

July 2, 1991
SCI 615.003

Dignity Housing West
c/o Mr. Willie Pettus
Pyatok Associates
339 15th Street, Suite 212
Oakland, California 94612

Soil Remediation
Dignity Housing West
15th and Castro Streets
Oakland, California

Dear Mr. Pettus:

This letter records the results of soil remediation at the referenced site. The work was performed in accordance with a Remediation Work Plan prepared by Subsurface Consultants, Inc., dated May 16, 1991. Details regarding site conditions are summarized in the work plan. Prior to proceeding with remediation, the work plan was approved by Mr. Paul Smith of the Alameda County Health Care Services Agency (ACHCSA). The remediation contractor was Bay Area Tank and Marine.

Soil Excavation

Initially, the previous excavation backfill was removed and stockpiled on-site. The location of the excavation is shown on the Site Plan, Plate 1. The backfill extended to a maximum depth of about 12 feet and consisted of aggregate baserock. Organic vapors were not detected by an organic vapor meter (OVM) while removing the backfill material. Organic vapors were detected in the native soils below the backfill. The excavation was extended until no significant organic vapors were detected. The resulting excavation measured approximately 20 by 25 feet in plan, and varied from about 23 to 25 feet deep. The limits of the final excavation are shown on Plate 2. Generalized cross sections of the excavation are presented on Plate 3.

Confirmation soil samples were obtained from the bottom and sidewalls of the excavation to document clean-up activities. Sample locations are shown on Plates 2 and 3. For completeness, the results of the analytical tests conducted on test boring

■ Subsurface Consultants, Inc.

samples during our contamination assessment are also presented on Plate 3. The test boring samples shown on Plate 3 which were not analytically tested contained very low OVM readings.

The samples obtained during remediation were collected from a backhoe bucket. All loose soil and approximately 3 inches of intact material was scraped away from the sampling location. A clean brass liner was then pushed into the material using a rubber mallet. The liner was withdrawn and its ends were covered with Teflon sheets and plastic caps and then sealed with duct tape. The samples were placed in an ice filled cooler and remained refrigerated until delivery to Curtis and Tompkins, Ltd., a laboratory certified by the California DHS to conduct the analyses requested. The analytical program included analysis for total volatile hydrocarbons (TVH) (EPA 5030/8015 modified), total extractable hydrocarbons (TEH) (EPA 3550/8015 modified), and BTXE (EPA 5030/8020). The analytical results are summarized in Table 1.

Table 1.
 Hydrocarbon Concentrations in Confirmation Soil Samples

<u>Sample Designation</u>	<u>TVH¹ (mg/kg)³</u>	<u>TEH² mg/kg</u>	<u>Benzene (ug/kg)⁴</u>	<u>Toluene (ug/kg)</u>	<u>Ethyl-Benzene (ug/kg)</u>	<u>Total Xylenes (ug/kg)</u>
13 @ 15 ft	<1	<1	<5	<5	<5	<5
14 @ 15 ft	<1	<1	<5	<5	<5	<5
15 @ 18 ft	<1	<1	<5	<5	<5	<5
16 @ 15 ft	<1	<1	<5	7.4	<5	<5
17 @ 22 ft	<1	<1	<5	5.8	<5	7.3
18 @ 22 ft ⁵	210	<1	<80	280	960	5,400
44 @ 25 ft	<1	<1	<5	<5	<5	<5

¹ TVH = Total volatile hydrocarbons (as gasoline)
² TEH = Total extractable hydrocarbons (kerosene and diesel range)
³ mg/kg = milligrams per kilogram = parts per million = ppm
⁴ ug/kg = micrograms per kilogram = parts per billion = ppb
⁵ Contaminated soil was removed by subsequent excavation

Soil Remediation

Excavation activities generated approximately 430 cubic yards (loose) of contaminated soil. In order to evaluate treatment/disposal options, 4 soil samples were obtained for every 50 cubic yards (cy) of excavated soil. The 4 samples were composited by the analytical laboratory to form one sample for analysis. Each composite sample was analyzed for TVH, TEH, BTXE, total lead and soluble (TCLP) lead. One of the composites was also analyzed for reactivity, corrosivity and ignitability.

One 120 cy stockpile of clean soil has been created. One soil sample (#43) from this stockpile was obtained and analyzed for TVH, TEH and BTEX. The results of the analyses are presented in Tables 2 and 3.

Table 2.
 Hydrocarbons and Lead in Soil Stockpiles

Sample Designation	TVH ¹ (mg/kg) ⁵	TEH ² (mg/kg)	B ³ (ug/kg) ⁶	T ³ (ug/kg)	E ³ (ug/kg)	X ³ (ug/kg)	Total Lead (mg/kg)	TCLP ⁴ Lead (ug/l) ⁷
1,2,3,4	6.3	<1	<5	<5	6.1	28	6	<60
5,6,7,8	1.3	<1	<5	<5	<5	<5	<3	<60
9,10,11,12	<1	<1	<5	<5	<5	<5	<3	<60
19,20,21,22	39	<1	<5	<5	130	810	<3	<60
23,24,25,26	38	<1	<5	<5	<5	520	<3	<60
27,28,29,30	<1	<1	<5	<5	<5	<5	5	<60
31,32,33,34	1.7	<1	<5	8.0	<5	37	<3	<60
35,36,37,38	<1	<1	<5	<5	<5	<5	<3	<60
39,40,41,42	<1	<1	<5	<5	<5	<5	<3	<60
43	<1	<1	<5	<5	<5	<5	-- ⁸	--

1 TVH = Total volatile hydrocarbons (as gasoline)
 2 TEH = Total extractable hydrocarbons (kerosene and diesel range)
 3 BTEX = Benzene, toluene, ethylbenzene and total xylenes,
 4 TCLP = Soluble lead in TCLP leachate
 5 mg/kg = milligrams per kilogram = parts per million = ppm
 6 ug/kg = micrograms per kilogram = parts per billion = ppb
 7 ug/l = micrograms per liter = parts per billion = ppb
 8 -- = test not requested

Table 3
Reactivity, Corrosivity, and Igniteability of Soil

<u>Composite Sample ID</u>	<u>Releasable Cyanide</u>	<u>Releasable Sulfide</u>	<u>Flash Point (Degrees C)</u>	<u>Ph</u>
5,6,7,8	ND ¹	ND	>100	8.3

¹ ND = None detected, chemicals not present at concentrations above detection limits

The excavated soil has been accepted for disposal at the Mountain View landfill and will be removed from the site during the week of July 5, 1991. We can provide additional disposal documentation, if appropriate.

Excavation Backfilling

The resulting excavation was backfilled with the clean on-site and imported soils. The excavation was backfilled with crushed rock up to a depth of 15 feet. The upper 15 feet of material was placed in thin lifts (8 to 12 inches in loose thickness) and compacted to at least 90 percent relative compaction in accordance with ASTM D 1557 test procedure. The excavation area will be temporarily covered 3 inches of asphalt concrete. This work should be completed during the week of July 12, 1991. During construction of the Dignity Housing Project, the excavation area will be situated beneath new street sidewalk and building improvements.

