BUSICK - GEARING PROPERTIES

6335 SCARLETT CT.

DUBLIN, CALIF. 94566

91 MAR -4 AM 11:02

February 28, 1991

Alameda County Health Agency
Division of Hazardous Materials
80 Swan Way , Room 200
Oakland, Ca. 94621

Attention: Ravi Arulanantham Ph.D.

Dear Ravi:

Enclosed herewith is a copy of the report prepared by Clayton Environmental Consultants dated December 12, 1990.

I apologise for the delay. I was under the impression that Clayton had forwarded a copy to you.

Perhaps after studying the report, you will advise me if it will still be necessary to proceed with further monitoring wells or if we may continue the monitoring with one well, as you originally suggested.

Sincerely,
BUSICK-GEARING PROPERTIES

Doreen M. Green

Enc.

Western Operations

1252 Quarry Lane
Pleasanton, CA 94566
(415) 426-2600
Fax (415) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

Subsurface Investigation
at
Busick Air
6341 Scarlett Court
Dublin, California

Clayton Project No. 31820.00

December 12, 1990

Executive Summary

This report presents the results of Clayton's subsurface investigation at Busick Air located at 6341 Scarlett Court in Dublin, California. Ms. Doreen Green of Busick Air authorized the project on October 10, 1990, by accepting Clayton's Proposal No. 90-B-247 and its accompanying terms and conditions. The project was initiated at the request of Mr. Ravi Arulanantham, of the Alameda County Department of Environmental Health (ACDEH), to monitor and define the vertical and lateral extent of chlorinated hydrocarbon contamination recognized in the soil and groundwater near the excavation of a former sump. This investigation included the installation of three boreholes, BH-1, BH-2, and BH-3, and one monitoring well, MW-1. Soil and groundwater samples collected during field activities were analyzed for suspect chlorinated solvent constituents.

Water samples taken from the boreholes and the monitoring well were found to contain chlorinated solvents. The soil sample contained a very low concentration of trichloroethene (TCE). Based on these analytical results, it appears that groundwater has been impacted by the chlorinated solvents that were stored in the sump. The concentration of the contaminants decrease as the distance from the sump increases.

Clayton discussed the results of sample analysis with Mr. Arulanantham, on December 4, 1990. Based on this conversation, we recommend installation of four more boreholes and two more monitoring wells to further assess the lateral extent of the contamination.

CONTENTS

1.0 INTRODUCTION

Clayton Environmental Consultants, Inc. was retained by Busick Air to perform a subsurface investigation at 6341 Scarlett Court in Dublin, California (Figure 1). Ms. Doreen Green of Busick Air authorized the project on October 10, 1990, by accepting Clayton's Proposal No. 90-B-247 and its accompanying terms and conditions. This work was based on the recommendations provided by Mr. Ravi Arulanantham, of the Alameda County Department of Environmental Health (ACDEH), and on guidelines for investigation of fuel leak sites by the Regional Water Quality Control Board (RWQCB). The purpose of this project was to monitor and define the lateral and vertical extent of the chlorinated hydrocarbon contamination identified in soil and groundwater sampled during excavation of the former sump.

Clayton conducted a site walk with Mr. Arulanantham on October 12, 1990. During the visit, Mr. Arulanantham requested installation of three boreholes in locations that he designated, and collection of water samples from the boreholes. Mr. Arulanantham also requested installation of one monitoring well within 10 feet downgradient of the former sump location (Figure 2).

1.1 BACKGROUND

Mr. Bruce Jacobson of Decon Environmental Services contacted Mr. Alan Gibbs, Clayton supervisor of geology, after Decon had excavated a sump at the site. After the sump was removed, the excavation was enlarged until a depth of approximately 6 feet was reached and groundwater was encountered. The sump had evidently been used by the previous tenant. Decon collected water samples from the excavation on July 18, 1990, and then pumped and treated the water several times. Water samples were taken again on September 14, 1990. Laboratory analytical results for the before and after water samples indicated that pumping had reduced the chlorinated solvent concentrations (Appendix F). However, chlorinated solvent concentrations in the groundwater did not meet California Regional Water Quality Control Board (RWQCB) Drinking Water Standards.

1.2 SCOPE OF WORK

Clayton installed three boreholes and one monitoring well downgradient of the former sump location, based on regional groundwater flow direction, to monitor and define the extent of groundwater contamination. The locations of the boreholes and the monitoring well are shown in Figure 2. A groundwater sample was collected from all three boreholes and the monitoring well. A soil sample was taken at a depth of 5 feet during drilling of monitoring well MW-1. The soil and groundwater samples were analyzed for volatile organics.

2.0 SITE DESCRIPTION

The subject site is located at 6341 Scarlett Court, east of the intersection of Dougherty Road and Interstate Highway 580 on the east edge of Dublin, California. The site location is shown in Figure 1. The site is paved. There are three buildings, including two warehouses, onsite. The sump had been located at the southeast corner of the warehouse that is directly behind the Busick Air office building.

During drilling, groundwater was encountered between 12.5 and 15.5 feet below the ground surface. After we hit groundwater, the water level in the boreholes and monitoring well rose to approximately 6 feet below the surface. The site is located within the San Ramon subbasin of the Livermore Valley groundwater basin. Soil survey maps by the U.S. Department of Agriculture show that the surface soil in the site area is Clear Lake clay. This thick clay has slow permeability and high capacity for holding available water. The shallow groundwater in the site vicinity is expected to flow to the southwest, generally following the local topography. The groundwater gradient at nearby Valley Nissan, at 5787 Scarlett Court was calculated to be 0.04 ft/100 ft toward the south-southwest. The groundwater gradient at Scottsman Corporation, at 6055 Scarlett Court, is 0.03 ft/100 ft to the south-southwest.

3.0 FIELD PROCEDURES

Clayton conducted activities related to the installation of monitoring well MW-1 and three boreholes, BH-1, BH-2, and BH-3, at the site on November 12, 1990. One soil sample was collected from 5 feet below ground surface during the drilling of MW-1. Water samples were collected from the three boreholes on November 12, 1990. A groundwater sample was collected from MW-1 on November 19, 1990. The following subsections address the completion of each of the project tasks.

3.1 SOIL BOREHOLE INSTALLATION AND SAMPLING

Clayton supervised the drilling of four boreholes, one of which was converted into monitoring well MW-1. A copy of the well construction log is included as Appendix A. Aqua Science Engineers of San Ramon, California, provided borehole and well installation services under subcontract to Clayton.

The boreholes were drilled using a mobile drilling rig. Before work commenced, the augers and soil sampler were steam cleaned. The augers were steam cleaned between boreholes. The soil sampler was cleaned after the soil sample was taken.

The borehole locations were first predrilled with a hand auger because they were close to a transformer and an underground electric line. The originally designated location of MW-1 was within 3 feet of an electric line marked by Pacific Gas & Electric (PG&E), so the monitoring well was relocated slightly to the north and east. The monitoring well was still within 10 feet of the sump excavation area. Boreholes BH-1,

BH-2, and BH-3 were within 15 feet downgradient or crossgradient of the monitoring well. The boreholes and the monitoring well were drilled until water was encountered, approximately 15 feet below ground surface (bgs).

During the drilling, the soil characteristics were logged in the field by a Clayton geologist. Distinguishing features such as color, odor, and relative soil moisture content were noted. Appendix B presents the borehole logs prepared while drilling was in progress. Drilling activities were conducted in accordance with RWQCB and ACDEH guidelines, under the supervision of a geologist registered in the State of California.

A soil sample was collected from 5 feet bgs in the monitoring well borehole for analysis. To collect an undisturbed soil sample, three brass tubes were placed in an 18-inch, split-barrel Sprague and Hennwood sampler, which was attached to the drilling rod. Once the sampler and rod were in position, a 140-pound hammer positioned 30 inches above the sampling equipment was allowed to free-fall onto the rod, advancing the sampling assembly to obtain an undisturbed sample. This technique was used to drive the sampler 18 inches into undisturbed soil. The sampler was then pulled from the borehole and disassembled, and the three brass tubes were separated for visual inspection and labeling.

