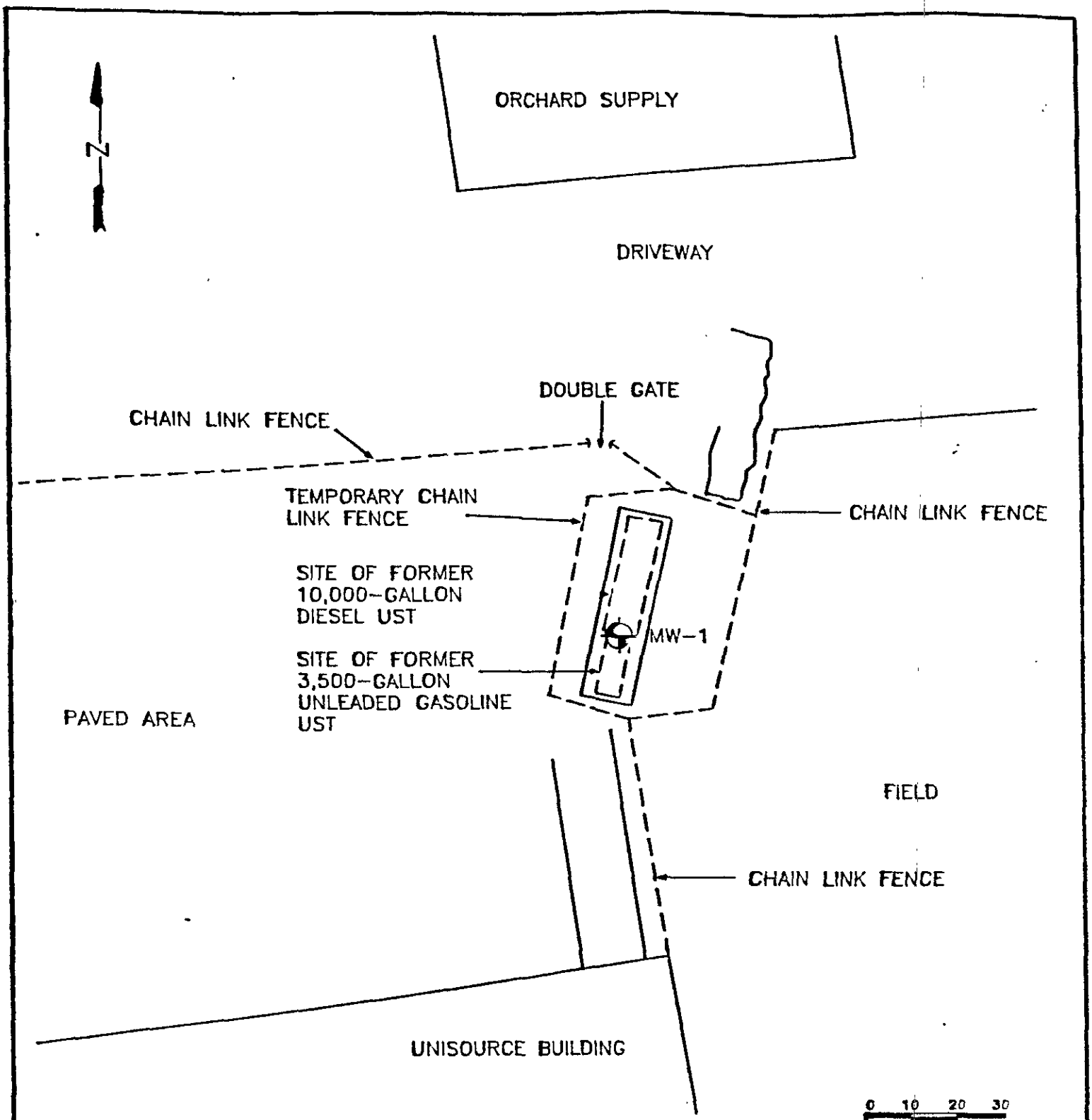
SITE LOCATION MAP

BEDFORD PROPERTIES, INC.
6700 GOLDEN GATE DRIVE
DUBLIN, CALIFORNIA

MITTELHAUSER CORPORATION

DRWG NO FIGURE 1

REV 0



ENG	URIAH, INC.
CHK. BY	MMB
APP. BY	
DRAWN	SKM
DATE	12/18/91
SCALE	AS SHOWN
CAD NO	17530001
PRJ NO	P1753

MITTELHAUSER CORPORATION

SITE PLAN

BEDFORD PROPERTIES, INC.
6700 GOLDEN GATE DRIVE
DUBLIN, CALIFORNIA

DRWG NO

FIGURE 2

REV 0

TABLE 1

MONITORING WELL DEVELOPMENT DATA
December 2, 1991

WELL #	DEPTH TO WATER (FEET)	FREE PRODUCT THICKNESS (FEET)	SHEEN PRESENCE	WATER REMOVED (GALLONS)
MW-1	16.35	-0-	None	110

BEDFORD PROPERTIES, INC.
DUBLIN, CALIFORNIA
MW INSTALLATION REPORT

JANUARY 1992
REV: D0
1753TBL2.WK1

TABLE 2

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

SAMPLE NUMBER	SAMPLE COLLECTION DEPTH (FEET)	TOTAL PETROLEUM HYDROCARBONS AS DIESEL	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES
MW.1	20.5	ND	ND	ND	ND	ND	ND
Detection Limits:		1.0	1.0	0.0050	0.0050	0.0050	0.0050

* = TOG was not detected

— Indicates analysis not performed.