Conclusions

Soils containing gasoline were encountered within the excavation. The confirmation soil samples obtained at the excavation limits did not contain TVH or TEH at concentrations above detection limits (i.e., <1 mg/kg). Very low concentrations of toluene and xylene were left in place beyond the limits of excavation. The resulting excavation was backfilled with clean material. As a result, we conclude that soil contamination near the previous tanks has been successfully remediated.

Dignity Housing West
July 2, 1991
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In accordance with ACHCSA requirements, a groundwater monitoring program will be implemented. At a minimum, groundwater sampling events will be conducted during the months of August and November, 1991 and February, 1992. If non-detectable results are documented for these events, a request will be submitted to (1) cease monitoring, and (2) obtain RWQCB site closure.

If you have any questions, please call.

Yours very truly,

Subsurface Consultants, Inc.



R. William Rudolph
Geotechnical Engineer 741 (expires 12/31/92)

JVB:RWR:JPB:sld

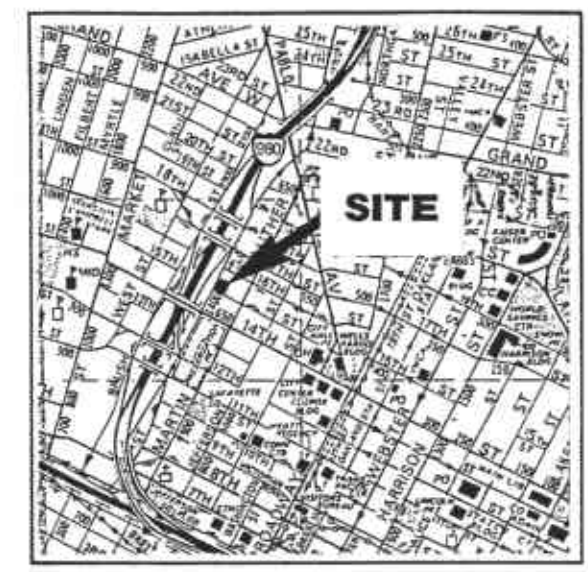
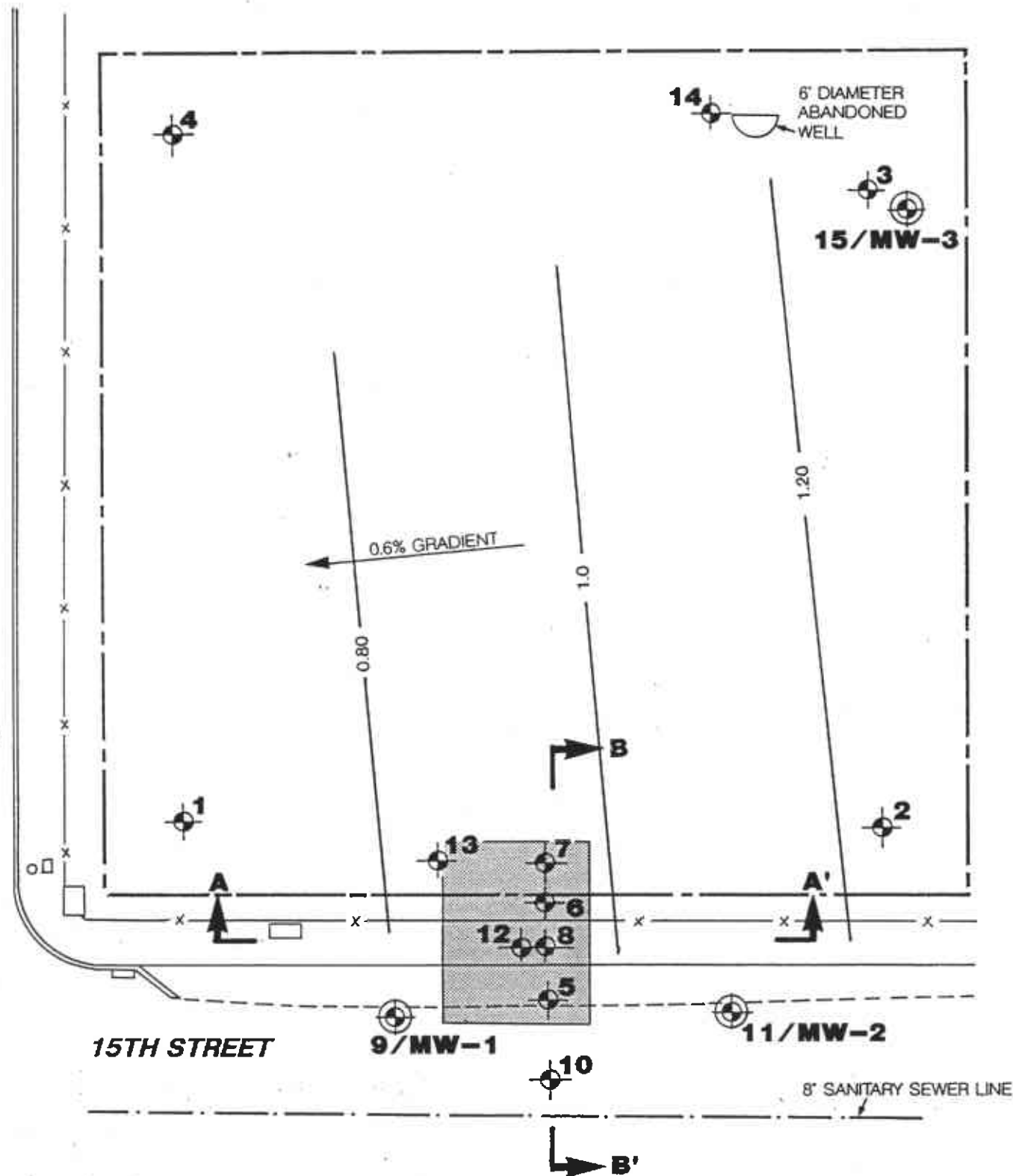
Attachments: Site Plan - Plate 1
Soil Remediation Plan - Plate 2
Remediation Cross Sections - Plate 3
Analytical Test Reports
Chain-of-Custody records

