

1365 VANDER WAY SAN JOSE, CALIFORNIA 95112 (408) 297-6969 FAX (408) 297-7716

February 26, 1990  
Project 4454/2

Mrs. Naoko Ward  
The Plymouth Group  
2047 Old Middlefield Road  
Mountain View, California 94043

Subject: Verification Soil Sampling  
Underground Fuel Tank Removals  
Sunnyside Nursery  
Hayward, California

Dear Mrs. Ward:

This letter summarizes the field work and laboratory results of Terratech's verification soil sampling for the underground tank removals at the Sunnyside Nursery site in Hayward, California (see Figure 1).

On January 29, 1990 two underground fuel tanks (a 5000-gallon gasoline tank and a 4000-gallon diesel tank) were uncovered and removed from the subject property. Immediately following the tank removals Terratech collected soil samples from the bottoms of the pit excavations. Two samples were collected from each excavation, as shown on Figures 2 and 3.

During the extraction of the tanks, both excavations exhibited hydrocarbon odors and soil discoloration. Directly beneath the gasoline tank was a thin zone of contamination within backfill/bedding material, apparently from tank overfilling or spillage. Verification samples were taken from native soils below this contaminated layer, at a depth of about 12 1/2 feet. The area underneath the fuel pump end of the diesel tank was also discolored and exhibited a strong hydrocarbon odor. This contamination appears to have originated from a poor pump to tank connection. The impact was also minor in extent and verification samples were taken from beneath the contaminated soil at a depth of about 10 feet.

For sampling, a backhoe bucket of soil from each sample location was brought to the surface for collection. The samples were collected in two-inch diameter brass liners, immediately sealed with foiled and taped end caps, labeled and iced.

The soil samples were transported to Anametrix, Inc., a State-certified laboratory in San Jose, California. Standard chain-of-custody procedures were followed. The samples were analyzed for total petroleum hydrocarbons (TPH) as diesel or gasoline (according to tank contents), and individual fuel constituents - benzene, toluene, ethylbenzene and benzene (BTEX).

The laboratory results of the verification sampling (S-1 through S-4) are summarized in Table 1. No detectable fuel was found. A copy of the laboratory results is attached.

On February 2, 1990 the remaining soils in the diesel and gasoline tank excavations which were obviously contaminated were removed with a backhoe under the direction of Terratech's environmental geologist. To be conservative, the bottoms of the excavations were extended down to about 13 feet, approximately the top of the water table. All excavated material was added to the respective stockpiles next to each pit. The excavations were then backfilled with 3/8-inch pea gravel.

Our geologist collected four soil samples from each stockpile, a minimum of six inches below the exterior surface. Anametrix formed two composites, one for each stockpile, and analyzed them for TPH as diesel, TPH as gasoline and BTEX. The results of these analyses (Composite S-5a thru S-5d and Composite S-6a thru S-6d) are also summarized in Table 1.

Since the TPH levels in both stockpiles are below 1000 parts per million (ppm), the materials can be handled as "non-hazardous". The soil from the gasoline tank excavation may be re-used immediately on-site (or on the Laguna Park parcel) as surficial fill material. However, the soil from the diesel tank excavation must undergo landfarming in an isolated area to reduce TPH levels below 100 ppm. Weekly discing will facilitate the aeration process. Verification samples should be collected and analyzed before this material is re-used; after a minimum period of one month.

*as non toxic waste by DHS less than 100 ppm "landfarming" what is plan, method where? permit and facility who will do? Containment for treatment area*

Sincerely,

TERRATECH, INC.

*E.R. Lautenbach*

Eric R. Lautenbach  
CE 42437

*Regional Board  
Permission Requested*

erl/tcm



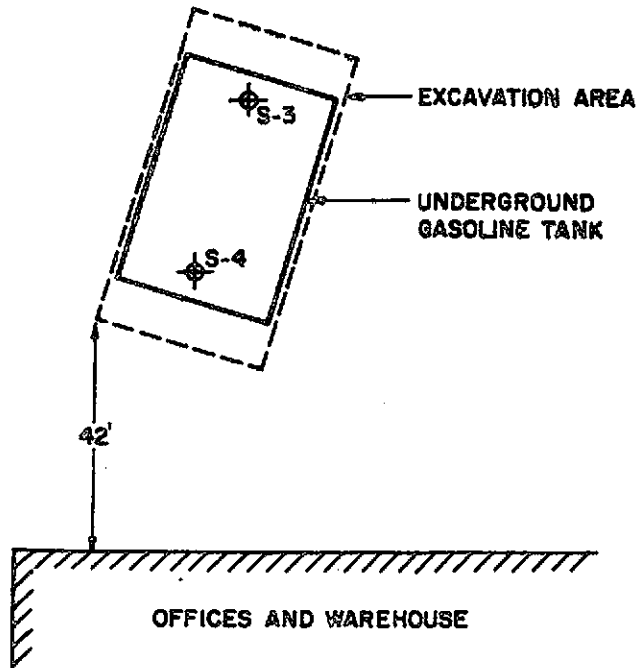
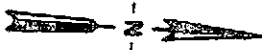
TABLE 1