The sample was collected in a 2.5-inch diameter brass tube that is 6 inches long. The tube ends were covered with aluminum foil, capped with plastic caps, and sealed with electrical tape, and the sample was labeled and placed into a pre-cooled ice chest chilled to 4°C for shipment to Clayton's state-certified environmental laboratory in Pleasanton, California. Upon delivery to the laboratory, a chain-of-custody form was completed listing analyses required. Soil samples were not collected from boreholes BH-1, BH-2, and BH-3.

Waste drill cuttings were placed into Department of Transportation (DOT)-approved drums for proper disposal at a later date. These drums were labeled with the name of the site, address, well number, and the drum contents, and were left at the site.

3.2 MONITORING WELL CONSTRUCTION AND SAMPLING

When we reached the desired depth of 15 feet in monitoring well MW-1, a 4-inch diameter PVC schedule 40 well casing and screen (0.010-inch) was installed into the borehole. All well casings, screens, and bottom plugs were precleaned prior to installation into the borehole. Sand was added into the annular space to 1 foot above the screened section of the casing. A 1-foot bentonite seal was placed above the sand pack by hydrating bentonite pellets. A neat cement seal was then placed over the bentonite plug to ground surface. A watertight locking box was installed over the well head to prevent tampering or surface runoff from entering the well. Details of the well construction are shown in Figure 3.

Temporary monitoring wells were installed into boreholes BH-1, BH-2, and BH-3 by placing 2-inch PVC schedule 40 well casing and screen (0.010-inch) in the boreholes. The wells were allowed to stabilize for at least 1 hour, and were then purged of 2 to 3 well volumes prior to sampling in accordance with ACDEH guidelines. The PVC was then removed from the boreholes and the holes were backfilled with a cement slurry to 1 foot below the surface. A concrete plug was placed above the grout to the surface.

The monitoring well was developed on November 16, 1990, after waiting at least 72 hours after installation. The well was developed using an electrical submersible pump to remove silt from the sand pack. The purged water is being stored onsite in a DOT-approved drum pending analytical results to determine proper disposal methods.

On November 19, 1990, 72 hours after development, groundwater was sampled from monitoring well MW-1, using Alameda County Water District guidelines for groundwater sampling and testing. Water samples were placed in appropriate containers provided by Clayton's state-certified laboratory, labeled, and placed into an ice chest precooled to 4°C for shipment to Clayton's laboratory. One trip blank was provided in accordance with Clayton's quality assurance/quality control (QA/QC). Upon delivery to the laboratory, a chain-of-custody form was completed listing analyses required. Chain-of-custody forms are included as Appendix C. Water sampling survey forms are in Appendix D.

4.0 LABORATORY RESULTS AND DATA ANALYSES

Samples were analyzed for volatile organics by the following methods:

- EPA Method 8010, for combined purgeables (soil)
- EPA Method 601/602, for combined purgeables (water)

The laboratory reports are enclosed as Appendices E and F.

4.1 SOIL SAMPLE ANALYSIS

Trichloroethene (TCE), at a concentration of 0.04 mg/kg (approximately equivalent to parts per million), was the only compound detected in the soil sample taken from a depth of 5 feet in monitoring well MW-1.

4.2 GROUNDWATER SAMPLES ANALYSES

All of the boreholes and the monitoring well contained purgeable halocarbons in the groundwater samples. Clayton notes that water sampled from a borehole does not accurately represent chemical constituents in the groundwater because the samples were taken before groundwater had stabilized in the well and may contain high concentrations of suspended solids. Therefore the numbers listed below for the

boreholes may represent higher chemical concentrations than the true chemical content of the groundwater.

Analyte	BH-1	BH-2	BH-3	MW-1	Maximum Contaminant Level *	State Action Levels **
Trans-1,2-Dichloroethene	ND	ND	38	ND	10	10
Cis-1,2-Dichloroethene	ND	42	570	4,400	6	6
1,2-Dichloroethene (total)	ND	40	610	4,400	--	--
1,2-Dichloroethane	150	160	ND	ND	0.5	--
Trichloroethene TCE	5	1,500	530	10,000	5	--
Tetrachloroethene	ND	50	ND	ND	5	--

Table Notes
ND = Not detected at or above the limit of detection
-- = Information not available or applicable
* = Department of Health Resources (DHS) and Environmental Protection Agency (EPA)
** = DHS
All values in parts per billion (ppb)
Limits of Detection are included with the laboratory analyses

Monitoring well MW-1, installed in the borehole closest to the sump excavation area, showed the highest contaminant concentrations in groundwater. TCE was the only chemical constituent analyzed for that was present in all of the samples. Borehole BH-1 had the fewest contaminants and the lowest concentrations. This borehole is crossgradient from the sump area. Boreholes BH-2 and BH-3, which are downgradient of the sump area, had higher concentrations of TCE and other constituents than BH-1, but significantly lower concentrations than those found in monitoring well MW-1.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Water samples taken from the boreholes and the monitoring well were found to contain chlorinated solvents. The soil sample contained a very low concentration of TCE. Based on these analytical results, it appears that groundwater has been impacted by the chlorinated solvents that were kept in the sump. The contaminant concentration decreases as the distance from the sump increases.

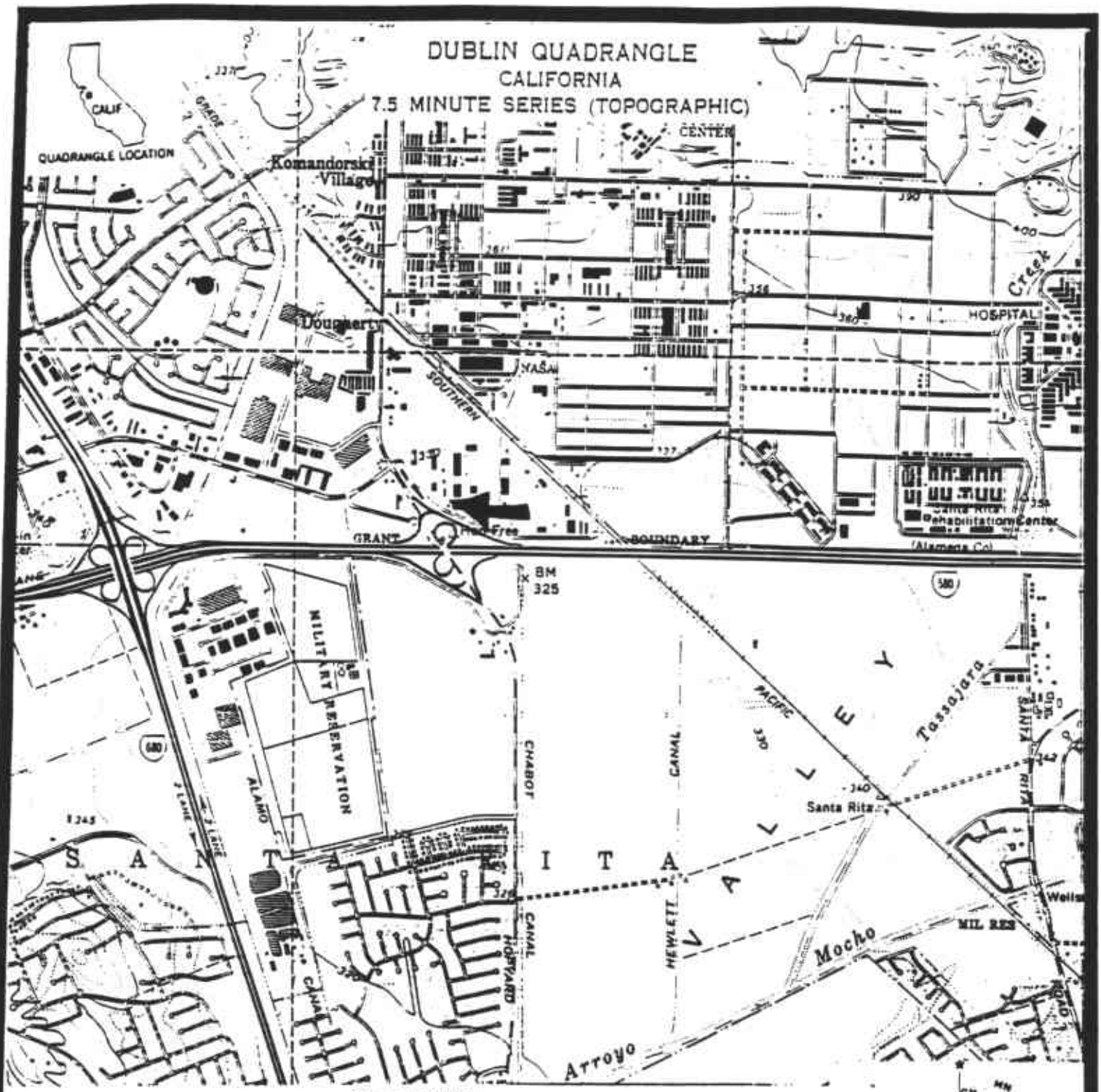
Clayton discussed the results of sample analyses with Mr. Arulanantham, on December 4, 1990. Based on this conversation, we recommend that four more boreholes and two more monitoring wells be installed to further assess the lateral extent of the contamination.