6 copies enclosed

cc: (1) Mr. Paul Smith
Alameda County Health Care Services Agency

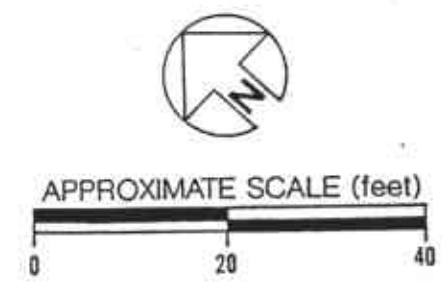
(1) Fei Tsen
Tsen and Associates

CASTRO STREET



VICINITY MAP

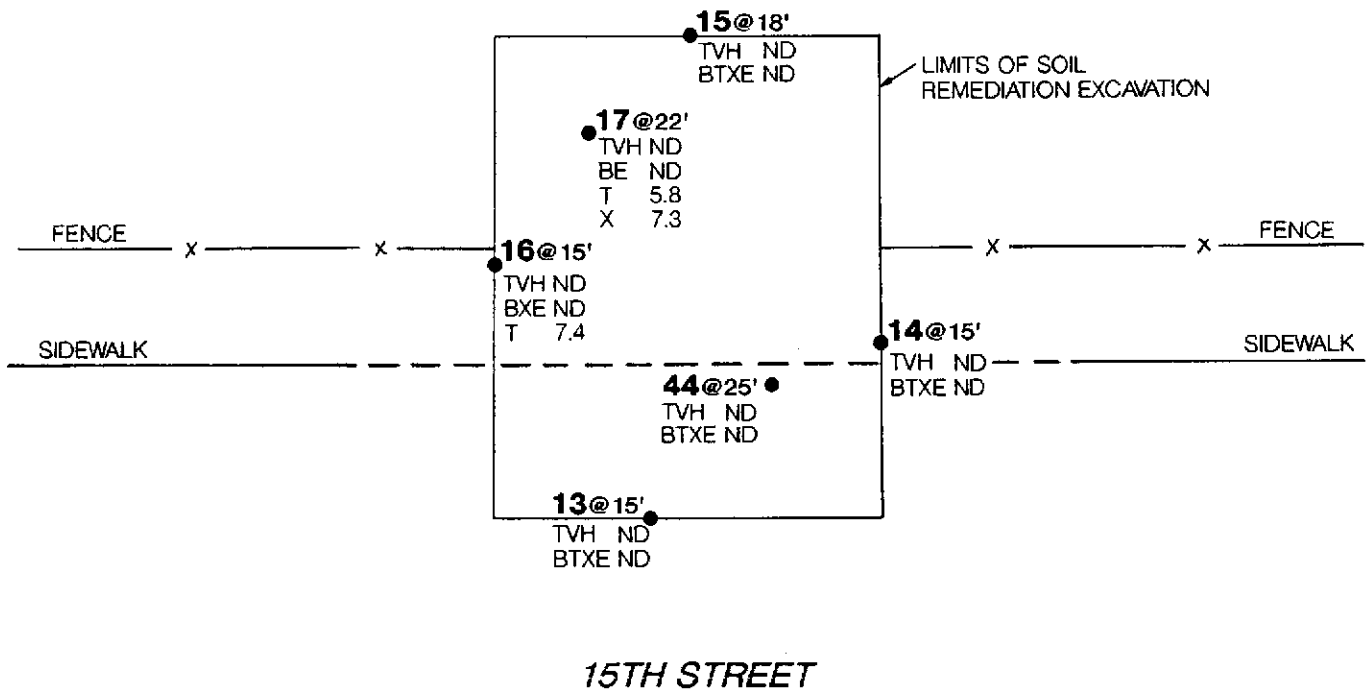
- TEST BORING/MONITORING WELL
- TEST BORING
- SOIL REMEDIATION EXCAVATION
- EDGE OF PAVEMENT
- 1.0 GROUNDWATER GRADIENT CONTOUR
- CROSS SECTION



REFERENCE: TOPOGRAPHIC MAP PREPARED BY BATES AND BAILEY, LAND SURVEYORS ENTITLED 'PROPERTY AT 690 15TH STREET, OAKLAND', DATED FEBRUARY 1991.

Subsurface Consultants

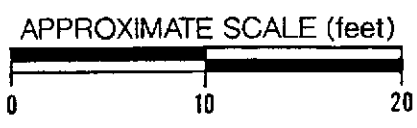
SITE PLAN			1
DIGNITY HOUSING WEST - OAKLAND, CA			
JOB NUMBER 615.003	DATE 6/27/91	APPROVED JVB	



14@15' ● FINAL CONFIRMATION
SAMPLE LOCATION, NUMBER AND DEPTH

TVH TOTAL VOLATILE HYDROCARBONS AS
GASOLINE (mg/kg)

BTXE BENZINE, TOLUENE ETHYLBENZINE
& TOTAL XYLENE (ug/kg)