SUMMARY OF SOIL SAMPLE ANALYSIS RESULTS  
FOR UNDERGROUND FUEL TANK CLOSURESSunnyside Nursery  
Hayward, California

SAMPLE LOCATION & DEPTH	TPH as GASOLINE (ppm)	BENZENE (ppm)	TOLUENE (ppm)	ETHYL- BENZENE (ppm)	XYLENES (ppm)	TPH as DIESEL (ppm)
Diesel Tank S-1 @ 10'	—	< 0.005	< 0.005	< 0.005	< 0.005	< 10
S-2 @ 10'	—	< 0.005	< 0.005	< 0.005	< 0.005	< 10
S-6a thru 6d (stockpile)	35	< 0.050	< 0.050	< 0.050	< 0.050	200
Gasoline Tank S-3 @ 12.5'	< 1	< 0.005	< 0.005	< 0.005	< 0.005	—
S-4 @ 12.5'	< 1	< 0.005	< 0.005	< 0.005	< 0.005	—
S-5a thru 5d (stockpile)	11	< 0.010	< 0.010	< 0.010	0.18	—

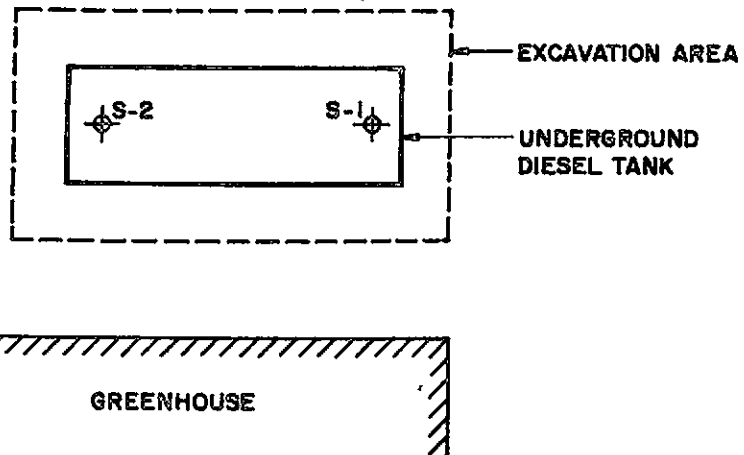
Note: Samples S-1 thru S-4 were collected on January 26, 1990;  
Samples S-5a thru 5d and S-6a thru 6d collected on February 2, 1990.





**DETAIL A**

SCALE: 1" = 10'  
(OR AS INDICATED)



**DETAIL B**

SCALE: 1" = 10'