Limitations

The information and opinions rendered in this report are exclusively for use by Busick Air. Clayton Environmental Consultants, Inc. will not distribute this report without your consent except as may be required by law or court order. The information and opinions expressed in this report are given in response to our limited assignment and should be evaluated and implemented only in light of that assignment. We accept responsibility for the competent performance of our duties in executing the assignment and preparing this report in accordance with the normal standards of our profession but disclaim any responsibility for consequential damages.

This report prepared by: Robyn Seymour
Robyn Seymour
Geologist

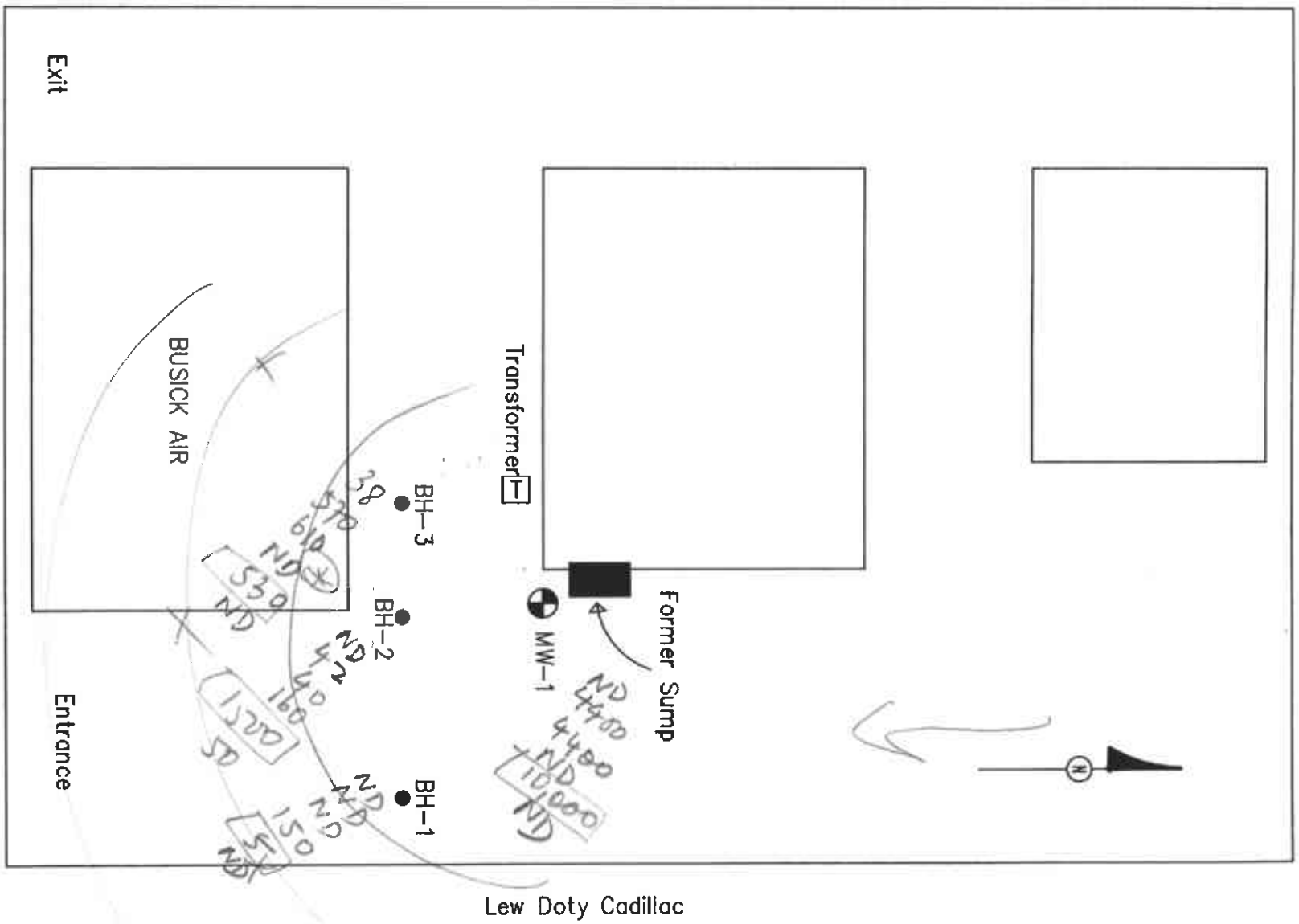
This report reviewed by:
Alan D. Gibbs, R.G.
Supervisor, Geology Group



Clayton Environmental Consultants, Inc.

Figure 1

Site Location Map
Busick Air
6341 Scarlett Court
Dublin, California



LEGEND

- Monitoring Well
- Borehole

(not to scale)

Borehole/Monitoring Well Locations
Busick Air
6341 Scarlett Court
Dublin, California

Clayton Project No. 31820.00

Figure 2

31820-01-16

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EXPLANATION

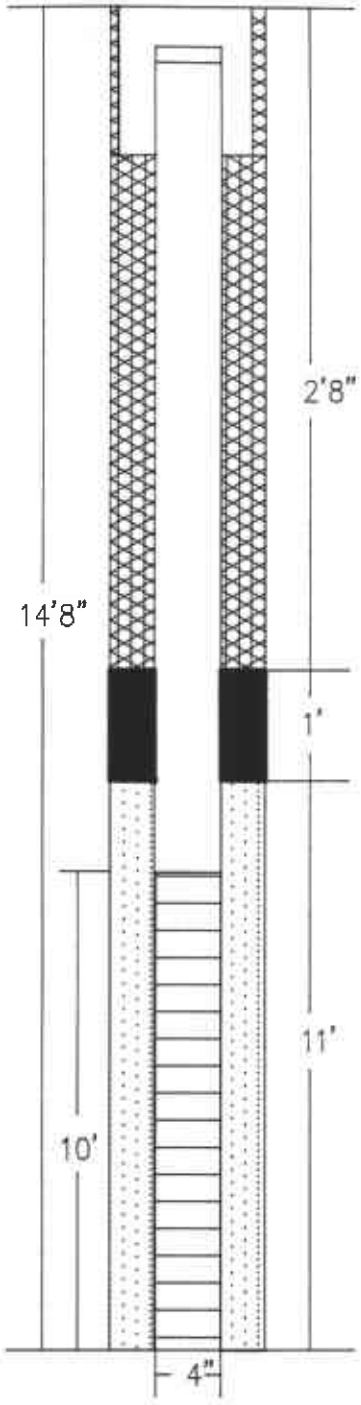
Concrete

Bentonite

Sand

4" PVC
Schedule 40
0.01" Slotted
Screen

4" PVC
Schedule 40
Solid Casing



Well Schematic for Monitoring Well (MW-1)
Busick Air
6341 Scarlett Court
Dublin, California

(not to scale) Clayton Project No. 31820.00

Figure 3

31820-00-16

Clayton
ENVIRONMENTAL
CONSULTANTS

APPENDIX A

WELL CONSTRUCTION PERMIT (MW-1)

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE ♦ PLEASANTON, CALIFORNIA 94566 ♦ (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 6341 SCARLETT COURT, DUBLIN

CLIENT
Name BIESICK AIR CONDITIONING
Address 6341 SCARLETT Phone 828-1780
City DUBLIN Zip

APPLICANT
Name CLAYTON ENVIRONMENTAL CONSULTANTS
Address 1252 QUARRY LN. Phone 426-2670
City PLEASANTON Zip 94566

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	___	General	___
Water Supply	___	Contamination	X
Monitoring	X	Well Destruction	___

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. 487000

WELL PROJECTS
Drill Hole Diameter 10 in. Maximum
Casing Diameter 4 in. Depth 15 ft.
Surface Seal Depth * ft. Number MW-1

GEOTECHNICAL PROJECTS
Number of Borings 3 Maximum
Hole Diameter 8 in. Depth 15 ft.