**SOIL REMEDIATION
EXCAVATION PLAN**

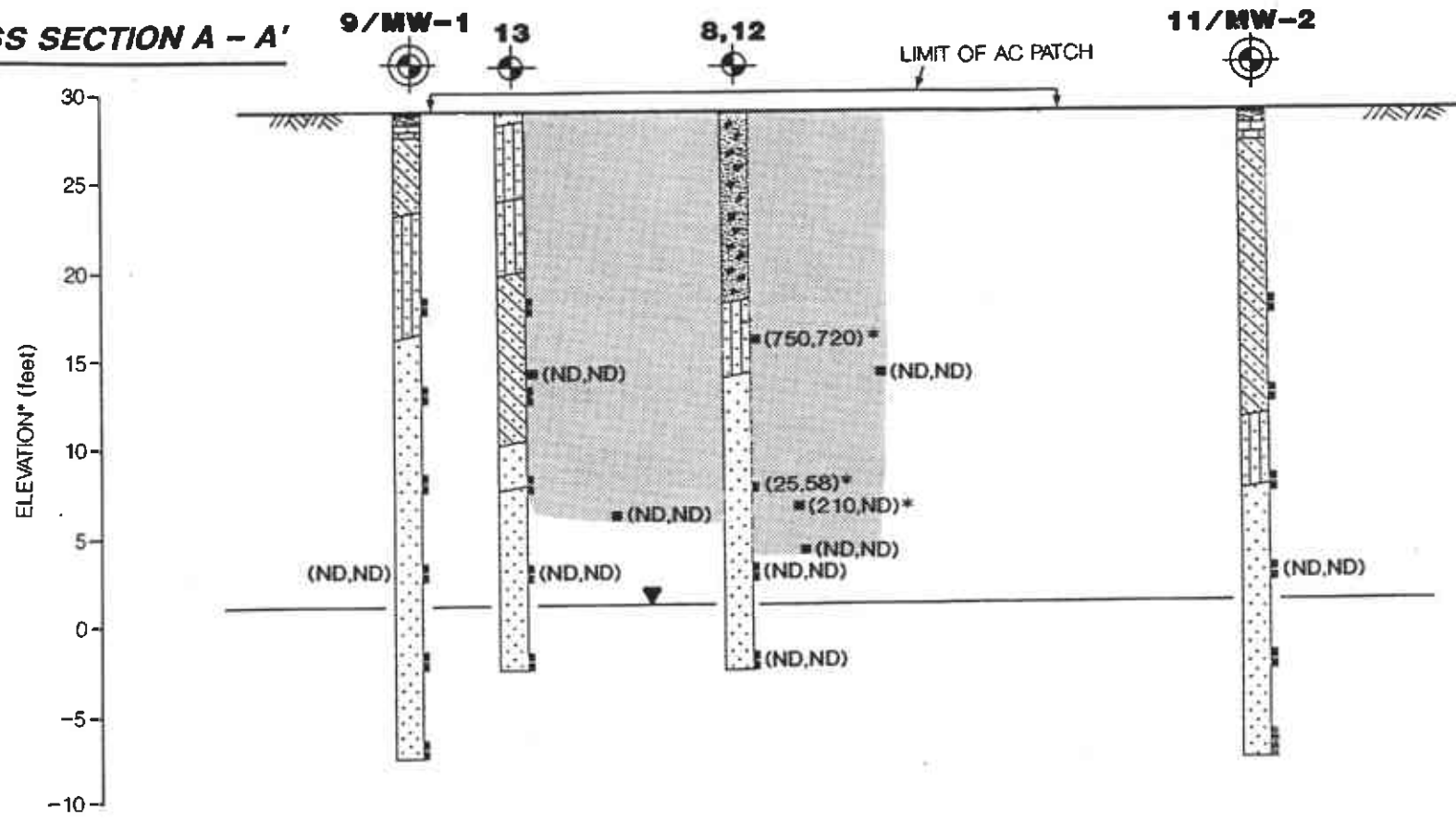
Subsurface Consultants

DIGNITY HOUSING WEST - OAKLAND, CA

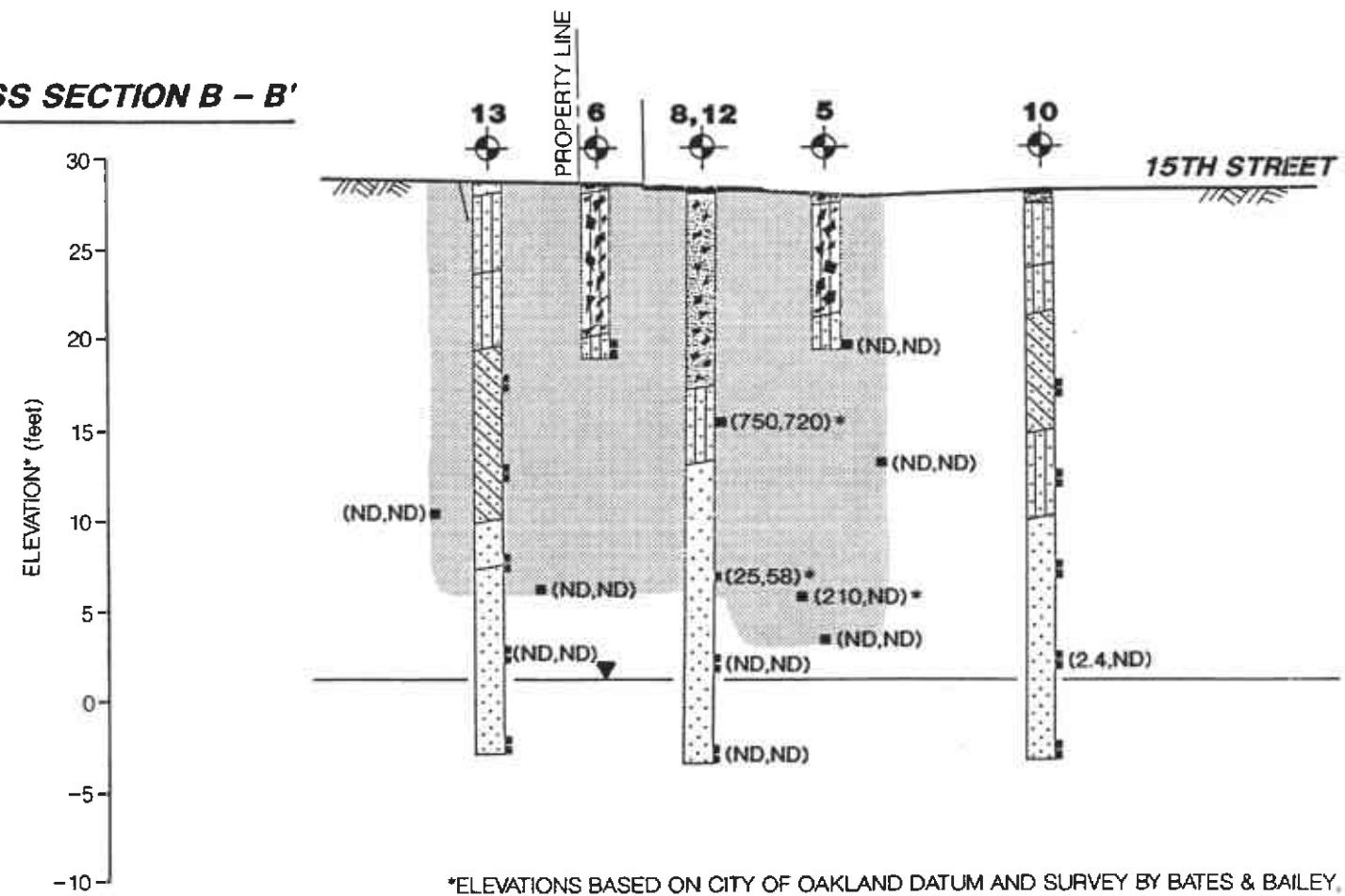
JOB NUMBER 615.003	DATE 6/27/91	APPROVED <i>JVB</i>
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PLATE
2

CROSS SECTION A - A'



CROSS SECTION B - B'



TEST BORING/MONITORING WELL
 TEST BORING
 SAMPLE LOCATION
 (750,720)
 TEH
 TVH
 ND NONE DETECTED
 APPROXIMATE LIMIT OF SOIL REMOVAL
 * SOIL REMOVED BY EXCAVATION

HORIZONTAL SCALE: 1" = 10'

*ELEVATIONS BASED ON CITY OF OAKLAND DATUM AND SURVEY BY BATES & BAILEY, DATED FEBRUARY 1991, ENTITLED PROPERTY AT 690 15TH STREET, OAKLAND, CA.

Subsurface Consultants			REMEDATION CROSS SECTION		PLATE 3
			DIGNITY HOUSING WEST - PHASE II		
JOB NUMBER 615.002	DATE 5/10/91	APPROVED JUB			



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/13/91

DATE REPORTED: 06/21/91

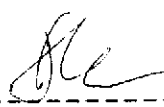
LAB NUMBER: 104128

CLIENT: SUBSURFACE CONSULTANTS

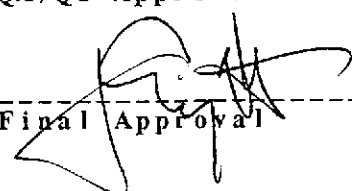
PROJECT ID: 615.003

LOCATION: DIGNITY HOUSING

RESULTS: SEE ATTACHED



QA/QC Approval



Final Approval

LABORATORY NUMBER: 104128
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/13/91
 DATE ANALYZED: 06/21/91
 DATE REPORTED: 06/21/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes
 TVH by California DOHS Method/LUFT Manual October 1989
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104128-13	COMP 1,2,3,4	6.3	ND(5.0)	ND(5.0)	6.1	28
104128-14	COMP 5,6,7,8	1.3	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104128-15	COMP 9,10,11,12	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit
 indicated in parentheses.