2-90

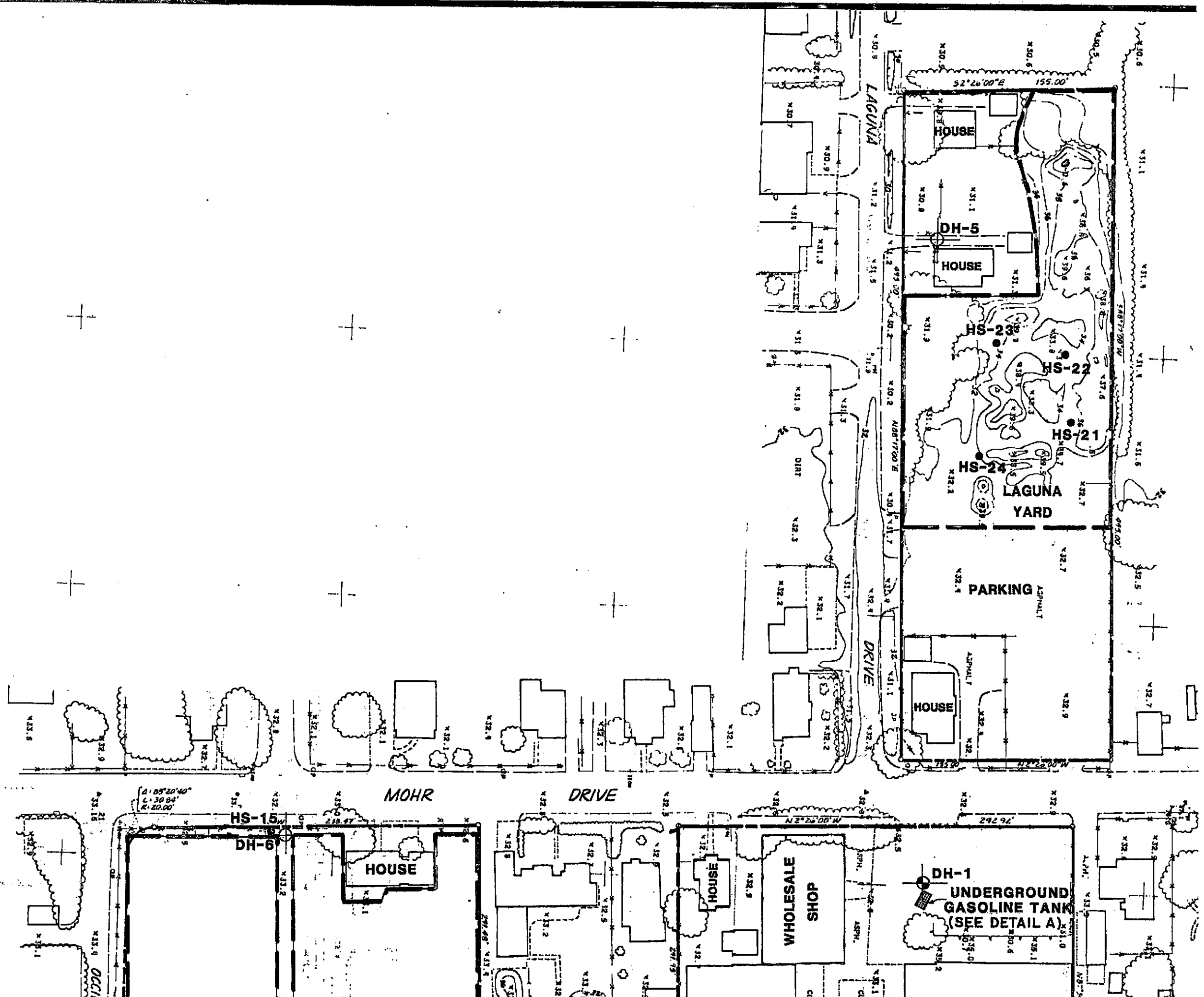
**TERRATECH**

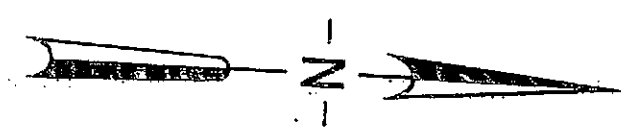
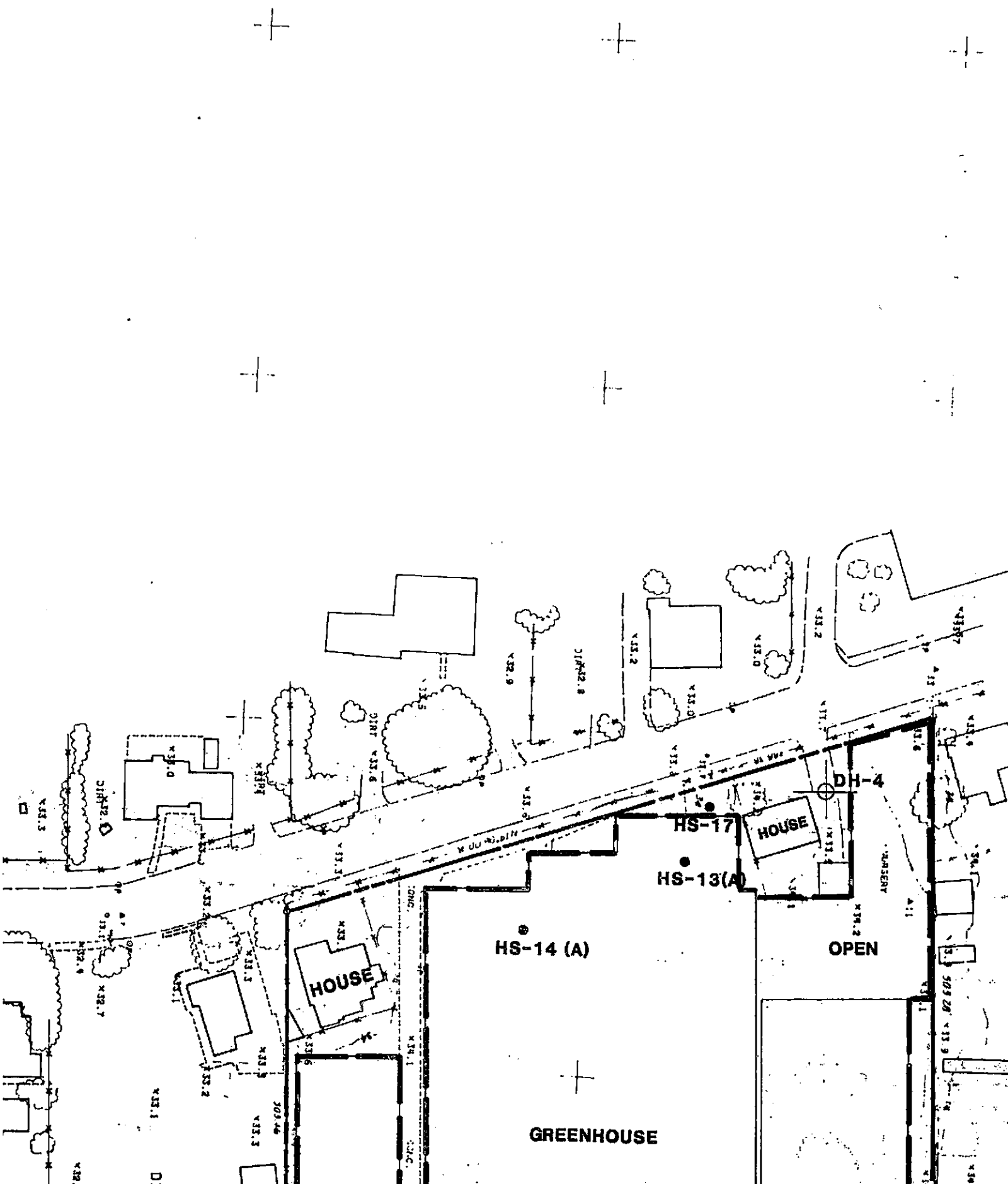
SUNNYSIDE NURSERY  
HAYWARD, CALIFORNIA