ESTIMATED STARTING DATE Nov. 12, 1990
ESTIMATED COMPLETION DATE Nov. 12, 1990

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [signature] RG Date Nov. 2, 1990

FOR OFFICE USE

PERMIT NUMBER 90662
LOCATION NUMBER

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

(B.) WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

(C.) GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

* Surface seal depth is to be a minimum of 5 feet, as discussed with Robyn Seymour, 7 November 1990.

Approved [signature] Date 7 Nov 90
Todd N. Wendler

121989

APPENDIX B

BOREHOLE LITHOLOGIC LOGS

Clayton
ENVIRONMENTAL CONSULTANTS

LOG OF EXPLORATORY BORING

Project No.: 31820.00 Date: 11/12/90
Client: Busick Air
Location: 6341 Scarlett Court
Logged By: R. Seymour Driller: Aqua Science

BORING NO. MW-1
Sheet 1 of 1

Field Location of Boring:
South of warehouse
Ground Elevation: Datum:

Drilling Method: Mobile B-61, hollow-stem auger
Hole Diameter: 10"
Casing Installation Data: TD = 14' 8", 10' screen, 4' 8" blank

Water Level	5.5				
Time	2:50				
Date	11/12/90				

Drilling Rate (ft/min)	PID — OVA (ppm)	DEPTH	SAMPLE	Soil Group Symbol (usca)	Litho-graphic Symbol	DESCRIPTION
						8" Asphalt
		1				6" Base rock
		2				
						Clay, grey-black, stiff, slightly moist
	2.7	3				
		4				
	4.0					
		5				
			4			Sample MW-1 @ 5'
		6	5	CL		
			6			
		7				Clay, grey-brown, stiff, moist
		8				
		9				
		10				
		11				
	26.4					
		12				
				▽		Hit water
		13				
		14				
		15				TD = 15'
		16				6 bags sand
		17				
		18				

Clayton
ENVIRONMENTAL CONSULTANTS

LOG OF EXPLORATORY BORING

Project No.: 31820.00 Date: 11/12/90
Client: Busick Air
Location: 6341 Scarlett Court
Logged By: R. Seymour Driller: Aqua Science

BORING NO. BH-1

Sheet 1 of 1

Field Location of Boring:

Southeast of sump area

Ground Elevation: Datum:

Drilling Method: Mobil B-61, hollow-stem auger
Hole Diameter: 7-3/4"
Casing Installation Data: Backfilled

Water Level	6'				
Time	6:00				
Date	11/12/90				

Drilling Rate (ft/min)	PID — OVA (ppm)	DEPTH	SAMPLE	Soil Group Symbol (uscs)	Litho-graphic Symbol	DESCRIPTION
						Asphalt 8"
		1				
	1.2	2				Clay, grey-black, stiff, moist, no odor
		3				
		4				
		5				
		6				
				CL		
		7				
						Clay, color change to brown, plastic, firm, moist
		8				
		9				
		10				
	1.2					
		11				
		12				
		13				
		14				
	0.0					
		15		▽		Hit water
						TD = 17'
		16				
		17				
		18				

Clayton
ENVIRONMENTAL CONSULTANTS

LOG OF EXPLORATORY BORING

Project No.: 31820.00
Client: Busick Air
Location: 6341 Scarlett Court
Logged By: R. Seymour
Date: 11/12/90
Driller: Aqua Science

BORING NO. BH-2

Sheet 1 of 1

Field Location of Boring:

South of sump area

Ground Elevation: Datum:

Drilling Method: Mobil B-61, hollow-stem auger
Hole Diameter: 7-3/4"
Casing Installation Data: Backfilled

Water Level	6.4				
Time					
Date	11/12/90				

Drilling Rate (ft/min)	PID — OVA (ppm)	DEPTH	SAMPLE	Soil Group Symbol (uscs)	Litho-graphic Symbol	DESCRIPTION
						8" Asphalt
		1				4" Base rock
		2				Clay, black-brown, stiff, plastic, moist
		3				
		4				
		5				
		6		CL		
						Color change to brown
		7				
		8				
		9				
		10				
		11				
		12				
		13				
		14				
		15		▽		Hit water
						TD = 15'
		16				
		17				
		18				

Clayton
ENVIRONMENTAL
CONSULTANTS

LOG OF EXPLORATORY BORING

Project No.: 31820.00
Client: Busick Air
Location: 6341 Scarlett Court
Logged By: R. Seymour
Date: 11/12/90
Driller: Aqua Science

BORING NO. BH-3

Sheet 1 of 1

Field Location of Boring:

Southwest of sump area

Ground Elevation: Datum:

Drilling Method: XMobil B-61, hollow-stem auger
Hole Diameter: 7-3/4"
Casing Installation Data: Backfilled

Water Level	6'				
Time					
Date	11/12/90				

Drilling Rate (ft/min)	PID — OVA (ppm)	DEPTH	SAMPLE	Soil Group Symbol (uscs)	Litho-graphic Symbol	DESCRIPTION
						8" Asphalt
		1				4" Base rock
		2				
		3				Clay, black-grey, dense, plastic, slightly moist
		4				
		5				
		6				
		7		CL		
		8				
		9				
		10				Color change to grey-brown
		11				
		12				
		13				
		14				
		15		▽		Hit water TD = 15'
		16				
		17				
		18				

APPENDIX C

CHAIN-OF-CUSTODY FORMS

Clayton

ENVIRONMENTAL CONSULTANTS

A Marsh & McLennan Company

REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only	Page ____ of ____		
Project No.			
Batch No.	9011112		
Client No.			
Date Received	11/13/90	By	[illegible]
Date Logged In	↓	By	↓

Purchase Order No.
Client Job No. 31820

SEND INVOICE TO
Name: Robyn Seymour
Company: Busick Air
Dept.
Address
City, State, Zip

REPORT RESULTS TO
Name: Robyn Seymour
Title
Company: Clayton
Dept.
Mailing Address
City, State, Zip
Telephone No.
Telefax No.

Date Results Required:
Rush Charges Authorized? ☐ Yes ☐ No

Special Instructions: (method, limit of detection, phone results, rush results, etc.)

* Explanation of Preservative:

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added*)

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number of Containers	8020 / 8010	Purgeables 601/602										FOR LAB USE ONLY
BH-1	11/12/90	water	2x40ml	2		X										-01A B
BH-2		↓	↓	↓		X										-02 ↓
* BH-3		↓	↓	↓		X										-03 ↓
Trip blank (0102990)		↓	1x40ml	1		X										-04
MW-1, 5'	11/12/90	soil	2x6 oc	↓	X											-05 ↓

CHAIN OF CUSTODY (if required)
Relinquished by: Robyn Seymour — Date/Time 11/13/90 0933
Received by: — Date/Time
Relinquished by: — Date/Time
Received at lab by: Rebecca L Turner Chiarello — Date/Time 11/13/90 9:30
Method of Shipment:
Sample condition upon receipt: ok

* (air bubbles in) both vials

Authorized by: ____________ Date ________
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive, Novi, MI 48050, (313) 344-1770
Raritan Center, 160 Fieldcrest Ave., Edison, NJ 08837, (201) 225-6040
400 Chastain Center Blvd., N.W., Suite 490, Kennesaw, GA 30144, (404) 499-7500
1252 Quarry Lane, Pleasanton, CA 94566, (415) 426-2600

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

7/89 20K

Clayton ENVIRONMENTAL CONSULTANTS

A Marsh & McLennan Company

REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only	Page 1 of 1
Project No.	
Batch No.	
Client No.	
Date Logged In 11/ /90	By TC

REPORT RESULTS TO

Name Robin Somerville | Title

Company | Dept.