QA/QC SUMMARY

RPD, % 1
 RECOVERY, % 104

LABORATORY NUMBER: 104128
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/13/91
 DATE EXTRACTED: 06/17/91
 DATE ANALYZED: 06/19/91
 DATE REPORTED: 06/21/91

Extractable Petroleum Hydrocarbons in Soils & Wastes
 California DOHS Method
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg / Kg)	DIESEL RANGE (mg / Kg)	REPORTING LIMIT* (mg / Kg)
104128-13	COMP 1, 2, 3, 4	ND	ND	1.0
104128-14	COMP 5, 6, 7, 8	ND	ND	1.0
104128-15	COMP 9, 10, 11, 12	ND	ND	1.0

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	16
RECOVERY, %	99

LABORATORY NUMBER: 104128-14
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 SAMPLE ID: COMP 5,6,7,8

DATE RECEIVED: 06/13/91
 DATE ANALYZED: 06/20,21/91
 DATE REPORTED: 06/21/91

PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
RELEASABLE CYANIDE	ND	mg/Kg	1.0	SW-846 SECTION 7.3.3.2
RELEASABLE SULFIDE	ND	mg/Kg	1.0	SW-846 SECTION 7.3.4.1
FLASH POINT	>100	DEGREES C	--	ASTM D93
pH	8.3	S.U.	--	EPA 9045

QA/QC SUMMARY

	RPD, %	RECOVERY, %
SULFIDE	<1	--
CYANIDE	<1	63
FLASH POINT	5	--
pH	<1	--

LABORATORY NUMBER: 104128
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/13/91
 DATE ANALYZED: 06/18/91
 DATE REPORTED: 06/21/91

=====
 ANALYSIS: LEAD
 ANALYSIS METHOD: EPA 7420
 =====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
104128-13	COMP 1,2,3,4	6.0	mg / kg	3.0
104128-14	COMP 5,6,7,8	ND	mg / kg	3.0
104128-15	COMP 9,10,11,12	ND	mg / kg	3.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

=====
 RPD, % <1
 Recovery, % 91
 =====

LABORATORY NUMBER: 104128
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/13/91
 DATE EXTRACTED: 06/17/91
 DATE ANALYZED: 06/18/91
 DATE REPORTED: 06/21/91

=====
 ANALYSIS: LEAD IN TCLP LEACHATE
 ANALYSIS METHOD: EPA 7420
 =====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
104128-13	COMP 1,2,3,4	ND	ug/L	60
104128-14	COMP 5,6,7,8	ND	ug/L	60
104128-15	COMP 9,10,11,12	ND	ug/L	60

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

=====
 RPD, % 6
 Recovery, % 83
 =====

Subsurface Consultants

104128

CHAIN OF CUSTODY RECORD & ANALYTICAL TEST REQUEST

Project Name: Dignity Housing
 SCI Job Number: 615.003
 Project Contact at SCI: John Bosche
 Sampled By: Dennis Alexander
 Analytical Laboratory: Curtis + Tompkins
 Analytical Turnaround: Normal (1 week)

Sample ID	Sample Type ¹	Container Type ²	Sampling Date	Hold	Analysis	Analytical Method
Composite 3 { 1 2 3 4	S	T	6/12/91		TVH/BTXE, TEH LEAD, TCLP LEAD	
	↓	↓	↓			
	↓	↓	↓			
	↓	↓	↓			
Composite 4 { 5 6 7 8	S	T			TVH/BTXE, TEH LEAD, TCLP LEAD	
	↓	↓	↓			
	↓	↓	↓			
	↓	↓	↓			

* * * * *

Released by: D. Alexander Received by: _____ Date: 6/13/91
 Released by: _____ Received by: _____ Date: _____
 Received by Laboratory: [Signature] Date: 6/13/91
 Released by Laboratory: _____ Date: _____
 Released by: _____ Date: _____

¹ Sample Type: W = Water, S = Soil, O = Other (specify)
² Container Type: V = VOA, P = Plastic, G = Glass, T = Brass Tube, O = Other (specify)

NOTES TO LABORATORY:
 - Notify SCI if there are any anomalous peaks on GC or other scans
 - Questions/clarifications - Contact SCI at (415) 268-0461

Subsurface Consultants

104128

CHAIN OF CUSTODY RECORD & ANALYTICAL TEST REQUEST

Project Name: Dignity Housing
 SCI Job Number: 615,003
 Project Contact at SCI: John Bosche
 Sampled By: Dennis Alexander
 Analytical Laboratory: Curtis & Tompkins
 Analytical Turnaround: Normal (1 week)

Sample ID	Sample Type ¹	Container Type ²	Sampling Date	Hold	Analysis	Analytical Method
9	S	T	6/12/91		TVH/BTXE, TEH	LEAD, TCLP LEAD
10	↓	↓	↓			
11	↓	↓	↓			
12	↓	↓	↓			

* * * * *

Released by: D. Alexander Received by: _____ Date: 6/13/91
 Released by: _____ Received by: _____ Date: _____
 Received by Laboratory: [Signature] Date: 6/13/91
 Released by Laboratory: _____ Date: _____
 Released by: _____ Date: _____

¹ Sample Type: W = Water, S = Soil, O = Other (specify)
² Container Type: V = VOA, P = Plastic, G = Glass, T = Brass Tube, O = Other (specify)

NOTES TO LABORATORY:
 - Notify SCI if there are any anomalous peaks on GC or other scans
 - Questions/clarifications - Contact SCI at (415) 268-0461



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2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/13/91

DATE REPORTED: 06/17/91


LAB NUMBER: 104116

CLIENT: SUBSURFACE CONSULTANTS

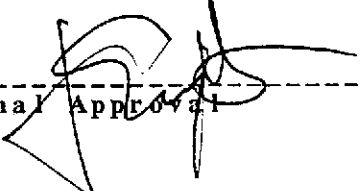
PROJECT ID: 615.003

LOCATION: DIGNITY HOUSING

RESULTS: SEE ATTACHED



QA/QC Approval



Final Approval

Berkeley

Wilmington

Los Angeles

LABORATORY NUMBER: 104116
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/13/91
 DATE ANALYZED: 06/16/91
 DATE REPORTED: 06/17/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes
 TVH by California DOHS Method/LUFT Manual October 1989
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104116-1	13@15'	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104116-2	14@15'	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit
 indicated in parentheses.