ND = Non detectable.

Results in parts per million (ppm) unless otherwise indicated.

TABLE 3

SUMMARY OF WATER SAMPLE ANALYTICAL RESULTS

SAMPLE NUMBER	TOTAL PETROLEUM HYDROCARBONS AS DIESEL	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE	BENZENE	TOLUENE	ETHYL BENZENE	XYLENES
MW.1	0.63	ND	ND	ND	ND	ND
Detection Limits:	1.0	1.0	0.0050	0.0050	0.0050	0.0050

* = TOG was not detected.
-- Indicates analysis not performed.
ND = Non detectable.
Results in parts per million (ppm) unless otherwise indicated.

MITTELHAUSER corporation

BORING NO.: MW-1 PROJECT NO.: 1753-05 PROJECT NAME: BEDFORD – 6700 GOLDEN GATE DRIVE, DUBLIN

BORING LOCATION: TANK PIT AT TANK JUNCTURE ELEVATION AND DATUM: NA

DRILLING AGENCY: HDW DRILLING DRILLER: ANIBEL

DRILLING EQUIPMENT: 8" DIAMETER HOLLOW-STEM AUGER

COMPLETION DEPTH: 30 FEET BEDROCK DEPTH: NA

FIRST WATER DEPTH: 20 FEET NO. OF SAMPLES: 1

DATE & TIME STARTED.	DATE & TIME FINISHED.
11/20/91 10:25 am	11/20/91 11:20 am
LOGGED BY: R. PAPLER	CHECKED BY:

DEPTH (ft.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID/FID	REMARKS
0	6" ASPHALT		See attached diagram.			Borehole drilled using 8" OD hollow-stem augers.
	SILTY GRAVEL (GW): light brown, damp, becoming moist with depth, gravel fine to coarse and well rounded (Fill).	GW				Samples collected using a 2 1/2" OD California-modified split-spoon sampler lined with brass tubes driven by a 140# downhole hammer falling 30".
5						
10	Gradational color change to grayish brown with slight increase in moisture.					
15	Drilling water at ~17 feet.	▽				Groundwater later stabilized at 16.26 feet, 1:18 pm.
	SILTY CLAY (CH): brown, moist, firm, plastic.	CH				
20	SANDY SILT (ML/SM) interbedded with SILTY GRAVEL (GW); brown, wet, gravel: fine and well rounded, medium dense with some orange and gray mottling.	▽ ML/SM & GW		5 9 4		Groundwater first encountered at 20 feet.
	SILTY CLAY (CH): gray, wet, soft, plastic, micropores.	CH				
25				1 3 5		Borehole terminated at 30'. 2" diameter PVC well with 10 feet of screen constructed in borehole 11/20/91.
				1 3 3		Boring terminated at 30 feet at 11:20 a.m.
30						