Mailing Address

City, State, Zip

Telephone No. | Telefax No.

Purchase Order No. | Client/Job No.

SEND INVOICE TO

Name

Company | Dept.

Address

City, State, Zip

Date Results Required: | Rush Charges Authorized? ☐ Yes ☐ No | Phone Results ☐

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative: Pres. HCl

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *)

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number of Containers	601	602	Hold	FOR LAB USE ONLY
MW-4	11-19-90	water	40 mL	3	XP	XP		01, 2, 3
Trip Blank (010-990)		↓	↓	1			X	

CHAIN OF CUSTODY

Relinquished by: M Spurgeon | Date/Time 11/19/90 4:30 PM

Relinquished by: | Date/Time

Method of Shipment:

Received by: | Date/Time

Received at Lab by: [illegible] | Date/Time 11/20/90 [illegible]

Sample Condition Upon Receipt: ☐ Acceptable ☐ Other (explain)

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Please return completed form and samples to one of the Clayton Environmental Consultants, Inc. labs listed below:

22345 Roethel Drive
Novi, MI 48050
(313) 344-1770

Raritan Center
160 Fieldcrest Ave.
Edison, NJ 08837
(201) 225-6040

400 Chastain Center Blvd., N.W.
Suite 490
Kennesaw, GA 30144
(404) 499-7500

1252 Quarry Lane
Pleasanton, CA 94566
(415) 426-2600

6/90

DISTRIBUTION:
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Copy

APPENDIX D

WATER SAMPLING SURVEY FORM

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.
WATER SAMPLING FIELD SURVEY FORM

Job No: 31820.00 Site: Busick Air Date: 11/19/90

Well No: MW-1 Sampling Team: Mike Springman & Dariush Dastmalchi

Sampling Method: Submersible pump

Field Conditions: Drizzly, 18°C, cloudy

Describe Equipment Decontamination Before Sampling This Well:

Washed with TSP, steam cleaned, rinsed with deionized water

Total Depth to Well: 14.48 Time: 1449 Depth to Water Before Purging: 5.5

Volume Height of Water Column:		2-inch		4-inch		Volume		Purge Factor		To Purge
8.98	*	.16		.65	=	5.84	*	4	=	23.35

Depth Purging From: 14 Time Purging Begins:

Notes on Initial Discharge:

Time	Volume Purged	pH	Conductivity	T	Comments
1505	10	4.07	5.80	22°C	Clear, pumped dry
1520	15	4.07	6.19		Clear, pumped dry
1540	20	4.08	6.30		Clear, pumped dry
	25	4.08	6.48		Clear, pumped dry

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.
WATER SAMPLING FIELD SURVEY FORM
(CONTINUED)

Time Field Parameter Measurement Begins:

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity	5.93	6.03	6.03	6
T°C	22°C	22°C	22°C	22°C

Pre-Sample Collection Gallons Purged:

Time Sample Collection Begins:

Time Sample Collection Ends:

Total Gallons Purged:

Comments:

APPENDIX E

RESULTS OF SOIL SAMPLE ANALYSES

Western Operations

1252 Quarry Lane
Pleasanton, CA 94566
(415) 426-2600
Fax (415) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

November 20, 1990

Ms. Robyn Seymour
CLAYTON ENVIRONMENTAL CONSULTANTS, INC.
1252 Quarry Lane
Pleasanton, CA 94566

Client Ref. 31820
Clayton Project No. 90111.12

Dear Ms. Seymour:

Attached is our analytical laboratory report for the samples received on November 13, 1990. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Maryann Gambino, Client Services Supervisor, at (415) 426-2657.

Sincerely,

Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/tb
Attachments

Results of Analysis
for
Busick Air

Client Reference: 31820
Clayton Project No. 90111.12

Sample Identification:	MW-1, 5'	Date Sampled:	11/12/90
Lab Number:	9011112-05A	Date Received:	11/13/90
Sample Matrix/Media:	SOIL	Date Extracted:	11/16/90
Analytical Method:	EPA 8010	Date Prepared:	11/16/90
Extraction Method:	EPA 5030	Date Analyzed:	11/17/90
Preparation Method:	EPA 5030		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Halocarbons			
Chloromethane	74-87-3	ND	0.06
Bromomethane	74-83-9	ND	0.07
Vinyl chloride	75-01-4	ND	0.05
Chloroethane	75-00-3	ND	0.05
Methylene chloride	75-09-2	ND	0.2
1,1-Dichloroethene	75-35-4	ND	0.03
1,1-Dichloroethane	75-35-3	ND	0.04
Trans-1,2-Dichloroethene	156-60-5	ND	0.04
Cis-1,2-Dichloroethene	156-59-2	ND	0.04
1,2-Dichloroethene (total)	540-59-0	ND	0.04
Chloroform	67-66-3	ND	0.05
1,2-Dichloroethane	107-06-2	ND	0.03
1,1,1-Trichloroethane	71-55-6	ND	0.05
Carbon tetrachloride	56-23-5	ND	0.06
Bromodichloromethane	75-27-4	ND	0.07
1,2-Dichloropropane	78-87-5	ND	0.05
Cis-1,3-Dichloropropene	10061-01-5	ND	0.05
Trichloroethene	79-01-6	0.04	0.03
Dibromochloromethane	124-48-1	ND	0.06
1,1,2-Trichloroethane	79-00-5	ND	0.06
Trans-1,3-Dichloropropene	10061-02-6	ND	0.06
2-Chloroethylvinylether	100-75-8	ND	0.1
Bromoform	75-25-2	ND	0.07
Tetrachloroethene	127-18-4	ND	0.05
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.05
Chlorobenzene	108-90-7	ND	0.07
1,3-Dichlorobenzene	541-73-7	ND	0.2
1,2-Dichlorobenzene	95-50-1	ND	0.4
1,4-Dichlorobenzene	106-46-7	ND	0.4
Dichlorodifluoromethane	75-71-8	ND	0.1
Trichlorofluoromethane	75-69-4	ND	0.04
Freon 113	76-13-1	ND	0.06

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Busick Air

Client Reference: 31820
Clayton Project No. 90111.12

Sample Identification:	MW-1, 5'	Date Sampled:	11/12/90
Lab Number:	9011112-05A	Date Received:	11/13/90
Sample Matrix/Media:	SOIL	Date Extracted:	11/16/90
Analytical Method:	EPA 8020	Date Prepared:	11/16/90
Extraction Method:	EPA 5030	Date Analyzed:	11/17/90
Preparation Method:	EPA 5030		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Aromatics			
Benzene	71-43-2	ND	0.04
Chlorobenzene	108-90-7	ND	0.03
1,2-Dichlorobenzene	95-50-1	ND	0.05
1,3-Dichlorobenzene	541-73-7	ND	0.03
1,4-Dichlorobenzene	106-46-7	ND	0.05
Ethylbenzene	100-41-4	ND	0.03
Toluene	108-88-3	ND	0.02
Xylenes	1330-20-7	ND	0.04

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Busick Air

Client Reference: 31820
Clayton Project No. 90111.12

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9011112-06B	Date Received:	--
Sample Matrix/Media:	SOIL	Date Extracted:	11/16/90
Analytical Method:	EPA 8010	Date Prepared:	11/16/90
Extraction Method:	EPA 5030	Date Analyzed:	11/16/90
Preparation Method:	EPA 5030		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Halocarbons			
Chloromethane	74-87-3	ND	0.06
Bromomethane	74-83-9	ND	0.07
Vinyl chloride	75-01-4	ND	0.05
Chloroethane	75-00-3	ND	0.05
Methylene chloride	75-09-2	ND	0.2
1,1-Dichloroethene	75-35-4	ND	0.03
1,1-Dichloroethane	75-35-3	ND	0.04
Trans-1,2-Dichloroethene	156-60-5	ND	0.04
Cis-1,2-Dichloroethene	156-59-2	ND	0.04
1,2-Dichloroethene (total)	540-59-0	ND	0.04
Chloroform	67-66-3	ND	0.05
1,2-Dichloroethane	107-06-2	ND	0.03
1,1,1-Trichloroethane	71-55-6	ND	0.05
Carbon tetrachloride	56-23-5	ND	0.06
Bromodichloromethane	75-27-4	ND	0.07
1,2-Dichloropropane	78-87-5	ND	0.05
Cis-1,3-Dichloropropene	10061-01-5	ND	0.05
Trichloroethene	79-01-6	ND	0.03
Dibromochloromethane	124-48-1	ND	0.06
1,1,2-Trichloroethane	79-00-5	ND	0.06
Trans-1,3-Dichloropropene	10061-02-6	ND	0.06
2-Chloroethylvinylether	100-75-8	ND	0.1
Bromoform	75-25-2	ND	0.07
Tetrachloroethene	127-18-4	ND	0.05
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.05
Chlorobenzene	108-90-7	ND	0.07
1,3-Dichlorobenzene	541-73-7	ND	0.2
1,2-Dichlorobenzene	95-50-1	ND	0.4
1,4-Dichlorobenzene	106-46-7	ND	0.4
Dichlorodifluoromethane	75-71-8	ND	0.1
Trichlorofluoromethane	75-69-4	ND	0.04
Freon 113	76-13-1	ND	0.06