QA/QC SUMMARY

RPD, %	9
RECOVERY, %	94

LABORATORY NUMBER: 104116
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/13/91
 DATE EXTRACTED: 06/13/91
 DATE ANALYZED: 06/16/91
 DATE REPORTED: 06/17/91

Extractable Petroleum Hydrocarbons in Soils & Wastes
 California DOHS Method
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
104116-1	13@15'	ND	ND	1.0
104116-2	14@15'	ND	ND	1.0

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	20
RECOVERY, %	83



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/14/91

DATE REPORTED: 06/19/91

LAB NUMBER: 104141

CLIENT: SUBSURFACE CONSULTANTS

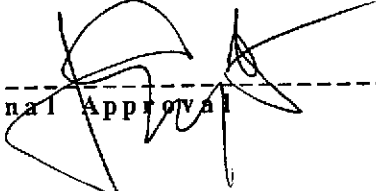
PROJECT ID: 615.003

LOCATION: DIGNITY HOUSING

RESULTS: SEE ATTACHED



QA/QC Approval



Final Approval

LABORATORY NUMBER: 104141
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/14/91
 DATE ANALYZED: 06/18/91
 DATE REPORTED: 06/19/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes
 TVH by California DOHS Method/LUFT Manual October 1989
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104141-1	15@18'	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104141-2	16@15'	ND(1.0)	ND(5.0)	7.4	ND(5.0)	ND(5.0)
104141-3	17@22'	ND(1.0)	ND(5.0)	5.8	ND(5.0)	7.3
104141-4	18@22'	210	ND(80)	280	960	5,400

ND = Not detected at or above reporting limit; Reporting limit
 indicated in parentheses.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	107

LABORATORY NUMBER: 104141
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/14/91
 DATE EXTRACTED: 06/17/91
 DATE ANALYZED: 06/19/91
 DATE REPORTED: 06/19/91

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg /Kg)	DIESEL RANGE (mg /Kg)	REPORTING LIMIT* (mg /Kg)
104141-1	15@18'	ND	ND	1.0
104141-2	16@15'	ND	ND	1.0
104141-3	17@22'	ND	ND	1.0
104141-4	18@22'	ND	ND	1.0

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	85

Subsurface Consultants

104141

CHAIN OF CUSTODY RECORD & ANALYTICAL TEST REQUEST

Project Name: Dignity Housing
 SCI Job Number: 615.003
 Project Contact at SCI: John Bosche
 Sampled By: Dennis Alexander
 Analytical Laboratory: Curtis & Tompkins
 Analytical Turnaround: Rapid

Sample ID	Sample Type ¹	Container Type ²	Sampling Date	Hold	Analysis	Analytical Method
1 15@18'	S	T	6/14/91		TVH/BTXE TEH	
2 16@15'	↓	↓	↓		↓	
3 17@22'	↓	↓	↓		↓	
4 18@22'	↓	↓	↓		↓	

* * * * *

Released by: D. Alexander Received by: _____ Date: 6-14-91
 Released by: _____ Received by: _____ Date: _____
 Received by Laboratory: [Signature] Date: 6/14/91
 Released by Laboratory: _____ Date: _____
 Released by: _____ Date: _____

¹ Sample Type: W = Water, S = Soil, O = Other (specify)
² Container Type: V = VOA, P = Plastic, G = Glass, T = Brass Tube, O = Other (specify)

NOTES TO LABORATORY:
 - Notify SCI if there are any anomalous peaks on GC or other scans
 - Questions/clarifications - Contact SCI at (415) 268-0461



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/14/91

DATE REPORTED: 06/21/91


LAB NUMBER: 104143

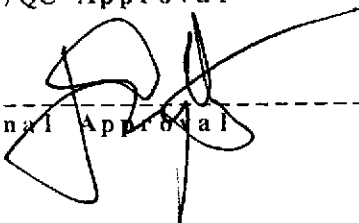
CLIENT: SUBSURFACE CONSULTANTS

PROJECT ID: 615.003

LOCATION: DIGNITY HOUSING

RESULTS: SEE ATTACHED



QA/QC Approval


Final Approval



LABORATORY NUMBER: 104143
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 615.003
LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/14/91
DATE ANALYZED: 06/20,21/91
DATE REPORTED: 06/21/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes
TVH by California DOHS Method/LUFT Manual October 1989
BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104143-25	COMP 19-22	39	ND(80)	ND(80)	130	810
104143-26	COMP 23-26	38	ND(80)	ND(80)	ND(80)	520
104143-27	COMP 27-30	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104143-28	COMP 31-34	1.7	ND(5.0)	8.0	ND(5.0)	37
104143-29	COMP 35-38	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)
104143-30	COMP 39-42	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	8
RECOVERY, %	110

LABORATORY NUMBER: 104143
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/14/91
 DATE ANALYZED: 06/18/91
 DATE REPORTED: 06/21/91

=====
 ANALYSIS: LEAD
 ANALYSIS METHOD: EPA 7420
 =====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
104143-25	COMP 19-22	ND	mg / kg	3.0
104143-26	COMP 23-26	ND	mg / kg	3.0
104143-27	COMP 27-30	5.0	mg / kg	3.0
104143-28	COMP 31-34	ND	mg / kg	3.0
104143-29	COMP 35-38	ND	mg / kg	3.0
104143-30	COMP 39-42	ND	mg / kg	3.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

=====
 RPD, % <1
 Recovery, % 91
 =====

LABORATORY NUMBER: 104143
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/14/91
 DATE EXTRACTED: 06/17/91
 DATE ANALYZED: 06/18/91
 DATE REPORTED: 06/21/91

=====
 ANALYSIS: LEAD IN TCLP LEACHATE
 ANALYSIS METHOD: EPA 7420
 =====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
104143-25	COMP 19-22	ND	ug/L	60
104143-26	COMP 23-26	ND	ug/L	60
104143-27	COMP 27-30	ND	ug/L	60
104143-28	COMP 31-34	ND	ug/L	60
104143-29	COMP 35-38	ND	ug/L	60
104143-30	COMP 39-42	ND	ug/L	60

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

=====
 RPD, % 6
 Recovery, % 83
 =====

LABORATORY NUMBER: 104143
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/14/91
 DATE EXTRACTED: 06/17/91
 DATE ANALYZED: 06/20/91
 DATE REPORTED: 06/21/91

Extractable Petroleum Hydrocarbons in Soils & Wastes
 California DOHS Method
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg / Kg)	DIESEL RANGE (mg / Kg)	REPORTING LIMIT* (mg / Kg)
104143-25	COMP 19-22	ND	ND	10
104143-26	COMP 23-26	ND	ND	10
104143-27	COMP 27-30	ND	ND	1.0
104143-28	COMP 31-34	ND	ND	1.0
104143-29	COMP 35-38	ND	ND	1.0
104143-30	COMP 39-42	ND	ND	1.0

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	16
RECOVERY, %	99

104143

Subsurface Consultants

CHAIN OF CUSTODY RECORD & ANALYTICAL TEST REQUEST

Project Name: Dignity Housing

SCI Job Number: 615.003

Project Contact at SCI: John Bosche

Sampled By: Dennis Alexander

Analytical Laboratory: Curtis & Tompkins

Analytical Turnaround: Normal (1 week)

Sample ID	Sample Type ¹	Container Type ²	Sampling Date	Hold	Analysis	Analytical Method
19 1	S	T	6/14/91		TVH/BTXE, TEH LEAD, TCLP LEAD	
20 2	↓	↓	↓		↓	
21 3	↓	↓	↓		↓	
22 4	↓	↓	↓		↓	
23 5	S	T			TVH/BTXE, TEH LEAD, TCLP LEAD	
24 6	↓	↓	↓		↓	
25 7	↓	↓	↓		↓	
26 8	↓	↓	↓		↓	

* * * * *

Released by: D. Alexander Received by: _____ Date: 6/14/91

Released by: _____ Received by: _____ Date: _____

Received by Laboratory: [Signature] Date: 6/14/91

Released by Laboratory: _____ Date: _____

Released by: _____ Date: _____

¹ Sample Type: W = Water, S = Soil, O = Other (specify)