Screen

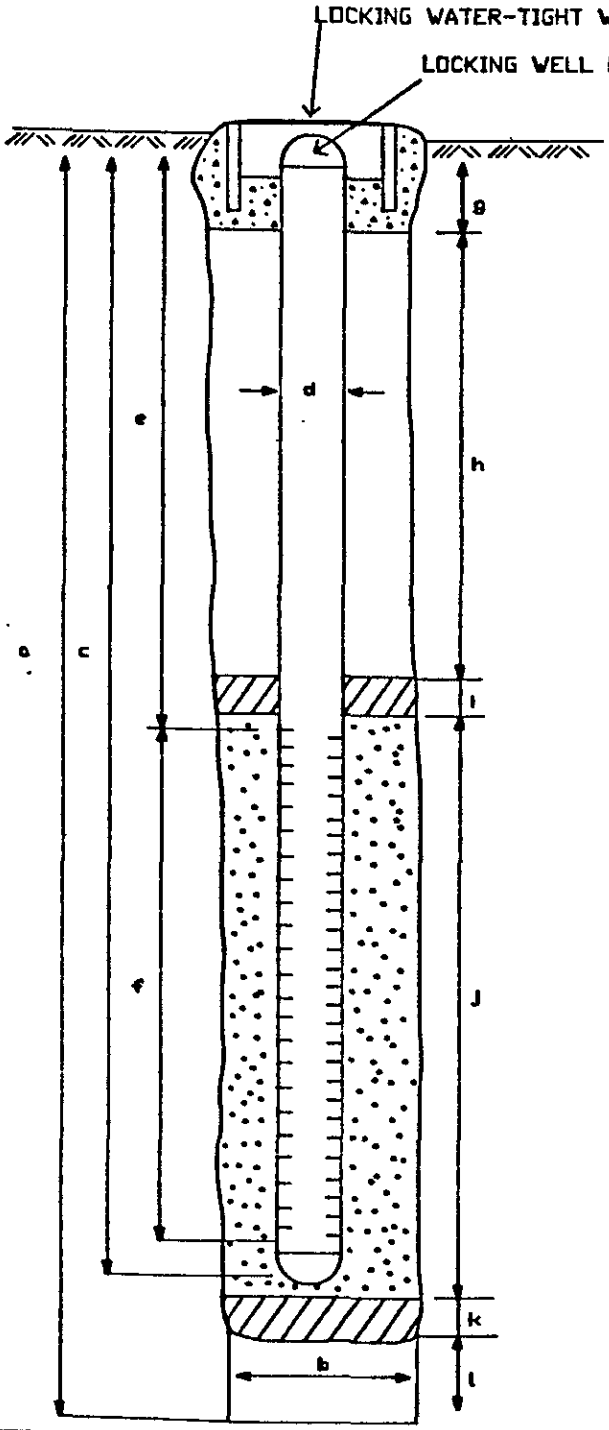
WELL CONSTRUCTION DETAILS

PROJECT NUMBER 1753-05 BORING/WELL NO. MW-1

PROJECT NAME Bedford/Dublin TOP OF CASING ELEV. Not Measured

COUNTY Alameda GROUND SURFACE ELEV. Not Measured

WELL PERMIT NO. 91650 DATUM Not Applicable



EXPLORATORY BORING

a. Total depth 30 FT.

b. Diameter 8 IN.

Drilling method Hollow Stem Auger

WELL CONSTRUCTION

c. Casing length 29.5 FT.

Material Schedule 40 PVC

d. Diameter 2 IN.

e. Depth to top perforations 20 FT.

f. Perforated length 10 FT.

Perforated interval from 20 to 30 FT.

Perforation type Factory

Perforation size 0.020 inches

g. Surface seal 1 FT.

Seal material Concrete

h. Backfill 17 FT.

Backfill material Cement

i. Seal 2 FT.

Seal material Bentonite Pellets

j. Gravel pack 18 FT.

Pack material Lonestar 2/12 Sand

k. Bottom seal 0 FT.

Seal material NA

l. Stuff in bottom of borehole 0 FT.

CHROMALAB, INC.

Analytical Laboratory (E694)

5 DAYS TURNAROUND

November 27, 1991 ChromaLab File No.: 1191209

MITTELHAUSER CORPORATION

Attn: Roger W. Papler

RE: One soil sample for Gasoline/BTEX, Diesel, and Oil & Grease analyses

Project Name: BEDFORD / DUBLIN
Project Number: 1753.05
Date Sampled: Nov. 16, 1991 Date Submitted: Nov. 20, 1991
Date Extracted: Nov. 26, 1991 Date Analyzed: Nov. 26, 1991

RESULTS:

Sample I.D.	Gasoline (mg/kg)	Diesel (mg/kg)	Benzene (µg/kg)	Toluene (µg/kg)	Ethyl Benzene (µg/kg)	Total Xylenes (µg/kg)	Oil & Grease (mg/kg)
1753-MW1-20.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE REC.	98.0%	92.6%	95.6%	99.4%	100.5%	101.4%	----
DET. LIMIT	1.0	1.0	5.0	5.0	5.0	5.0	10
METHOD OF ANALYSIS	5030/ 8015	3550/ 8015	8020	8020	8020	8020	5520 E&F

ChromaLab, Inc.

David Duong
Chief Chemist

Eric Tam (by DD)
Eric Tam
Laboratory Director

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798
Federal ID #68-0140157

MITTELHAUSER corporation

2401 CROW CANYON ROAD, SUITE 100
SAN RAMON, CA 94583
(415) 743-0335

CHAIN OF CUSTODY RECORD

4257

PAGE 1 OF 1

PROJECT NUMBER:	PROJECT NAME:
1753.05	Bedford / Dublin 6700 Koldenbate

SAMPLED BY: (PRINTED AND SIGNATURE)
Roger W. Papler Roger Papler

SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION	NUMBER OF CONTAINERS	ANALYSIS(ES): TPH-Gas, BTEX	TPH-Diesel	TOG (Gravimetric)	Organic Lead		PRESERVATIVE	REMARKS
1753-MW-1-20.5	30 Nov 91		Soil	Tank pit (e tank juncture)	1	X	X	X	X		Ice	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
Roger Papler	11/20/91	13:55	Gary Cooke
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)

TOTAL NO. OF SAMPLES (THIS SHIPMENT)	1
TOTAL NO. OF CONTAINERS (THIS SHIPMENT)	1

LABORATORY: Chroma Lab

LABORATORY CONTACT: Eric

LABORATORY PHONE NUMBER: (510) 831-1788

SAMPLE ANALYSIS REQUEST SHEET ATTACHED: ( )YES ( )NO

DISTRIBUTION: WHITE, MITTELHAUSER CORPORATION
GOLD, LABORATORY
PINK, CLIENT
GREEN, PROJECT FILE

REMARKS: Normal TAT