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Busick Air

Client Reference: 31820
Clayton Project No. 90111.12

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9011112-06B	Date Received:	--
Sample Matrix/Media:	SOIL	Date Extracted:	11/16/90
Analytical Method:	EPA 8020	Date Prepared:	11/16/90
Extraction Method:	EPA 5030	Date Analyzed:	11/16/90
Preparation Method:	EPA 5030		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
Purgeable Aromatics			
Benzene	71-43-2	ND	0.04
Chlorobenzene	108-90-7	ND	0.03
1,2-Dichlorobenzene	95-50-1	ND	0.05
1,3-Dichlorobenzene	541-73-7	ND	0.03
1,4-Dichlorobenzene	106-46-7	ND	0.05
Ethylbenzene	100-41-4	ND	0.03
Toluene	108-88-3	ND	0.02
Xylenes	1330-20-7	ND	0.04

ND Not detected at or above limit of detection
-- Information not available or not applicable

APPENDIX F

RESULTS OF GROUNDWATER SAMPLE ANALYSES

SEQUOIA ANALYTICAL
680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

DECON Environmental Services	Client Project ID:	309, Busik Air	Sampled: Jul 18, 1990
26102 Eden Landing Road, Suite 4	Sample Descript:	Water, #1	Received: Jul 18, 1990
Hayward, CA 94545	Analysis Method:	EPA 5030/8010	Analyzed: Jul 26, 1990
Attention: Chris Kwoka	Lab Number:	007-3857	Reported: Jul 31, 1990

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane	20	N.D.
Bromoform	20	N.D.
Bromomethane	20	N.D.
Carbon tetrachloride	20	N.D.
Chlorobenzene	20	N.D.
Chloroethane	100	N.D.
2-Chloroethylvinyl ether	20	N.D.
Chloroform	10	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	10	N.D.
1,2-Dichlorobenzene	40	N.D.
1,3-Dichlorobenzene	40	N.D.
1,4-Dichlorobenzene	40	N.D.
1,1-Dichloroethane	10	15
1,2-Dichloroethane	10	N.D.
1,1-Dichloroethene	20	72
Total 1,2-Dichloroethene	20	11,000
1,2-Dichloropropane	10	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Methylene chloride	40	170
1,1,2,2-Tetrachloroethane	10	N.D.
Tetrachloroethene	10	240
1,1,1-Trichloroethane	10	200
1,1,2-Trichloroethane	10	140
Trichloroethene	10	10,000
Trichlorofluoromethane	20	N.D.
Vinyl chloride	40	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

Cynthia H. Camba
Project Manager

RECEIVED SEP 2 1 1990

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 52494-1
CLIENT: Decon Environmental
JOB NO.: 309

DATE SAMPLED: 09/14/90
DATE RECEIVED: 09/14/90
DATE ANALYZED: 09/18/90

EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE:309-0911-01

Compound	MDL (ug/L)	RESULTS (ug/l)
Chloromethane/Vinyl Chloride	1.0	ND
Bromomethane/Chloroethane	1.0	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	3
Methylene Chloride	4.0	12
trans-1,2-Dichloroethene	0.5	37
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	2
1,1,1-Trichloroethane	0.5	7
Carbon tetrachloride	0.5	ND
1,2-Dichloroethane	0.5	3
Trichloroethylene	0.5	3000
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	9
1,1,2-Trichloroethane	0.5	5
Tetrachloroethene	0.5	22
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15
MS/MSD average recovery = 87 % :MS/MSD RPD =< 1 %

Richard Srna, Ph.D.

Laboratory Director

Western Operations

1252 Quarry Lane
Pleasanton, CA 94566
(415) 426-2600
Fax (415) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

November 20, 1990

Ms. Robyn Seymour
CLAYTON ENVIRONMENTAL CONSULTANTS, INC.
1252 Quarry Lane
Pleasanton, CA 94566

Client Ref. 31820
Clayton Project No. 90111.12

Dear Ms. Seymour:

Attached is our analytical laboratory report for the samples received on November 13, 1990. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Maryann Gambino, Client Services Supervisor, at (415) 426-2657.

Sincerely,

Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/tb
Attachments

Results of Analysis
for
Busick Air

Client Reference: 31820
Clayton Project No. 90111.12

Sample Identification: BH-1
Lab Number: 9011112-01A
Sample Matrix/Media: WATER
Analytical Method: EPA 601

Date Sampled: 11/12/90
Date Received: 11/13/90
Date Analyzed: 11/16/90

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Halocarbons			
Chloromethane	74-87-3	ND	3
Bromomethane	74-83-9	ND	4
Vinyl chloride	75-01-4	ND	3
Chloroethane	75-00-3	ND	3
Methylene chloride	75-09-2	ND	10
1,1-Dichloroethene	75-35-4	ND	1
1,1-Dichloroethane	75-35-3	ND	2
Trans-1,2-Dichloroethene	156-60-5	ND	2
Cis-1,2-Dichloroethene	156-59-2	ND	2
1,2-Dichloroethene (total)	540-59-0	ND	2
Chloroform	67-66-3	ND	3
1,2-Dichloroethane	107-06-2	150	2
1,1,1-Trichloroethane	71-55-6	ND	3
Carbon tetrachloride	56-23-5	ND	3
Bromodichloromethane	75-27-4	ND	4
1,2-Dichloropropane	78-87-5	ND	3
Cis-1,3-Dichloropropene	10061-01-5	ND	3
Trichloroethene	79-01-6	5	2
Dibromochloromethane	124-48-1	ND	3
1,1,2-Trichloroethane	79-00-5	ND	3
Trans-1,3-Dichloropropene	10061-02-6	ND	3
2-Chloroethylvinylether	100-75-8	ND	5
Bromoform	75-25-2	ND	4
Tetrachloroethene	127-18-4	ND	3
1,1,2,2-Tetrachloroethane	79-34-5	ND	3
Chlorobenzene	108-90-7	ND	4
1,3-Dichlorobenzene	541-73-7	ND	10
1,2-Dichlorobenzene	95-50-1	ND	20
1,4-Dichlorobenzene	106-46-7	ND	20
Dichlorodifluoromethane	75-71-8	ND	5
Trichlorofluoromethane	75-69-4	ND	2
Freon 113	76-13-1	ND	3

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Busick Air

Client Reference: 31820
Clayton Project No. 90111.12

Sample Identification:	BH-1	Date Sampled:	11/12/90
Lab Number:	9011112-01A	Date Received:	11/13/90
Sample Matrix/Media:	WATER	Date Analyzed:	11/16/90
Analytical Method:	EPA 602		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Aromatics			
Benzene	71-43-2	ND	2
Chlorobenzene	108-90-7	ND	2
1,2-Dichlorobenzene	95-50-1	ND	3
1,3-Dichlorobenzene	541-73-7	ND	2
1,4-Dichlorobenzene	106-46-7	ND	3
Ethylbenzene	100-41-4	ND	2
Toluene	108-88-3	ND	2
Xylenes	1330-20-7	ND	2