² Container Type: V = VOA, P = Plastic, G = Glass, T = Brass Tube, O = Other (specify)

NOTES TO LABORATORY:

- Notify SCI if there are any anomalous peaks on GC or other scans
- Questions/clarifications - Contact SCI at (415) 268-0461

Subsurface Consultants

CHAIN OF CUSTODY RECORD & ANALYTICAL TEST REQUEST

Project Name: Dignity Housing
 SCI Job Number: 615.003
 Project Contact at SCI: John Bosche
 Sampled By: Dennis Alexander
 Analytical Laboratory: Curtis + Tompkins
 Analytical Turnaround: Normal (1 week)

Sample ID	Sample Type ¹	Container Type ²	Sampling Date	Hold	Analysis	Analytical Method
35 17	S	T	6/14/91		TVH/BTXE, TEH LEAD, TCLP LEAD	
36 18						
37 19						
38 20	↓	↓			↓	
39 21	S	T			TVH/BTXE, TEH LEAD, TCLP LEAD	
40 22						
41 23						
42 24	↓	↓	↓		↓	
*	*	*	*	*	*	*

Released by: D. Alexander Received by: _____ Date: 6-14-91
 Released by: _____ Received by: _____ Date: _____
 Received by Laboratory: [Signature] Date: 6/14/91
 Released by Laboratory: _____ Date: _____
 Released by: _____ Date: _____

¹ Sample Type: W = Water, S = Soil, O = Other (specify)
² Container Type: V = VOA, P = Plastic, G = Glass, T = Brass Tube,
 O = Other (specify)

NOTES TO LABORATORY:
 - Notify SCI if there are any anomalous peaks on GC or other scans
 - Questions/clarifications - Contact SCI at (415) 268-0461



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2323 Fifth Street, Berkeley, CA 94710. Phone (415) 486-0900

DATE RECEIVED: 06/17/91

DATE REPORTED: 06/21/91


LAB NUMBER: 104151

CLIENT: SUBSURFACE CONSULTANTS

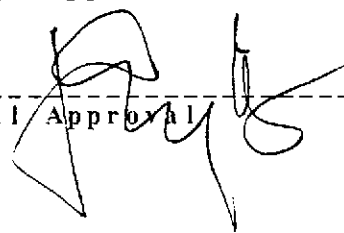
PROJECT ID: 615.003

LOCATION: DIGNITY HOUSING

RESULTS: SEE ATTACHED



QA/QC Approval



Final Approval

Berkeley

Wilmington

Los Angeles

LABORATORY NUMBER: 104151
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/17/91
 DATE EXTRACTED: 06/17/91
 DATE ANALYZED: 06/20/91
 DATE REPORTED: 06/21/91

Extractable Petroleum Hydrocarbons in Soils & Wastes
 California DOHS Method
 LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg /Kg)	DIESEL RANGE (mg /Kg)	REPORTING LIMIT* (mg /Kg)
104151-1	43	ND	ND	1.0

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	9
RECOVERY, %	108

LABORATORY NUMBER: 104151
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/17/91
 DATE ANALYZED: 06/21/91
 DATE REPORTED: 06/21/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes
 TVH by California DOHS Method/LUFT Manual October 1989
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104151-1	43	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	104

Subsurface Consultants

CHAIN OF CUSTODY RECORD & ANALYTICAL TEST REQUEST

Project Name: Dignity Housing
 SCI Job Number: 615.003
 Project Contact at SCI: John Bosche
 Sampled By: Dennis Alexander
 Analytical Laboratory: Curtis + Tompkins
 Analytical Turnaround: Normal (1 week)

Sample ID	Sample Type ¹	Container Type ²	Sampling Date	Hold	Analysis	Analytical Method
43	S	T	6/17/91		TVH/BTXE TEH	

* * * * *

Released by: D. Alexander Received by: _____ Date: 6/17/91
 Released by: _____ Received by: _____ Date: _____
 Received by Laboratory: [Signature] Date: 6/17/91
 Released by Laboratory: _____ Date: _____
 Released by: _____ Date: _____

¹ Sample Type: W = Water, S = Soil, O = Other (specify)
² Container Type: V = VOA, P = Plastic, G = Glass, T = Brass Tube, O = Other (specify)

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 - Questions/clarifications - Contact SCI at (415) 268-0461



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 06/26/91

DATE REPORTED: 07/01/91


LAB NUMBER: 104292

CLIENT: SUBSURFACE CONSULTANTS

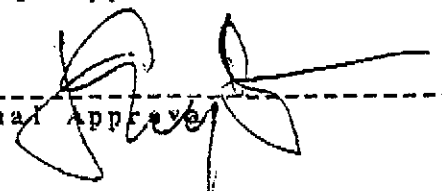
PROJECT ID: 615.003

LOCATION: DIGNITY HOUSING

RESULTS: SEE ATTACHED



QA/QC Approval



Final Approval

LABORATORY NUMBER: 104292
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT ID: 615.003
 LOCATION: DIGNITY HOUSING

DATE RECEIVED: 06/26/91
 DATE ANALYZED: 06/27/91
 DATE REPORTED: 07/01/91

Total Volative Hydrocarbons with BTXE in Soils and Wastes
 TVH by California DOHS Method/LUFT Manual October 1989
 BTXE by EPA 5030/8020