**DETAILS A AND B**




**FIGURE  
2**

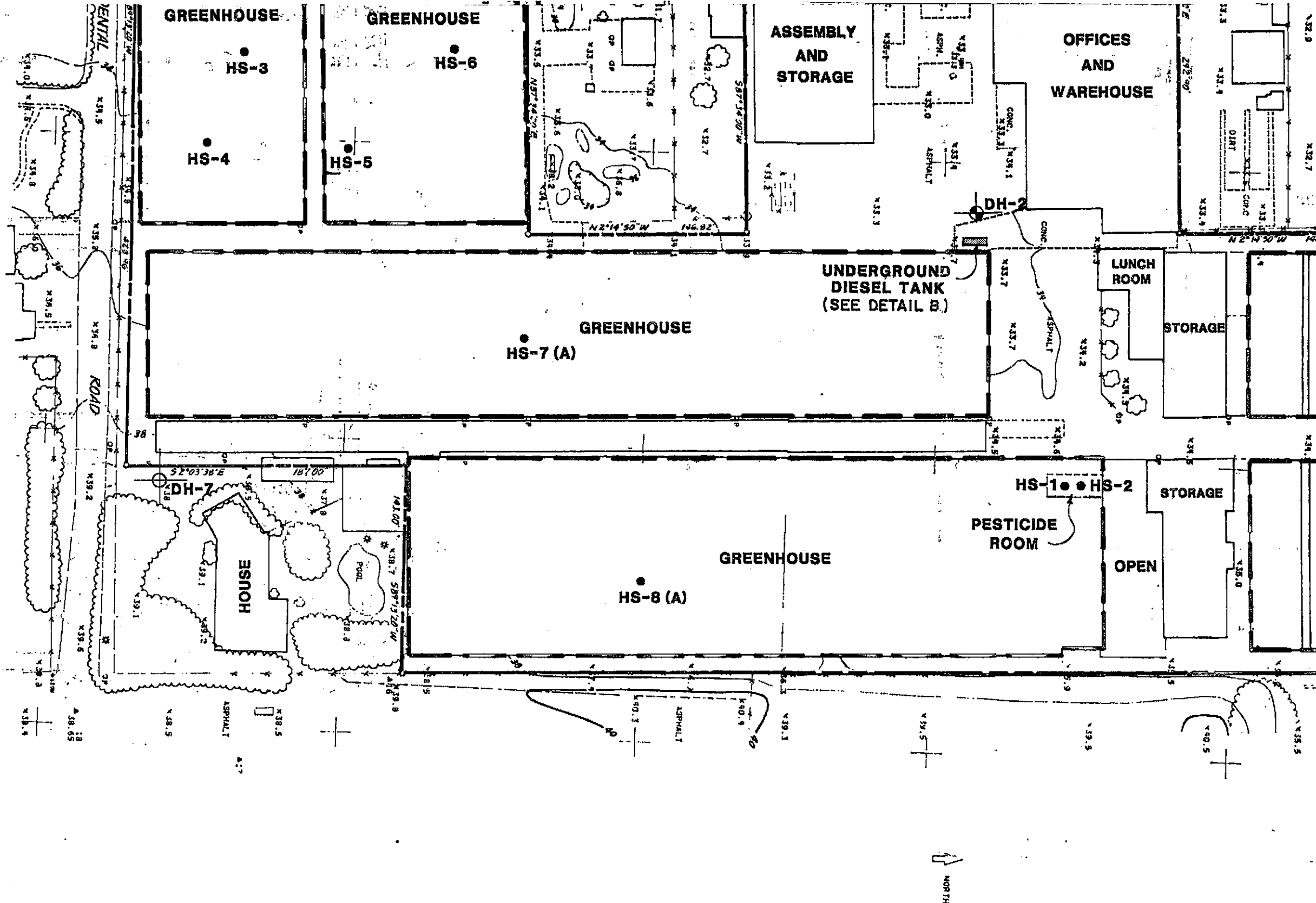
**PROJECT  
4454/2**





**LEGEND**

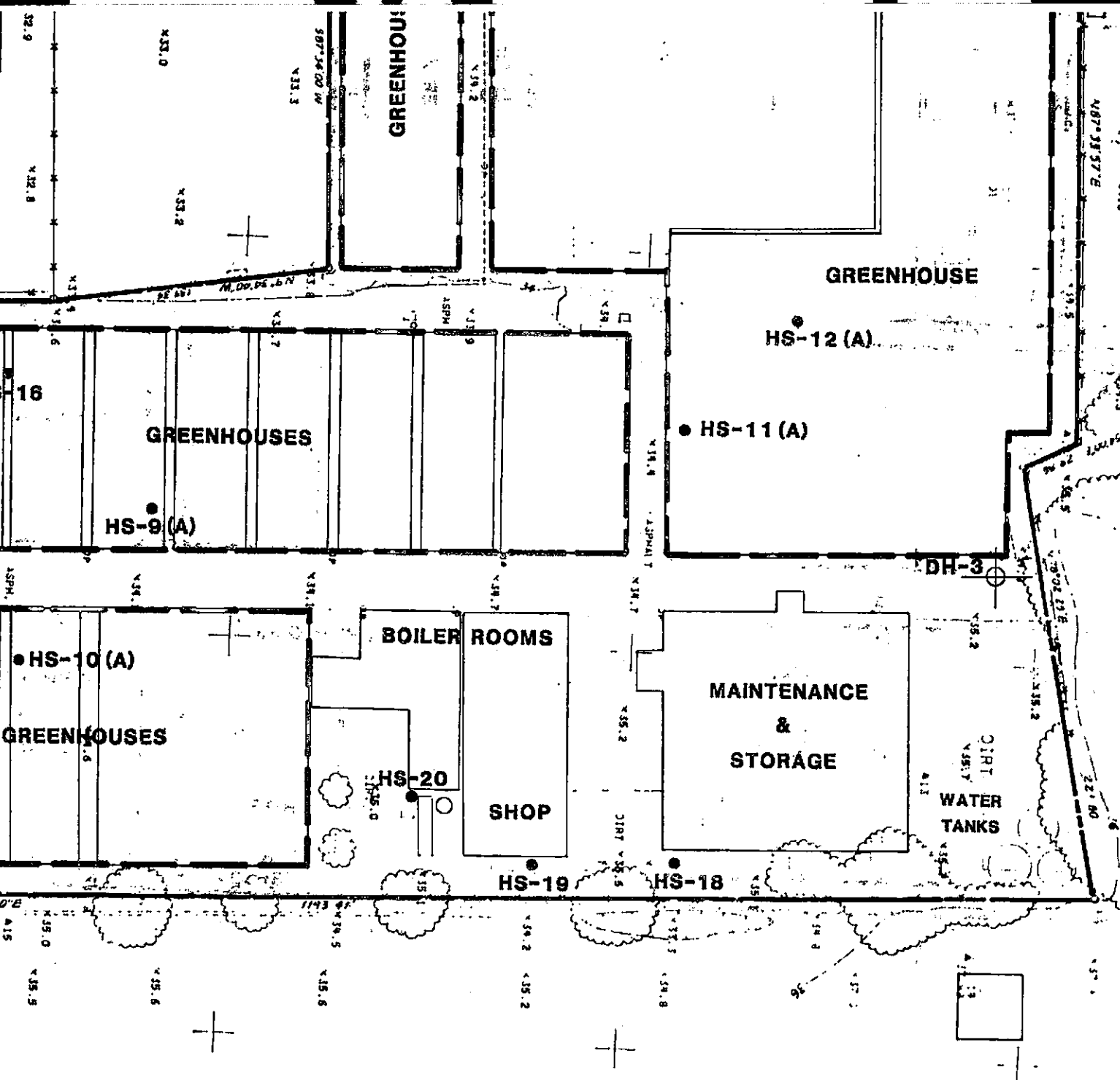
-  DH-2  
 EXPLORATION DRILL HOLE (ENVIRONMENTAL)
-  DH-7  
 EXPLORATION DRILL HOLE (GEOTECHNICAL)
-  HS-24  
 SHALLOW SOIL SAMPLE ("A" DESIGNATES RESAMPLE)