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Busick Air

Client Reference: 31820
Clayton Project No. 90111.12

Sample Identification: BH-2
Lab Number: 9011112-02A
Sample Matrix/Media: WATER
Analytical Method: EPA 601

Date Sampled: 11/12/90
Date Received: 11/13/90
Date Analyzed: 11/14/90

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Halocarbons			
Chloromethane	74-87-3	ND	30
Bromomethane	74-83-9	ND	40
Vinyl chloride	75-01-4	ND	30
Chloroethane	75-00-3	ND	30
Methylene chloride	75-09-2	ND	100
1,1-Dichloroethene	75-35-4	ND	10
1,1-Dichloroethane	75-35-3	ND	20
Trans-1,2-Dichloroethene	156-60-5	ND	20
Cis-1,2-Dichloroethene	156-59-2	42	20
1,2-Dichloroethene (total)	540-59-0	40	20
Chloroform	67-66-3	ND	30
1,2-Dichloroethane	107-06-2	160	20
1,1,1-Trichloroethane	71-55-6	ND	30
Carbon tetrachloride	56-23-5	ND	30
Bromodichloromethane	75-27-4	ND	40
1,2-Dichloropropane	78-87-5	ND	30
Cis-1,3-Dichloropropene	10061-01-5	ND	30
Trichloroethene	79-01-6	1,500	20
Dibromochloromethane	124-48-1	ND	30
1,1,2-Trichloroethane	79-00-5	ND	30
Trans-1,3-Dichloropropene	10061-02-6	ND	30
2-Chloroethylvinylether	100-75-8	ND	50
Bromoform	75-25-2	ND	40
Tetrachloroethene	127-18-4	50	30
1,1,2,2-Tetrachloroethane	79-34-5	ND	30
Chlorobenzene	108-90-7	ND	40
1,3-Dichlorobenzene	541-73-7	ND	100
1,2-Dichlorobenzene	95-50-1	ND	200
1,4-Dichlorobenzene	106-46-7	ND	200
Dichlorodifluoromethane	75-71-8	ND	50
Trichlorofluoromethane	75-69-4	ND	20
Freon 113	76-13-1	ND	30

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Busick Air

Client Reference: 31820
Clayton Project No. 90111.12

Sample Identification: BH-2
Lab Number: 9011112-02A
Sample Matrix/Media: WATER
Analytical Method: EPA 602

Date Sampled: 11/12/90
Date Received: 11/13/90
Date Analyzed: 11/14/90

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Aromatics			
Benzene	71-43-2	ND	20
Chlorobenzene	108-90-7	ND	20
1,2-Dichlorobenzene	95-50-1	ND	30
1,3-Dichlorobenzene	541-73-7	ND	20
1,4-Dichlorobenzene	106-46-7	ND	30
Ethylbenzene	100-41-4	ND	20
Toluene	108-88-3	ND	20
Xylenes	1330-20-7	ND	20

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Busick Air

Client Reference: 31820
Clayton Project No. 90111.12

Sample Identification: BH-3
Lab Number: 9011112-03A
Sample Matrix/Media: WATER
Analytical Method: EPA 601

Date Sampled: 11/12/90
Date Received: 11/13/90
Date Analyzed: 11/14/90

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Halocarbons			
Chloromethane	74-87-3	ND	10
Bromomethane	74-83-9	ND	10
Vinyl chloride	75-01-4	ND	10
Chloroethane	75-00-3	ND	10
Methylene chloride	75-09-2	ND	40
1,1-Dichloroethene	75-35-4	ND	4
1,1-Dichloroethane	75-35-3	ND	8
Trans-1,2-Dichloroethene	156-60-5	38	8
Cis-1,2-Dichloroethene	156-59-2	570	8
1,2-Dichloroethene (total)	540-59-0	610	8
Chloroform	67-66-3	ND	10
1,2-Dichloroethane	107-06-2	ND	6
1,1,1-Trichloroethane	71-55-6	ND	10
Carbon tetrachloride	56-23-5	ND	10
Bromodichloromethane	75-27-4	ND	10
1,2-Dichloropropane	78-87-5	ND	10
Cis-1,3-Dichloropropene	10061-01-5	ND	10
Trichloroethene	79-01-6	530	6
Dibromochloromethane	124-48-1	ND	10
1,1,2-Trichloroethane	79-00-5	ND	10
Trans-1,3-Dichloropropene	10061-02-6	ND	10
2-Chloroethylvinylether	100-75-8	ND	20
Bromoform	75-25-2	ND	10
Tetrachloroethene	127-18-4	ND	10
1,1,2,2-Tetrachloroethane	79-34-5	ND	10
Chlorobenzene	108-90-7	ND	10
1,3-Dichlorobenzene	541-73-7	ND	40
1,2-Dichlorobenzene	95-50-1	ND	80
1,4-Dichlorobenzene	106-46-7	ND	80
Dichlorodifluoromethane	75-71-8	ND	20
Trichlorofluoromethane	75-69-4	ND	8
Freon 113	76-13-1	ND	10

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Busick Air

Client Reference: 31820
Clayton Project No. 90111.12

Sample Identification: BH-3
Lab Number: 9011112-03A
Sample Matrix/Media: WATER
Analytical Method: EPA 602

Date Sampled: 11/12/90
Date Received: 11/13/90
Date Analyzed: 11/14/90

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Aromatics			
Benzene	71-43-2	ND	8
Chlorobenzene	108-90-7	ND	6
1,2-Dichlorobenzene	95-50-1	ND	10
1,3-Dichlorobenzene	541-73-7	ND	6
1,4-Dichlorobenzene	106-46-7	ND	10
Ethylbenzene	100-41-4	ND	6
Toluene	108-88-3	ND	6
Xylenes	1330-20-7	ND	8

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Busick Air

Client Reference: 31820
Clayton Project No. 90111.12

Sample Identification: TRIP BLANK (0102990)
Lab Number: 9011112-04A
Sample Matrix/Media: WATER
Analytical Method: EPA 601

Date Sampled: --
Date Received: 11/13/90
Date Analyzed: 11/16/90

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Halocarbons			
Chloromethane	74-87-3	ND	0.6
Bromomethane	74-83-9	ND	0.7
Vinyl chloride	75-01-4	ND	0.5
Chloroethane	75-00-3	ND	0.5
Methylene chloride	75-09-2	ND	2
1,1-Dichloroethene	75-35-4	ND	0.2
1,1-Dichloroethane	75-35-3	ND	0.4
Trans-1,2-Dichloroethene	156-60-5	ND	0.4
Cis-1,2-Dichloroethene	156-59-2	ND	0.4
1,2-Dichloroethene (total)	540-59-0	ND	0.4
Chloroform	67-66-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.3
1,1,1-Trichloroethane	71-55-6	ND	0.5
Carbon tetrachloride	56-23-5	ND	0.6
Bromodichloromethane	75-27-4	ND	0.7
1,2-Dichloropropane	78-87-5	ND	0.5
Cis-1,3-Dichloropropene	10061-01-5	ND	0.5
Trichloroethene	79-01-6	ND	0.3
Dibromochloromethane	124-48-1	ND	0.6
1,1,2-Trichloroethane	79-00-5	ND	0.6
Trans-1,3-Dichloropropene	10061-02-6	ND	0.6
2-Chloroethylvinylether	100-75-8	ND	1
Bromoform	75-25-2	ND	0.7
Tetrachloroethene	127-18-4	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.7
1,3-Dichlorobenzene	541-73-7	ND	2
1,2-Dichlorobenzene	95-50-1	ND	4
1,4-Dichlorobenzene	106-46-7	ND	4
Dichlorodifluoromethane	75-71-8	ND	1
Trichlorofluoromethane	75-69-4	ND	0.4
Freon 113	76-13-1	ND	0.6

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Busick Air

Client Reference: 31820
Clayton Project No. 90111.12

Sample Identification: TRIP BLANK (0102990)
Lab Number: 9011112-04A
Sample Matrix/Media: WATER
Analytical Method: EPA 602

Date Sampled: --
Date Received: 11/13/90
Date Analyzed: 11/16/90

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Aromatics			
Benzene	71-43-2	ND	0.4
Chlorobenzene	108-90-7	ND	0.3
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-7	ND	0.3
1,4-Dichlorobenzene	106-46-7	ND	0.5
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
Xylenes	1330-20-7	ND	0.4