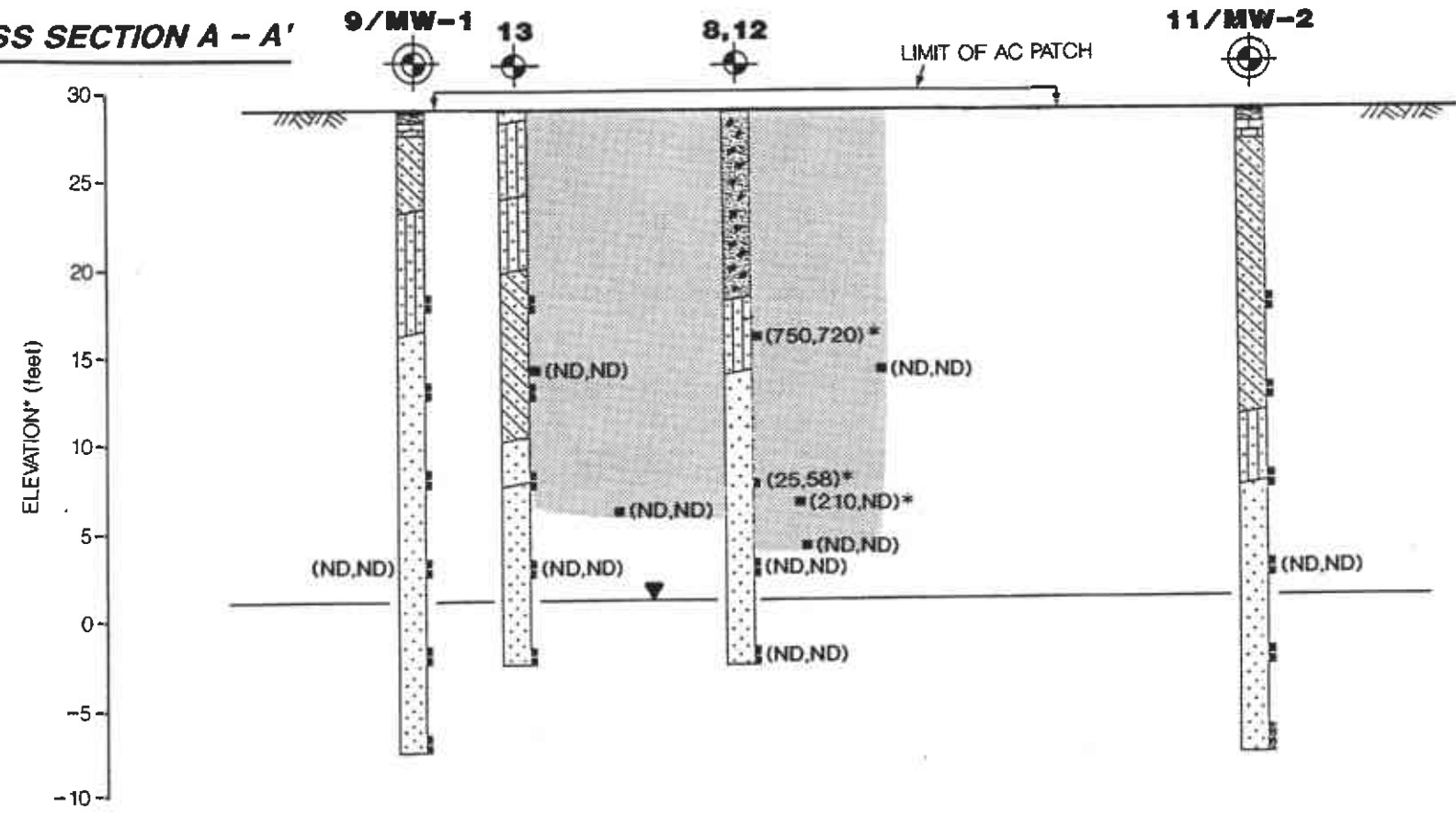
LAB ID	SAMPLE ID	TVH AS GASOLINE (mg/Kg)	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)
104292-1	44	ND(1.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

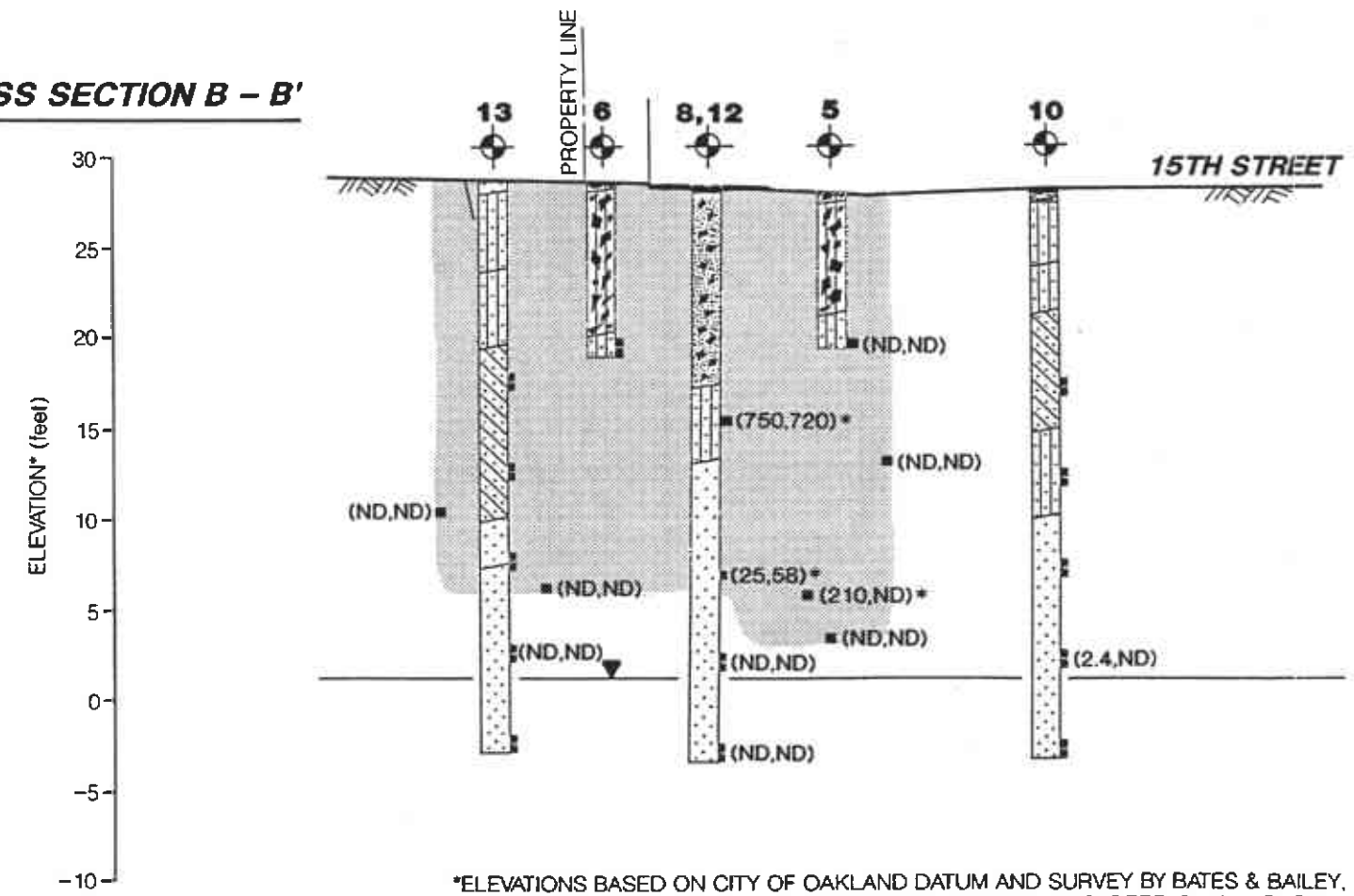
QA/QC SUMMARY

=====
 RPD, % 10
 RECOVERY, % 94
 =====

CROSS SECTION A - A'



CROSS SECTION B - B'



TEST BORING/MONITORING WELL
 TEST BORING
 SAMPLE LOCATION
 (750,720)
 TEH
 TVH
 ND NONE DETECTED
 APPROXIMATE LIMIT OF SOIL REMOVAL
 * SOIL REMOVED BY EXCAVATION

HORIZONTAL SCALE: 1" = 10'

*ELEVATIONS BASED ON CITY OF OAKLAND DATUM AND SURVEY BY BATES & BAILEY, DATED FEBRUARY 1991, ENTITLED PROPERTY AT 690 15TH STREET, OAKLAND, CA.

Subsurface Consultants

REMEDATION CROSS SECTION			3
DIGNITY HOUSING WEST - PHASE II			
JOB NUMBER	DATE	APPROVED	3
615.002	5/10/91	JVB	