Base Map: "Boundary Topography, Plymouth - Hayward", Prepared by  
 Cannis Consulting Engineers, Dated February 1988,

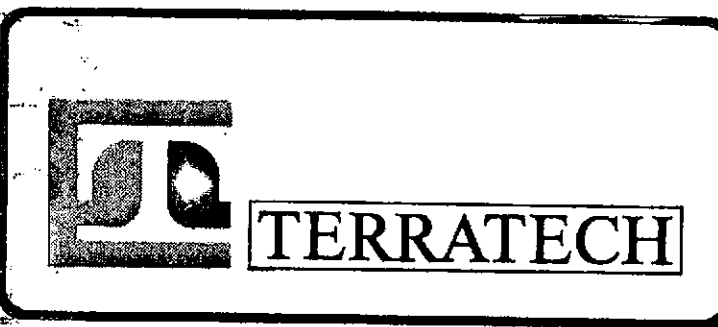
BRUNING 44-142

- - - - - PROPERTY BOUNDARY  
 - x - x - FENCE  
 - - - - - MITIGATION BOUNDARY (APPROX.)



0'                      100'                      200'  
 SCALE IN FEET  
 (1" = 70')

DATE 2-89		DWN BY BMK		CHKD ERL	APPR
REVISIONS					
NO.	DATE	DWN	CHKD	APPR	
1	6-16-89	BMK	ERL		MORE DETAIL ADDED
2	2-23-90	AMW	ERL		"



**SITE PLAN**  
 SUNNYSIDE NURSERY  
 HAYWARD, CALIFORNIA

FIGURE  
 1  
 PROJECT  
 4454/2





TERRATECH

CHAIN OF CUSTODY RECORD

P.O. NO. 3663

TURNAROUND: 48-Hours

PROJECT NUMBER: <u>#4454/2</u>					Number of Containers	Analysis Required TPH as Gasoline BTEX TPH as Diesel	REMARKS					
SAMPLERS (signature): <u>B. Kahl</u>												
Station Number	Date	Time	Comp.	Grab								Station Location
S-1	1/26	PM		X	FILL END	BRASS LINER	X	X				10'
S-2				X	OPPOSITE END		X	X				10'
S-3				X	FILL END		X	X				12.5'
S-4	↓	↓		X	EXTRACTOR END	↓	X	X				12.5'
Relinquished by(signature):		Date / Time		Received by (signature):		Relinquished by(signature):		Date / Time		Received by (signature):		
Company or Agency:				Company or Agency:		Company or Agency:				Company or Agency:		
Relinquished by(signature):		Date / Time		Received by (signature):		Relinquished by:		Date / Time		Received by (signature):		
Company or Agency:				Company or Agency:		Company or Agency:				Company or Agency:		
Relinquished by(signature):		Date / Time		Received for Laboratory by:		Date / Time		Remarks/Shipping Information				
<u>B. Kahl</u> TERRATECH, INC.		1/29/90 0830		<u>Norim Jr</u> (signature)		1/29/90 8:30		Send reports to: Eric Lautenbach 1365 VANDER WAY, SAN JOSE 95112				

TERRATECH

**ANAMETRIX INC**

Environmental & Analytical Chemistry  
1961 Concourse Drive, Suite E, San Jose, CA 95131  
(408) 432-8192 • Fax (408) 432-8198

FEB 03 1990

RECEIVED



**REPORT**

Eric Lautenbach  
Terratech, Inc.  
1365 Vander Way  
San Jose, CA 95112

January 31, 1990  
Anamatrix W.O.#: 9001257  
Date Received : 01/29/90  
Purchase Order#: 3663  
Project Number : 4454/2

Dear Mr. Lautenbach:

Your samples have been received for analysis. The REPORT SUMMARY lists your sample identifications and the analytical methods you requested. The following sections are included in this report: RESULTS.

NOTE: Amounts reported are net values, i.e. corrected for method blank contamination.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX, INC.