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Busick Air

Client Reference: 31820
Clayton Project No. 90111.12

Sample Identification: METHOD BLANK
Lab Number: 9011112-06A
Sample Matrix/Media: WATER
Analytical Method: EPA 601

Date Sampled: --
Date Received: --
Date Analyzed: 11/14/90

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Halocarbons			
Chloromethane	74-87-3	ND	0.6
Bromomethane	74-83-9	ND	0.7
Vinyl chloride	75-01-4	ND	0.5
Chloroethane	75-00-3	ND	0.5
Methylene chloride	75-09-2	ND	2
1,1-Dichloroethene	75-35-4	ND	0.2
1,1-Dichloroethane	75-35-3	ND	0.4
Trans-1,2-Dichloroethene	156-60-5	ND	0.4
Cis-1,2-Dichloroethene	156-59-2	ND	0.4
1,2-Dichloroethene (total)	540-59-0	ND	0.4
Chloroform	67-66-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.3
1,1,1-Trichloroethane	71-55-6	ND	0.5
Carbon tetrachloride	56-23-5	ND	0.6
Bromodichloromethane	75-27-4	ND	0.7
1,2-Dichloropropane	78-87-5	ND	0.5
Cis-1,3-Dichloropropene	10061-01-5	ND	0.5
Trichloroethene	79-01-6	ND	0.3
Dibromochloromethane	124-48-1	ND	0.6
1,1,2-Trichloroethane	79-00-5	ND	0.6
Trans-1,3-Dichloropropene	10061-02-6	ND	0.6
2-Chloroethylvinylether	100-75-8	ND	1
Bromoform	75-25-2	ND	0.7
Tetrachloroethene	127-18-4	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.7
1,3-Dichlorobenzene	541-73-7	ND	2
1,2-Dichlorobenzene	95-50-1	ND	4
1,4-Dichlorobenzene	106-46-7	ND	4
Dichlorodifluoromethane	75-71-8	ND	1
Trichlorofluoromethane	75-69-4	ND	0.4
Freon 113	76-13-1	ND	0.6

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Busick Air

Client Reference: 31820
Clayton Project No. 90111.12

Sample Identification: METHOD BLANK
Lab Number: 9011112-06A
Sample Matrix/Media: WATER
Analytical Method: EPA 602

Date Sampled: --
Date Received: --
Date Analyzed: 11/14/90

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Aromatics			
Benzene	71-43-2	ND	0.4
Chlorobenzene	108-90-7	ND	0.3
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-7	ND	0.3
1,4-Dichlorobenzene	106-46-7	ND	0.5
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
Xylenes	1330-20-7	ND	0.4

ND Not detected at or above limit of detection
-- Information not available or not applicable

Western Operations

1252 Quarry Lane
Pleasanton, CA 94566
(415) 426-2600
Fax (415) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

November 29, 1990

Ms. Robyn Seymour
CLAYTON ENVIRONMENTAL CONSULTANTS, INC.
1252 Quarry Lane
Pleasanton, CA 94566

Client Ref. 31820.00
Clayton Project No. 90111.79

Dear Ms. Seymour:

Attached is our analytical laboratory report for the samples received on November 19, 1990. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Maryann Gambino, Client Services Supervisor, at (415) 426-2657.

Sincerely,

Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/dt
Attachments

Results of Analysis
for
Busick Air

Client Reference: 31820.00
Clayton Project No. 90111.79

Sample Identification: MW-1
Lab Number: 9011179-01A
Sample Matrix/Media: WATER
Analytical Method: EPA 601

Date Sampled: 11/19/90
Date Received: 11/19/90
Date Analyzed: 11/21/90

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Halocarbons			
Chloromethane	74-87-3	ND	300
Bromomethane	74-83-9	ND	400
Vinyl chloride	75-01-4	ND	300
Chloroethane	75-00-3	ND	300
Methylene chloride	75-09-2	ND	1,000
1,1-Dichloroethene	75-35-4	ND	100
1,1-Dichloroethane	75-35-3	ND	200
Trans-1,2-Dichloroethene	156-60-5	ND	200
Cis-1,2-Dichloroethene	156-59-2	4,400	200
1,2-Dichloroethene (total)	540-59-0	4,400	200
Chloroform	67-66-3	ND	300
1,2-Dichloroethane	107-06-2	ND	200
1,1,1-Trichloroethane	71-55-6	ND	300
Carbon tetrachloride	56-23-5	ND	300
Bromodichloromethane	75-27-4	ND	400
1,2-Dichloropropane	78-87-5	ND	300
Cis-1,3-Dichloropropene	10061-01-5	ND	300
Trichloroethene	79-01-6	10,000	200
Dibromochloromethane	124-48-1	ND	300
1,1,2-Trichloroethane	79-00-5	ND	300
Trans-1,3-Dichloropropene	10061-02-6	ND	300
2-Chloroethylvinylether	100-75-8	ND	500
Bromoform	75-25-2	ND	400
Tetrachloroethene	127-18-4	ND	300
1,1,2,2-Tetrachloroethane	79-34-5	ND	300
Chlorobenzene	108-90-7	ND	400
1,3-Dichlorobenzene	541-73-7	ND	1,000
1,2-Dichlorobenzene	95-50-1	ND	2,000
1,4-Dichlorobenzene	106-46-7	ND	2,000
Dichlorodifluoromethane	75-71-8	ND	500
Trichlorofluoromethane	75-69-4	ND	200
Freon 113	76-13-1	ND	300

ND Not detected at or above limit of detection
-- Information not available or not applicable

Results of Analysis
for
Busick Air

Client Reference: 31820.00
Clayton Project No. 90111.79

Sample Identification: MW-1
Lab Number: 9011179-01A
Sample Matrix/Media: WATER
Analytical Method: EPA 602

Date Sampled: 11/19/90
Date Received: 11/19/90
Date Analyzed: 11/21/90

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Aromatics			
Benzene	71-43-2	ND	200
Chlorobenzene	108-90-7	ND	200
1,2-Dichlorobenzene	95-50-1	ND	300
1,3-Dichlorobenzene	541-73-7	ND	200
1,4-Dichlorobenzene	106-46-7	ND	300
Ethylbenzene	100-41-4	ND	200
Toluene	108-88-3	ND	200
Xylenes	1330-20-7	ND	200

ND Not detected at or above limit of detection
-- Information not available or not applicable

Clayton
ENVIRONMENTAL
CONSULTANTS

Results of Analysis
for
Busick Air

Client Reference: 31820.00
Clayton Project No. 90111.79

Sample Identification: METHOD BLANK
Lab Number: 9011179-03A
Sample Matrix/Media: WATER
Analytical Method: EPA 601

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Date Received: --
Date Analyzed: 11/21/90

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
Purgeable Halocarbons			
Chloromethane	74-87-3	ND	0.6
Bromomethane	74-83-9	ND	0.7
Vinyl chloride	75-01-4	ND	0.5
Chloroethane	75-00-3	ND	0.5
Methylene chloride	75-09-2	ND	2
1,1-Dichloroethene	75-35-4	ND	0.2
1,1-Dichloroethane	75-35-3	ND	0.4
Trans-1,2-Dichloroethene	156-60-5	ND	0.4
Cis-1,2-Dichloroethene	156-59-2	ND	0.4
1,2-Dichloroethene (total)	540-59-0	ND	0.4
Chloroform	67-66-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.3
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2-Chloroethylvinylether	100-75-8	ND	1
Bromoform	75-25-2	ND	0.7
Tetrachloroethene	127-18-4	ND	0.5
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.7
1,3-Dichlorobenzene	541-73-7	ND	2
1,2-Dichlorobenzene	95-50-1	ND	4
1,4-Dichlorobenzene	106-46-7	ND	4
Dichlorodifluoromethane	75-71-8	ND	1
Trichlorofluoromethane	75-69-4	ND	0.4
Freon 113	76-13-1	ND	0.6

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Results of Analysis
for
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Benzene	71-43-2	ND	0.4
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1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-7	ND	0.3
1,4-Dichlorobenzene	106-46-7	ND	0.5
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
Xylenes	1330-20-7	ND	0.4

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