Sincerely,

ANAMETRIX, INC.

Terry Cooke  
TPH Supervisor

TC/dmt

REPORT SUMMARY  
ANAMETRIX, INC. (408) 432-8192

Client : Terratech, Inc.  
Address : 1365 Vander Way  
  
City : San Jose, CA 95112  
Attn. : Eric Lautenbach

Anamatrix W.O.#: 9001257  
Date Received : 01/29/90  
Purchase Order#: 3663  
Project No. : 4454/2  
Date Released : 01/31/90

Anamatrix I.D.	Sample I.D.	Matrix	Date Sampled	Method	Date Extract	Date Analyzed	Inst I.D.
RESULTS							
9001257-01	S-1	SOIL	01/26/90	TPHd	01/29/90	01/29/90	N/A
9001257-02	S-2	SOIL	01/26/90	TPHd	01/29/90	01/29/90	N/A
9001257-03	S-3	SOIL	01/26/90	TPHg		01/29/90	N/A
9001257-04	S-4	SOIL	01/26/90	TPHg		01/29/90	N/A

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS  
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 4454/2 S-1  
 Matrix : SOIL  
 Date sampled : 01/26/90  
 Date anl.BTEX: 01/29/90  
 Date ext.TPHd: 01/29/90  
 Date anl.TPHd: 01/29/90

Anamatrix I.D. : 9001257-01  
 Analyst : *ml*  
 Supervisor : *TC*  
 Date released : 01/31/90  
 Date ext. TOG : N/A  
 Date anl. TOG : N/A

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	5	ND
108-88-3	Toluene	5	ND
100-41-4	Ethylbenzene	5	ND
1330-20-7	Total Xylenes	5	ND
	TPH as Diesel	10000	ND

- ND - Not detected at or above the practical quantitation limit for the method.  
 TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.  
 BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS  
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 4454/2 S-2  
 Matrix : SOIL  
 Date sampled : 01/26/90  
 Date anl.BTEX: 01/29/90  
 Date ext.TPHd: 01/29/90  
 Date anl.TPHd: 01/29/90

Anamatrix I.D. : 9001257-02  
 Analyst : *mh*  
 Supervisor : *7C*  
 Date released : 01/31/90  
 Date ext. TOG : N/A  
 Date anl. TOG : N/A

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	5	ND
108-88-3	Toluene	5	ND
100-41-4	Ethylbenzene	5	ND
1330-20-7	Total Xylenes	5	ND
	TPH as Diesel	10000	ND

- ND - Not detected at or above the practical quantitation limit for the method.  
 TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.  
 BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS  
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 4454/2 S-3  
 Matrix : SOIL  
 Date sampled : 01/26/90  
 Date anl.TPHg: 01/29/90  
 Date ext.TPHd: N/A  
 Date anl.TPHd: N/A

Anamatrix I.D. : 9001257-03  
 Analyst : mt  
 Supervisor : TC  
 Date released : 01/31/90  
 Date ext. TOG : N/A  
 Date anl. TOG : N/A

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	5	ND
108-88-3	Toluene	5	ND
100-41-4	Ethylbenzene	5	ND
1330-20-7	Total Xylenes	5	ND
	TPH as Gasoline	1000	ND

- ND - Not detected at or above the practical quantitation limit for the method.
- TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
- BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS  
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 4454/2 S-4  
 Matrix : SOIL  
 Date sampled : 01/26/90  
 Date anl.TPHg: 01/29/90  
 Date ext.TPHd: N/A  
 Date anl.TPHd: N/A

Anamatrix I.D. : 9001257-04  
 Analyst : *ON*  
 Supervisor : *TC*  
 Date released : 01/31/90  
 Date ext. TOG : N/A  
 Date anl. TOG : N/A

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	5	ND
108-88-3	Toluene	5	ND
100-41-4	Ethylbenzene	5	ND
1330-20-7	Total Xylenes	5	ND
	TPH as Gasoline	1000	ND

- ND - Not detected at or above the practical quantitation limit for the method.  
 TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.  
 BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.



TERRATECH

CHAIN OF CUSTODY RECORD

P.O. NO. 3668

TURNAROUND: 1 WEEK

PROJECT NUMBER: <u>4454/2</u>					Number of Containers	Analysis Required					REMARKS	SAMPLE DEPTH*		
SAMPLERS (signature): <u>Thomas Monin</u>						TPH AS GAS	BTEX	TPH AS DIESEL						
Station Number	Date	Time	Comp.	Grab	Station Location									
S-5a	2/2/00	9 AM			Gas Tank Stockpile	1 GASES LINER	X	X				COMPOSITE SAMPLES	6" +	
S-5b							X	X						6" +
S-5c							X	X						6" +
S-5d							X	X						6" +
S-6a					Diesel Tank Stockpile		X	X				COMPOSITE SAMPLES	6" +	
S-6b							X	X						6" +
S-6c							X	X						6" +
S-6d							X	X						6" +
Relinquished by (signature): <u>Thomas Monin</u>		Date / Time: <u>2/2/00 11:25</u>		Received by (signature):		Relinquished by (signature):		Date / Time:		Received by (signature):		Company or Agency:		
Company or Agency: <u>TERRATECH INC</u>				Company or Agency:		Company or Agency:				Company or Agency:				
Relinquished by (signature):		Date / Time:		Received by (signature):		Relinquished by:		Date / Time:		Received by (signature):		Company or Agency:		
Company or Agency:				Company or Agency:		Company or Agency:				Company or Agency:				
Relinquished by (signature): <u>Melissa Blum</u>		Date / Time: <u>2/2/00 1:50</u>		Received for Laboratory by: (signature) <u>[Signature]</u>		Date / Time: <u>2-2-00 13:50</u>		Remarks/Shipping Information						
Company or Agency: <u>TERRATECH, INC.</u>						Send reports to: Eric Lautenbach 1385 VANDER WAY, SAN JOSE 95112								

\* measured into stockpile



TERRATECH

**ANAMETRIX INC**

Environmental & Analytical Chemistry  
1961 Concourse Drive, Suite E, San Jose, CA 95131  
(408) 432-8192 • Fax (408) 432-8198

FEB 13 1990

RECEIVED



**REPORT**

Eric Lautenbach  
Terratech, Inc.  
1365 Vander Way  
San Jose, CA 95112

February 09, 1990  
Anamatrix W.O.#: 9002022  
Date Received : 02/02/90  
Purchase Order#: 3668  
Project Number : 4454/2

Dear Mr. Lautenbach:

Your samples have been received for analysis. The REPORT SUMMARY lists your sample identifications and the analytical methods you requested. The following sections are included in this report: RESULTS.

NOTE: Amounts reported are net values, i.e. corrected for method blank contamination.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX, INC.

Sincerely,

ANAMETRIX, INC.

A handwritten signature in cursive script that reads "Terry Cooke".

Terry Cooke  
TPH Supervisor

TC/dmt

REPORT SUMMARY  
ANAMETRIX, INC. (408) 432-8192

Client : Terratech, Inc.  
Address : 1365 Vander Way  
City : San Jose, CA 95112  
Attn. : Eric Lautenbach

Anamatrix W.O.#: 9002022  
Date Received : 02/02/90  
Purchase Order#: 3668  
Project No. : 4454/2  
Date Released : 02/09/90

Anamatrix I.D.	Sample I.D.	Matrix	Date Sampled	Method	Date Extract	Date Analyzed	Inst I.D.
RESULTS							
9002022-01	S-5A,B,C,D	SOIL	02/02/90	TPHg		02/08/90	N/A
9002022-02	S-6A,B,C,D	SOIL	02/02/90	TPH	02/05/90	02/07/90	N/A

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS  
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 4454/2 S-5A,B,C,D  
 Matrix : SOIL  
 Date sampled : 02/02/90  
 Date anl.TPHg: 02/08/90  
 Date ext.TPHd: N/A  
 Date anl.TPHd: N/A

Anamatrix I.D. : 9002022-01  
 Analyst : CB  
 Supervisor : TC  
 Date released : 02/09/90  
 Date ext. TOG : N/A  
 Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	10	ND
108-88-3	Toluene	10	ND
100-41-4	Ethylbenzene	10	ND
1330-20-7	Total Xylenes	10	180
	TPH as Gasoline	1000	11000

ND - Not detected at or above the practical quantitation limit for the method. ppm

TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.

BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS  
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 4454/2 S-6A,B,C,D  
 Matrix : SOIL  
 Date sampled : 02/02/90  
 Date anl.TPHg: 02/07/90  
 Date ext.TPHd: 02/05/90  
 Date anl.TPHd: 02/08/90

Anametrix I.D. : 9002022-02  
 Analyst : CB  
 Supervisor : TC  
 Date released : 02/09/90  
 Date ext. TOG : N/A  
 Date anl. TOG : N/A

CAS #	Compound Name	Detection Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	50	ND
108-88-3	Toluene	50	ND
100-41-4	Ethylbenzene	50	ND
1330-20-7	Total Xylenes	50	ND
	TPH as Gasoline	1000	35000
	TPH as Diesel	10000	200000

- ND - Not detected at or above the practical quantitation limit for the method.  
 TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.  
 TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.  
 BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.